

No.	Co-authors	Article title	Keywords	Vol., No., pp.	DOI	Citation
1	Chandrasekaran, R., Neeli, J., Alsberi, H., Hassan, M.M., Uikey, J., Yahya, M.	Pioneering Prognosis and Management in Neuromuscular Healthcare Using EMG Signal Processing with Advanced Deep Learning Techniques	advanced signal processing, attention mechanisms, Electromyography (EMG) signals, Graph Neural Network (GNN), hybrid deep learning architecture, machine learning, neuromuscular disorders, NeuroFusionNet	41, 4, 1633-1645	<a href="https://doi.org/10.18280/ts.410401">https://doi.org/10.18280/ts.410401</a>	Chandrasekaran, R., Neeli, J., Alsberi, H., Hassan, M.M., Uikey, J., Yahya, M. (2024). Pioneering prognosis and management in neuromuscular healthcare using EMG signal processing with advanced deep learning techniques. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1633-1645. <a href="https://doi.org/10.18280/ts.410401">https://doi.org/10.18280/ts.410401</a>
2	Coşar, H.İ., Kılıç, F., Altın, C., Tanık, N.	EEG Classification to Food Stimuli in Diverse Weight Groups with Regression Analysis of Eating Behavior Questionnaires	deep learning (DL), electroencephalography (EEG) classification, overweight, supervised tabular meta-learning (SuperTML), machine learning (ML), regression	41, 4, 1647-1665	<a href="https://doi.org/10.18280/ts.410402">https://doi.org/10.18280/ts.410402</a>	Coşar, H.İ., Kılıç, F., Altın, C., Tanık, N. (2024). EEG classification to food stimuli in diverse weight groups with regression analysis of eating behavior questionnaires. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1647-1665. <a href="https://doi.org/10.18280/ts.410402">https://doi.org/10.18280/ts.410402</a>
3	Gupta, M., Yadav, D., Khan, S.S., Kumawat, A.K., Chourasia, A., Rane, P., Ujlayan, A.	Modeling the Detection and Classification of Tomato Leaf Diseases Using a Robust Deep Learning Framework	plant diseases, image processing, machine learning, deep learning, artificial intelligence	41, 4, 1667-1678	<a href="https://doi.org/10.18280/ts.410403">https://doi.org/10.18280/ts.410403</a>	Gupta, M., Yadav, D., Khan, S.S., Kumawat, A.K., Chourasia, A., Rane, P., Ujlayan, A. (2024). Modeling the detection and classification of tomato leaf diseases using a robust deep learning framework. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1667-1678. <a href="https://doi.org/10.18280/ts.410403">https://doi.org/10.18280/ts.410403</a>
4	Zhang, L., Huang, X., Zhong, H.	Measurement of Street Greenness and Interface Permeability Based on Street View Image Analysis	street view images, deep learning, street greenness, interface permeability, urban ecological environment	41, 4, 1679-1688	<a href="https://doi.org/10.18280/ts.410404">https://doi.org/10.18280/ts.410404</a>	Zhang, L., Huang, X., Zhong, H. (2024). Measurement of street greenness and interface permeability based on street view image analysis. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1679-1688. <a href="https://doi.org/10.18280/ts.410404">https://doi.org/10.18280/ts.410404</a>
5	Alshehri, A.	Skin-NeT: Skin Cancer Diagnosis Using VGG and ResNet-Based Ensemble Learning Approaches	skin cancer, ensemble learning, machine learning, feature extraction, VGG-16, ResNet-50, VGG-19, Xception	41, 4, 1689-1705	<a href="https://doi.org/10.18280/ts.410405">https://doi.org/10.18280/ts.410405</a>	Alshehri, A. (2024). Skin-NeT: Skin cancer diagnosis using VGG and ResNet-based ensemble learning approaches. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1689-1705. <a href="https://doi.org/10.18280/ts.410405">https://doi.org/10.18280/ts.410405</a>
6	Dalal, S., Singh, J.P., Tiwari, A.K., Nandan, D.	An Automated Computed Tomography Scan Analysis Framework for COVID-19 Detection Using Machine Learning	COVID-19 detection, computed tomography, Kernel extreme machine learning, feature extraction, classification, autoencoder, seagull optimization	41, 4, 1707-1726	<a href="https://doi.org/10.18280/ts.410406">https://doi.org/10.18280/ts.410406</a>	Dalal, S., Singh, J.P., Tiwari, A.K., Nandan, D. (2024). An automated computed tomography scan analysis framework for COVID-19 detection using machine learning. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1707-1726. <a href="https://doi.org/10.18280/ts.410406">https://doi.org/10.18280/ts.410406</a>
7	Bakirci, M.	Real-Time Vehicle Detection Using YOLOv8-Nano for Intelligent Transportation Systems	vehicle detection, YOLOv8, aerial monitoring, intelligent transportation systems, UAV	41, 4, 1727-1740	<a href="https://doi.org/10.18280/ts.410407">https://doi.org/10.18280/ts.410407</a>	Bakirci, M. (2024). Real-time vehicle detection using YOLOv8-nano for intelligent transportation systems. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1727-1740. <a href="https://doi.org/10.18280/ts.410407">https://doi.org/10.18280/ts.410407</a>
8	Chen, Y.	Real-Time Load Monitoring of Logistics Delivery Vehicles Using Deep Learning-Based Image Analysis	logistics delivery vehicles, real-time load monitoring, deep learning, subpixel edge detection, interpolation, load volume calculation	41, 4, 1741-1748	<a href="https://doi.org/10.18280/ts.410408">https://doi.org/10.18280/ts.410408</a>	Chen, Y. (2024). Real-time load monitoring of logistics delivery vehicles using deep learning-based image analysis. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1741-1748. <a href="https://doi.org/10.18280/ts.410408">https://doi.org/10.18280/ts.410408</a>
9	Singh, S.K., Rashid, M., Alshamrani, S.S., Alnfai, M.M., Saxena, P., Khamparia, A.	Efficient Transfer Learning Approach for Acute Lymphoblastic Leukemia Diagnosis: Classification of Lymphocytes and Lymphoblastic Cells	transfer learning, acute lymphoblastic leukemia, lymphoblast, principal component analysis, deep learning	41, 4, 1749-1761	<a href="https://doi.org/10.18280/ts.410409">https://doi.org/10.18280/ts.410409</a>	Singh, S.K., Rashid, M., Alshamrani, S.S., Alnfai, M.M., Saxena, P., Khamparia, A. (2024). Efficient transfer learning approach for acute lymphoblastic leukemia diagnosis: Classification of lymphocytes and lymphoblastic cells. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1749-1761. <a href="https://doi.org/10.18280/ts.410409">https://doi.org/10.18280/ts.410409</a>
10	Akyürek, H.A., Koçer, B.	Spectral Similarity Based Multiscale Spatial-Spectral Preprocessing Framework for Hyperspectral Image Classification	Fréchet distance, hyperspectral image classification, multiscale filtering, spatial-spectral preprocessing, spectral angle mapper, spectral correlation measure, spectral information divergence, spectral similarity	41, 4, 1763-1779	<a href="https://doi.org/10.18280/ts.410410">https://doi.org/10.18280/ts.410410</a>	Akyürek, H.A., Koçer, B. (2024). Spectral similarity based multiscale spatial-spectral preprocessing framework for hyperspectral image classification. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1763-1779. <a href="https://doi.org/10.18280/ts.410410">https://doi.org/10.18280/ts.410410</a>
11	Alqahtani M.A.	A Novel End-to-End Deep Learning Approach for Skin Cancer Detection Based on Web Application	skin cancer, convolutional neural network (CNN), deep learning, classification, image processing, web	41, 4, 1781-1796	<a href="https://doi.org/10.18280/ts.410411">https://doi.org/10.18280/ts.410411</a>	Alqahtani M.A. (2024). A novel end-to-end deep learning approach for skin cancer detection based on web application. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1781-1796. <a href="https://doi.org/10.18280/ts.410411">https://doi.org/10.18280/ts.410411</a>
12	Yu, L.	Adaptive Signal Filtering and Health Monitoring for Electric Motor Control Systems in New Energy Vehicles	new energy vehicles, electric motor control systems, health monitoring, adaptive signal filtering, magnetic flux estimation, hierarchical transfer learning	41, 4, 1797-1805	<a href="https://doi.org/10.18280/ts.410412">https://doi.org/10.18280/ts.410412</a>	Yu, L. (2024). Adaptive signal filtering and health monitoring for electric motor control systems in new energy vehicles. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1797-1805. <a href="https://doi.org/10.18280/ts.410412">https://doi.org/10.18280/ts.410412</a>
13	Alwan, A.H., Hashim, A.T., Ali, S.A.	Partial Encryption Scheme of Medical Images Based on DWT, Secret Image Sharing and Hyperchaotic System	medical image, image encryption, IWT, partial encryption, secret image sharing, hyperchaotic system	41, 4, 1807-1821	<a href="https://doi.org/10.18280/ts.410413">https://doi.org/10.18280/ts.410413</a>	Alwan, A.H., Hashim, A.T., Ali, S.A. (2024). Partial encryption scheme of medical images based on DWT, secret image sharing and hyperchaotic system. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1807-1821. <a href="https://doi.org/10.18280/ts.410413">https://doi.org/10.18280/ts.410413</a>
14	Diana, D.C., Hema, R., Jane Carline, M.	D2L2-Dense LSTM Deep Learning Based Nonlinear Acoustic Echo Cancellation	non-linear acoustic echo cancellation, deep learning, LSTM, spectral magnitude, source separation, short time Fourier transform	41, 4, 1823-1834	<a href="https://doi.org/10.18280/ts.410414">https://doi.org/10.18280/ts.410414</a>	Diana, D.C., Hema, R., Jane Carline, M. (2024). D2L2-Dense LSTM deep learning based nonlinear acoustic echo cancellation. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1823-1834. <a href="https://doi.org/10.18280/ts.410414">https://doi.org/10.18280/ts.410414</a>
15	Mahmoud, A.O., Ziedan, I., Zamel, A.A.	Optimized Hybrid Convolution Neural Network with Machine Learning for Arabic Sign Language Recognition	classification, convolution neural network, hybrid CNN, hybrid ML, machine learning algorithms, optimization, sign language	41, 4, 1835-1846	<a href="https://doi.org/10.18280/ts.410415">https://doi.org/10.18280/ts.410415</a>	Mahmoud, A.O., Ziedan, I., Zamel, A.A. (2024). Optimized hybrid convolution neural network with machine learning for Arabic sign language recognition. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1835-1846. <a href="https://doi.org/10.18280/ts.410415">https://doi.org/10.18280/ts.410415</a>
16	Mallikarjunamallu, K., Khasim, S.	Arrhythmia Classification Using Noise Filtering and 1D CNN	electrocardiogram (ECG), gaussian noise, notch filter, one-dimensional convolutional neural network (1D CNN)	41, 4, 1847-1859	<a href="https://doi.org/10.18280/ts.410416">https://doi.org/10.18280/ts.410416</a>	Mallikarjunamallu, K., Khasim, S. (2024). Arrhythmia classification using noise filtering and 1D CNN. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1847-1859. <a href="https://doi.org/10.18280/ts.410416">https://doi.org/10.18280/ts.410416</a>
17	Zhang, R.X.	Optimizing and Assessing the Quality of E-Commerce Product Images Using Deep Learning Techniques	e-commerce, product images, quality assessment, image optimization, deep learning, Laplacian operator, wavelet transform	41, 4, 1861-1870	<a href="https://doi.org/10.18280/ts.410417">https://doi.org/10.18280/ts.410417</a>	Zhang, R.X. (2024). Optimizing and assessing the quality of e-commerce product images using deep learning techniques. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1861-1870. <a href="https://doi.org/10.18280/ts.410417">https://doi.org/10.18280/ts.410417</a>
18	Gnanapirakasam, S.B., Manjula, J.	Develop the Hybrid Empirical Mode Decomposition with Fast Mask CNN to Improve the Performance Measures of PCG Signals	Cardiovascular Diseases (CVD), denoising, double density discrete wavelet transform, Empirical Mode Decomposition (EMD), faster mask convolutional neural network, Mean Square Error (MSE), phonocardiogram, Signal-to-Noise Ratio (SNR)	41, 4, 1871-1883	<a href="https://doi.org/10.18280/ts.410418">https://doi.org/10.18280/ts.410418</a>	Gnanapirakasam, S.B., Manjula, J. (2024). Develop the hybrid Empirical Mode Decomposition with fast mask CNN to improve the performance measures of PCG signals. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1871-1883. <a href="https://doi.org/10.18280/ts.410418">https://doi.org/10.18280/ts.410418</a>

19	Aguilar-Domínguez, K.S., Pinto-Eliás, R., González-Serna, G., Magadán-Salazar, A.	A Novel Correlated Microstructure Elements Descriptor for Image Retrieval	image retrieval, microstructure descriptor, correlated visual features, structure descriptor, image descriptor, image representation, texture descriptor, color descriptor	41, 4, 1885-1897	<a href="https://doi.org/10.18280/ts.410419">https://doi.org/10.18280/ts.410419</a>	Aguilar-Domínguez, K.S., Pinto-Eliás, R., González-Serna, G., Magadán-Salazar, A. (2024). A novel correlated microstructure elements descriptor for image retrieval. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1885-1897. <a href="https://doi.org/10.18280/ts.410419">https://doi.org/10.18280/ts.410419</a>
20	Garg, N., Choudhry, M.S., Bodade, R.M.	Alzheimer's Disease Classification Using Wavelet-Based Image Features	Alzheimer's disease detection, local binary pattern, mild cognitive impairment, principal component analysis, wavelet transform-based method	41, 4, 1899-1910	<a href="https://doi.org/10.18280/ts.410420">https://doi.org/10.18280/ts.410420</a>	Garg, N., Choudhry, M.S., Bodade, R.M. (2024). Alzheimer's disease classification using wavelet-based image features. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1899-1910. <a href="https://doi.org/10.18280/ts.410420">https://doi.org/10.18280/ts.410420</a>
21	Anbalagan, D., Dakshinamurthy, S.	Enhancing the Early Detection and Diagnosis of Plant Diseases Using Deep Learning and Advanced Imaging Techniques	image processing, deep learning, ERLSTMH, downy mildew, ergot, rust, DenseNet-121, ResNet-152	41, 4, 1911-1922	<a href="https://doi.org/10.18280/ts.410421">https://doi.org/10.18280/ts.410421</a>	Anbalagan, D., Dakshinamurthy, S. (2024). Enhancing the early detection and diagnosis of plant diseases using deep learning and advanced imaging techniques. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1911-1922. <a href="https://doi.org/10.18280/ts.410421">https://doi.org/10.18280/ts.410421</a>
22	Lu, M.L., Yang, Y.X.	Image Processing Applications in Smart Contracts: Automated Financial Transaction Verification	smart contracts, image processing, financial transaction verification, automation, table detection, text extraction	41, 4, 1923-1932	<a href="https://doi.org/10.18280/ts.410422">https://doi.org/10.18280/ts.410422</a>	Lu, M.L., Yang, Y.X. (2024). Image processing applications in smart contracts: Automated financial transaction verification. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1923-1932. <a href="https://doi.org/10.18280/ts.410422">https://doi.org/10.18280/ts.410422</a>
23	Kumar, C.K., Ramachandran, N.	Intrusion Signalling System by Using AH-MAC in Network-Coded Mobile Small Cells	network coding, small cells, intrusion signal, pollution attack, attacker location, homomorphic MAC, 5G security	41, 4, 1933-1943	<a href="https://doi.org/10.18280/ts.410423">https://doi.org/10.18280/ts.410423</a>	Kumar, C.K., Ramachandran, N. (2024). Intrusion signalling system by using AH-MAC in network-coded mobile small cells. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1933-1943. <a href="https://doi.org/10.18280/ts.410423">https://doi.org/10.18280/ts.410423</a>
24	Orman, A.	Content-Based Image Retrieval Using Composite Feature Vectors with Edge Features Based on Color and Pixel Similarity	content-based image retrieval, human visual system (HVS), edge-detection, pixel similarity, gradient	41, 4, 1945-1952	<a href="https://doi.org/10.18280/ts.410424">https://doi.org/10.18280/ts.410424</a>	Orman, A. (2024). Content-based image retrieval using composite feature vectors with edge features based on color and pixel similarity. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1945-1952. <a href="https://doi.org/10.18280/ts.410424">https://doi.org/10.18280/ts.410424</a>
25	Sreedharan, S.E., Sundar, G.N., Narmadha, D.	NutriFoodNet: A High-Accuracy Convolutional Neural Network for Automated Food Image Recognition and Nutrient Estimation	food recognition, convolutional neural network (CNN), data augmentation, nutrition evaluation, calorie estimation	41, 4, 1953-1965	<a href="https://doi.org/10.18280/ts.410425">https://doi.org/10.18280/ts.410425</a>	Sreedharan, S.E., Sundar, G.N., Narmadha, D. (2024). NutriFoodNet: A high-accuracy convolutional neural network for automated food image recognition and nutrient estimation. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1953-1965. <a href="https://doi.org/10.18280/ts.410425">https://doi.org/10.18280/ts.410425</a>
26	Iourzikene, Z., Gougam, F., Benazzouz, D.	Performance Evaluation of Feature Extraction and SVM for Brain Tumor Detection Using MRI Images	brain tumor, feature extraction, support vector machines, ResNet50, Image classification	41, 4, 1967-1979	<a href="https://doi.org/10.18280/ts.410426">https://doi.org/10.18280/ts.410426</a>	Iourzikene, Z., Gougam, F., Benazzouz, D. (2024). Performance evaluation of feature extraction and SVM for brain tumor detection using MRI images. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1967-1979. <a href="https://doi.org/10.18280/ts.410426">https://doi.org/10.18280/ts.410426</a>
27	Dai, Z.C., Pan, D., Wu, P., Xu, L.X., Li, J.	A Repeater Deception Jamming System Based on High Gain Antenna Array Spatial Separation Receiving	high gain antenna array, satellite navigation, spatial separation, repeater deception jamming, preferred star strategy	41, 4, 1981-1989	<a href="https://doi.org/10.18280/ts.410427">https://doi.org/10.18280/ts.410427</a>	Dai, Z.C., Pan, D., Wu, P., Xu, L.X., Li, J. (2024). A repeater deception jamming system based on high gain antenna array spatial separation receiving. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1981-1989. <a href="https://doi.org/10.18280/ts.410427">https://doi.org/10.18280/ts.410427</a>
28	Matthew, J.M., Mustafá, M.B.N.M.	Enhancement of Hybrid Deep Neural Network Using Activation Function for EEG Based Emotion Recognition	activation function, ELU, BCI, emotion recognition, ReLU, Leaky ReLU, Deep Neural Network	41, 4, 1991-2002	<a href="https://doi.org/10.18280/ts.410428">https://doi.org/10.18280/ts.410428</a>	Matthew, J.M., Mustafá, M.B.N.M. (2024). Enhancement of hybrid deep neural network using activation function for EEG based emotion recognition. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 1991-2002. <a href="https://doi.org/10.18280/ts.410428">https://doi.org/10.18280/ts.410428</a>
29	Hemamalini, S., Kumar, V.D.A., Ramachandran, V., Robin, R.	Retinal Image Enhancement Through Hyperparameter Selection Using RSO for CLAHE to Classify Diabetic Retinopathy	image enhancement, diabetic retinopathy, histogram equivalence, convolutional neural network, rat swarm optimization algorithm, image segmentation	41, 4, 2003-2012	<a href="https://doi.org/10.18280/ts.410429">https://doi.org/10.18280/ts.410429</a>	Hemamalini, S., Kumar, V.D.A., Ramachandran, V., Robin, R. (2024). Retinal image enhancement through hyperparameter selection using RSO for CLAHE to classify diabetic retinopathy. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2003-2012. <a href="https://doi.org/10.18280/ts.410429">https://doi.org/10.18280/ts.410429</a>
30	Yazan, E., Talu, M.F., Aydođmuş, Ö.	Frameless Registration Method Using a Depth Camera for Robot-Assisted Stereotactic Brain Surgery	landmark registration, face landmark, stereotactic surgery, brain targeting, random forest, SVD	41, 4, 2013-2021	<a href="https://doi.org/10.18280/ts.410430">https://doi.org/10.18280/ts.410430</a>	Yazan, E., Talu, M.F., Aydođmuş, Ö. (2024). Frameless registration method using a depth camera for robot-assisted stereotactic brain surgery. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2013-2021. <a href="https://doi.org/10.18280/ts.410430">https://doi.org/10.18280/ts.410430</a>
31	Dubey, A., Yadav, P., Patel, S.C., Bhargava, C.P., Tomar, A.	Identifying Lung Cancer: A Review on Classification and Detection	lung cancer, sputum test, CAD, multimodal CAD systems, 2D-CNN, F1 score, confusion matrix	41, 4, 2023-2034	<a href="https://doi.org/10.18280/ts.410431">https://doi.org/10.18280/ts.410431</a>	Dubey, A., Yadav, P., Patel, S.C., Bhargava, C.P., Tomar, A. (2024). Identifying lung cancer: A review on classification and detection. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2023-2034. <a href="https://doi.org/10.18280/ts.410431">https://doi.org/10.18280/ts.410431</a>
32	Samreen, S., Venu, V.S.	Enhanced Image Super Resolution Using ResNet Generative Adversarial Networks	GAN, residual network, super resolution, ResNet-GAN	41, 4, 2035-2046	<a href="https://doi.org/10.18280/ts.410432">https://doi.org/10.18280/ts.410432</a>	Samreen, S., Venu, V.S. (2024). Enhanced image super resolution using ResNet generative adversarial networks. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2035-2046. <a href="https://doi.org/10.18280/ts.410432">https://doi.org/10.18280/ts.410432</a>
33	Gu, S.S., Sun, X.L., Chen, B., Tao, W.J.	Depression Micro-Expression Recognition Technology Based on Multimodal Knowledge Graphs	multimodal psychological data, multimodal knowledge graph, Convolutional Neural Network (CNN), Graph Convolutional Network (GCN), transfer learning	41, 4, 2047-2056	<a href="https://doi.org/10.18280/ts.410433">https://doi.org/10.18280/ts.410433</a>	Gu, S.S., Sun, X.L., Chen, B., Tao, W.J. (2024). Depression micro-expression recognition technology based on multimodal knowledge graphs. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2047-2056. <a href="https://doi.org/10.18280/ts.410433">https://doi.org/10.18280/ts.410433</a>
34	Srinubabu, M., Rajasekhar, N.V.	Design and Analysis of a Compact 4-Port MIMO Antenna for Improved Isolation and 5G (n78/n77/n48) Performance	MIMO antenna, modified ground, decoupling, isolation, efficiency, diversity parameters, 5G-NR n78/n77/n48 bands	41, 4, 2057-2067	<a href="https://doi.org/10.18280/ts.410434">https://doi.org/10.18280/ts.410434</a>	Srinubabu, M., Rajasekhar, N.V. (2024). Design and analysis of a compact 4-port MIMO antenna for improved isolation and 5G (n78/n77/n48) performance. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2057-2067. <a href="https://doi.org/10.18280/ts.410434">https://doi.org/10.18280/ts.410434</a>
35	Ahmed, B., Omer, O.A., Rashed, A., Abdel-Nasser, M.	No-Reference Quality Assessment of Blurred Images by Combining Hybrid Metrics	non-referential image quality assessment (NR-IQA), reblurring, gradient magnitude similarity deviation (GMSD), peak signal-to-noise ratio (PSNR), structural similarity index measure (SSIM), combined metrics, point spread function (PSF)	41, 4, 2069-2080	<a href="https://doi.org/10.18280/ts.410435">https://doi.org/10.18280/ts.410435</a>	Ahmed, B., Omer, O.A., Rashed, A., Abdel-Nasser, M. (2024). No-reference quality assessment of blurred images by combining hybrid metrics. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2069-2080. <a href="https://doi.org/10.18280/ts.410435">https://doi.org/10.18280/ts.410435</a>
36	Sabitha, P., Canessane, R.A., Minu, M.S.P., Gowri, V., Vigil, M.S.A.	An Improved Deep Network Model to Isolate Lung Nodules from Histopathological Images Using an Orchestrated and Shifted Window Vision Transformer	attention units, lung nodules, isolation, shifted window transformer, Vision Transformer (ViT)	41, 4, 2081-2091	<a href="https://doi.org/10.18280/ts.410436">https://doi.org/10.18280/ts.410436</a>	Sabitha, P., Canessane, R.A., Minu, M.S.P., Gowri, V., Vigil, M.S.A. (2024). An improved deep network model to isolate lung nodules from histopathological images using an orchestrated and shifted window vision transformer. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2081-2091. <a href="https://doi.org/10.18280/ts.410436">https://doi.org/10.18280/ts.410436</a>

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38	Patel, S.R., Madireddy, V.R., Rajiv, K.	Fetal Heart Abnormality Detection in Prior Stage Using LeNet 20 Deep Learning Architecture	fetal heart, heart abnormality, diagnosis, FCNN, LeNet 20	41, 4, 2103-2114	<a href="https://doi.org/10.18280/ts.410438">https://doi.org/10.18280/ts.410438</a>	Patel, S.R., Madireddy, V.R., Rajiv, K. (2024). Fetal heart abnormality detection in prior stage using LeNet 20 deep learning architecture. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2103-2114. <a href="https://doi.org/10.18280/ts.410438">https://doi.org/10.18280/ts.410438</a>
39	Chen, X.H., Wang, T.Z., Un, C.E., Qin, H.W.	Application of Deep Learning-Based Image Registration Techniques in Autonomous Robot Navigation	autonomous robot navigation, image registration, deep learning, network-in-network, dual-attention mechanisms, feature matching, parameter regression network	41, 4, 2115-2122	<a href="https://doi.org/10.18280/ts.410439">https://doi.org/10.18280/ts.410439</a>	Chen, X.H., Wang, T.Z., Un, C.E., Qin, H.W. (2024). Application of deep learning-based image registration techniques in autonomous robot navigation. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2115-2122. <a href="https://doi.org/10.18280/ts.410439">https://doi.org/10.18280/ts.410439</a>
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41	Atitallah, A.B.	An Optimized HW/SW Implementation of the Vector Median Rational Hybrid Filter for Real-Time Color Image Denoising	nonlinear filter, VMRF filter, real-time image denoising, HW/SW codesign, HLS flow, FPGA, low-latency implementation	41, 4, 2135-2142	<a href="https://doi.org/10.18280/ts.410441">https://doi.org/10.18280/ts.410441</a>	Atitallah, A.B. (2024). An optimized HW/SW implementation of the vector median rational hybrid filter for real-time color image denoising. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2135-2142. <a href="https://doi.org/10.18280/ts.410441">https://doi.org/10.18280/ts.410441</a>
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43	Polat, L.N.Ö., Özen, Ş.	Evaluating the Audiological Testing Process Through Galvanic Skin Response Using a One-Dimensional Convolutional Neural Network	audiological test, convolutional neural network (CNN), Fourier transform, galvanic skin response (GSR)	41, 4, 2153-2158	<a href="https://doi.org/10.18280/ts.410443">https://doi.org/10.18280/ts.410443</a>	Polat, L.N.Ö., Özen, Ş. (2024). Evaluating the audiological testing process through galvanic skin response using a one-dimensional convolutional neural network. <i>Traitement du Signal</i> , Vol. 41, No. 4, pp. 2153-2158. <a href="https://doi.org/10.18280/ts.410443">https://doi.org/10.18280/ts.410443</a>
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53	Soora, N.R., Kotte, V.K., Dorthi, K., Vodithala, S., Kumar, N.C.S.	A Comprehensive Literature Review of Vehicle License Plate Detection Methods	image processing, pattern recognition, license plate detection, license plate recognition, intelligent transport system, automatic number plate recognition	41, 3, 1129-1141	<a href="https://doi.org/10.18280/ts.410304">https://doi.org/10.18280/ts.410304</a>	Soora, N.R., Kotte, V.K., Dorthi, K., Vodithala, S., Kumar, N.C.S. (2024). A comprehensive literature review of vehicle license plate detection methods. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1129-1141. <a href="https://doi.org/10.18280/ts.410304">https://doi.org/10.18280/ts.410304</a>
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67	Deo, A., Pandey, I., Khan, S.S., Mandlik, A., Doohan, N.V., Panchal, B.	Deep Learning-Based Red Blood Cell Classification for Sickle Cell Anemia Diagnosis Using Hybrid CNN-LSTM Model	sickle cell anemia, machine learning, deep learning, CNN, LSTM, blood disorder, image classification, microscopy images	41, 3, 1293-1301	<a href="https://doi.org/10.18280/ts.410318">https://doi.org/10.18280/ts.410318</a>	Deo, A., Pandey, I., Khan, S.S., Mandlik, A., Doohan, N.V., Panchal, B. (2024). Deep learning-based red blood cell classification for sickle cell anemia diagnosis using hybrid CNN-LSTM model. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1293-1301. <a href="https://doi.org/10.18280/ts.410318">https://doi.org/10.18280/ts.410318</a>
68	Ashok, P., Latha, B.	Feature Extraction of Underwater Acoustic Signal Target Using Machine Learning Technique	features extractor, image processing, underwater acoustic, Region-based Convolutional Neural Network, ship-radiated noise, target recognition	41, 3, 1303-1314	<a href="https://doi.org/10.18280/ts.410319">https://doi.org/10.18280/ts.410319</a>	Ashok, P., Latha, B. (2024). Feature extraction of underwater acoustic signal target using machine learning technique. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1303-1314. <a href="https://doi.org/10.18280/ts.410319">https://doi.org/10.18280/ts.410319</a>
69	Murariu, M.G., Dorobanțu, F.R., Târniceanu, D.	Enhanced Classification of Focal and Generalized Epilepsy Using EEMD and CEEMDAN Methods	adaptive methods, classifiers, diagnostic systems, electroencephalography signals, epilepsy, focal, generalized	41, 3, 1315-1322	<a href="https://doi.org/10.18280/ts.410320">https://doi.org/10.18280/ts.410320</a>	Murariu, M.G., Dorobanțu, F.R., Târniceanu, D. (2024). Enhanced classification of focal and generalized epilepsy using EEMD and CEEMDAN methods. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1315-1322. <a href="https://doi.org/10.18280/ts.410320">https://doi.org/10.18280/ts.410320</a>
70	Lei, H.Q., Li, D.Q., Jiang, H.D.	Research on Bistatic Sonar Positioning and Its Optimization Algorithm	positioning optimization algorithm, sonar positioning, bistatic sonar, WLS algorithm	41, 3, 1323-1329	<a href="https://doi.org/10.18280/ts.410321">https://doi.org/10.18280/ts.410321</a>	Lei, H.Q., Li, D.Q., Jiang, H.D. (2024). Research on bistatic sonar positioning and its optimization algorithm. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1323-1329. <a href="https://doi.org/10.18280/ts.410321">https://doi.org/10.18280/ts.410321</a>
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72	Pandi, V.S., Prasina, A., Shibu, S., Sriprya, T.	A Novel Downlink Frequency Allocation (DFA) Technique for Enhanced Throughput in 5G and Beyond (B5G) Multi-hop Networks	DFA, 5G networks, B5G, multi-hop transmission, enhanced throughput	41, 3, 1345-1354	<a href="https://doi.org/10.18280/ts.410323">https://doi.org/10.18280/ts.410323</a>	Pandi, V.S., Prasina, A., Shibu, S., Sriprya, T. (2024). A novel downlink frequency allocation (DFA) technique for enhanced throughput in 5G and beyond (B5G) multi-hop networks. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1345-1354. <a href="https://doi.org/10.18280/ts.410323">https://doi.org/10.18280/ts.410323</a>

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74	Morab, F., Hegde, R., Hegde, V.	Swift Convergent Weighted Quadrigeminal Beamformer Using Smart Antenna System	beamforming, 5G, smart antennas, 6G, phased antenna array signal processing, massive MIMO	41, 3, 1365-1375	<a href="https://doi.org/10.18280/ts.410325">https://doi.org/10.18280/ts.410325</a>	Morab, F., Hegde, R., Hegde, V. (2024). Swift convergent weighted quadrigeminal beamformer using smart antenna system. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1365-1375. <a href="https://doi.org/10.18280/ts.410325">https://doi.org/10.18280/ts.410325</a>
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76	Liang, S.L.	Building Energy Efficiency Analysis and Diagnosis Using Integrated Image Processing and Thermal Imaging Technologies	building energy efficiency, image processing, thermal imaging technology, selection search algorithm, (SHapley Additive exPlanations) SHAP attribution clustering algorithm, energy efficiency state segmentation	41, 3, 1387-1395	<a href="https://doi.org/10.18280/ts.410327">https://doi.org/10.18280/ts.410327</a>	Liang, S.L. (2024). Building energy efficiency analysis and diagnosis using integrated image processing and thermal imaging technologies. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1387-1395. <a href="https://doi.org/10.18280/ts.410327">https://doi.org/10.18280/ts.410327</a>
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78	Alshazly, H., Elmamni, H., Alkanhel, R.I., Abdelnazeer, A.	Advancing Biometric Identity Recognition with Optimized Deep Convolutional Neural Networks	deep learning, ear recognition, ear biometrics, convolutional neural networks, transfer learning, visual explanation, interpretable models	41, 3, 1405-1418	<a href="https://doi.org/10.18280/ts.410329">https://doi.org/10.18280/ts.410329</a>	Alshazly, H., Elmamni, H., Alkanhel, R.I., Abdelnazeer, A. (2024). Advancing biometric identity recognition with optimized deep convolutional neural networks. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1405-1418. <a href="https://doi.org/10.18280/ts.410329">https://doi.org/10.18280/ts.410329</a>
79	Zhang, F.L.	Application of Multi-objective Optimization in 3D Image Reconstruction	3D image reconstruction, multi-objective optimization, medical imaging, computational efficiency, structural continuity	41, 3, 1419-1427	<a href="https://doi.org/10.18280/ts.410330">https://doi.org/10.18280/ts.410330</a>	Zhang, F.L. (2024). Application of multi-objective optimization in 3D image reconstruction. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1419-1427. <a href="https://doi.org/10.18280/ts.410330">https://doi.org/10.18280/ts.410330</a>
80	Mali, S.G., Mahajan, S.P.	Blind Sound Source Separation by Combining the Convolutional Neural Network and Degree Separator	artificial neural network, blind sound source separation, convolutional neural network-direction of arrival deep learning, degree separator, hybrid algorithms, microphone arrays, soft computing	41, 3, 1429-1439	<a href="https://doi.org/10.18280/ts.410331">https://doi.org/10.18280/ts.410331</a>	Mali, S.G., Mahajan, S.P. (2024). Blind sound source separation by combining the convolutional neural network and degree separator. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1429-1439. <a href="https://doi.org/10.18280/ts.410331">https://doi.org/10.18280/ts.410331</a>
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89	Bao, M., Zhang, N.	Enhanced Methodology for Building Surface Inspection Using Infrared Thermography and Numerical Simulation	infrared thermography (IRT), ANSYS Fluent, building surface inspection, heat transfer modeling, numerical simulation	41, 3, 1527-1537	<a href="https://doi.org/10.18280/ts.410340">https://doi.org/10.18280/ts.410340</a>	Bao, M., Zhang, N. (2024). Enhanced methodology for building surface inspection using infrared thermography and numerical simulation. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1527-1537. <a href="https://doi.org/10.18280/ts.410340">https://doi.org/10.18280/ts.410340</a>
90	Singh, K.N., Kumar, S.	A Spectral Graph Fractional Stockwell Transform for Signal Analysis	graph wavelet transform, graph fractional Fourier transform, graph fractional wavelet transform, graph Stockwell transform, Laplacian matrix, graph signal processing, time-frequency analysis, Stockwell transform	41, 3, 1539-1546	<a href="https://doi.org/10.18280/ts.410341">https://doi.org/10.18280/ts.410341</a>	Singh, K.N., Kumar, S. (2024). A spectral graph fractional Stockwell transform for signal analysis. <i>Traitement du Signal</i> , Vol. 41, No. 3, pp. 1539-1546. <a href="https://doi.org/10.18280/ts.410341">https://doi.org/10.18280/ts.410341</a>

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99	Hamza, M.M., Noredine, B., Abdeslem, B.Z., Benyssaad, Y., Ilham, B.S.	Classifying Abnormal Arterial Pulse Patterns in Cardiovascular Diseases: A Photoplethysmography and Machine Learning Approach	abnormal arterial pulse (AAP), arterial blood pressure (ABP), classification, machine learning (ML), modeling, photoplethysmography (PPG)	41, 2, 543-562	<a href="https://doi.org/10.18280/ts.410201">https://doi.org/10.18280/ts.410201</a>	Hamza, M.M., Noredine, B., Abdeslem, B.Z., Benyssaad, Y., Ilham, B.S. (2024). Classifying abnormal arterial pulse patterns in cardiovascular diseases: A photoplethysmography and machine learning approach. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 543-562. <a href="https://doi.org/10.18280/ts.410201">https://doi.org/10.18280/ts.410201</a>
100	Gogu, S.R., Sathe, S.R.	Ensemble Stacking for Grading Facial Paralysis Through Statistical Analysis of Facial Features Utilizing Ensemble Stacking for Grading Facial Paralysis Through Statistical Analysis of Facial Features	classification, ensemble stacking, facial features, facial paralysis (FP), machine learning	41, 2, 563-574	<a href="https://doi.org/10.18280/ts.410202">https://doi.org/10.18280/ts.410202</a>	Gogu, S.R., Sathe, S.R. (2024). Ensemble stacking for grading facial paralysis through statistical analysis of facial features. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 563-574. <a href="https://doi.org/10.18280/ts.410202">https://doi.org/10.18280/ts.410202</a>
101	Jin, L., Guan, Y.L., Li, P.F., Shi, C.X.	Applications of Multiscale Geometric Analysis in Image Texture Recognition and Classification	image texture recognition, image texture classification, contourlet-kernel spectral regression (KSR), domain multiresolution co-occurrence matrix (MCM), computer vision	41, 2, 575-584	<a href="https://doi.org/10.18280/ts.410203">https://doi.org/10.18280/ts.410203</a>	Jin, L., Guan, Y.L., Li, P.F., Shi, C.X. (2024). Applications of multiscale geometric analysis in image texture recognition and classification. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 575-584. <a href="https://doi.org/10.18280/ts.410203">https://doi.org/10.18280/ts.410203</a>
102	Chandrasekaran, S.N., Nagaraju, V.K.M., Nicholas, V.A.G., Jayaraman, T.	Enhanced Prediction of Fetal Heart Chamber Defects Using a Deep Belief Network-Based Transit Search Method	Enhanced Deep Belief Network (EDBN), Fetal Heart Chamber Defect (FHCD) Segmentation and Prediction, Grey Level Co-occurrence Matrix (GLCM), Otsu Thresholding, Transit Search (TS) algorithm	41, 2, 585-597	<a href="https://doi.org/10.18280/ts.410204">https://doi.org/10.18280/ts.410204</a>	Chandrasekaran, S.N., Nagaraju, V.K.M., Nicholas, V.A.G., Jayaraman, T. (2024). Enhanced prediction of fetal heart chamber defects using a deep belief network-based transit search method. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 585-597. <a href="https://doi.org/10.18280/ts.410204">https://doi.org/10.18280/ts.410204</a>
103	Akkaya, S.	Optimization of Convolutional Neural Networks for Classifying Power Quality Disturbances Using Wavelet Synchrosqueezed Transform	power quality disturbances (PQDs), detection and classification (D&C), convolutional neural network (CNN), hyperparameter optimization, time-series signal, wavelet synchrosqueezed transform (WSST)	41, 2, 599-614	<a href="https://doi.org/10.18280/ts.410205">https://doi.org/10.18280/ts.410205</a>	Akkaya, S. (2024). Optimization of convolutional neural networks for classifying power quality disturbances using wavelet synchrosqueezed transform. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 599-614. <a href="https://doi.org/10.18280/ts.410205">https://doi.org/10.18280/ts.410205</a>
104	Hu, T., Fu, Q.W., Chen, L., Shi, M.D.	Optimizing Building Information Modeling System Design Elements for Enhanced User Experience: A Multidimensional Approach	user experience (UX), Building Information Modeling (BIM), contextual design, design optimization	41, 2, 615-628	<a href="https://doi.org/10.18280/ts.410206">https://doi.org/10.18280/ts.410206</a>	Hu, T., Fu, Q.W., Chen, L., Shi, M.D. (2024). Optimizing building information modeling system design elements for enhanced user experience: A multidimensional approach. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 615-628. <a href="https://doi.org/10.18280/ts.410206">https://doi.org/10.18280/ts.410206</a>
105	Ganguly, S., Ghosh, I., Kumar, P.K., Sarkar, I., Ghosh, J., Mukhopadhyay, M.	Advancements in Jammer Location Identification and Suppression: Employing a Multi-Target Least Square Constant Modulus Array Approach	constant modulus algorithm (CMA), direction-of-arrival (DOA) estimation, intentional interferers, jamming signal suppression, least square constant modulus algorithm (LSCMA), null steering, root mean square error (RMSE)	41, 2, 629-641	<a href="https://doi.org/10.18280/ts.410207">https://doi.org/10.18280/ts.410207</a>	Ganguly, S., Ghosh, I., Kumar, P.K., Sarkar, I., Ghosh, J., Mukhopadhyay, M. (2024). Advancements in jammer location identification and suppression: Employing a multi-target least square constant modulus array approach. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 629-641. <a href="https://doi.org/10.18280/ts.410207">https://doi.org/10.18280/ts.410207</a>
106	Dhamale, T.D., Bhandari, S.U., Harpale, V.K., Nandan, D.	Autism Spectrum Disorder Detection Using Parallel Deep Convolution Neural Network and Generative Adversarial Networks	ABIDE-I, autism spectrum disorder, data augmentation, deep learning, Deep Convolution Neural Network, fMRI, generative adversarial neural network	41, 2, 643-652	<a href="https://doi.org/10.18280/ts.410208">https://doi.org/10.18280/ts.410208</a>	Dhamale, T.D., Bhandari, S.U., Harpale, V.K., Nandan, D. (2024). Autism spectrum disorder detection using parallel deep convolution neural network and generative adversarial networks. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 643-652. <a href="https://doi.org/10.18280/ts.410208">https://doi.org/10.18280/ts.410208</a>
107	Rong, L.F., Chen, Y.Q., Hu, J.L., Liu, Y.L., Li, H.R.	Ultrasonic Synthetic Aperture Imaging for Inner Defect of Concrete Based on Delay-Multiple-and-Sum	ultrasonic tests, concrete inner defect, SAFT, DMAS, imaging quality	41, 2, 653-668	<a href="https://doi.org/10.18280/ts.410209">https://doi.org/10.18280/ts.410209</a>	Rong, L.F., Chen, Y.Q., Hu, J.L., Liu, Y.L., Li, H.R. (2024). Ultrasonic synthetic aperture imaging for inner defect of concrete based on delay-multiple-and-sum. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 653-668. <a href="https://doi.org/10.18280/ts.410209">https://doi.org/10.18280/ts.410209</a>
108	Ratha, A.K., Barpanda, N.K., Sethy, P.K., Behera, S.K.	Automated Classification of Indian Mango Varieties Using Machine Learning and MobileNet-v2 Deep Features	mango identification, deep learning, convolutional neural network (CNN), computer vision, machine learning, Support Vector Machine (SVM)	41, 2, 669-678	<a href="https://doi.org/10.18280/ts.410210">https://doi.org/10.18280/ts.410210</a>	Ratha, A.K., Barpanda, N.K., Sethy, P.K., Behera, S.K. (2024). Automated classification of Indian mango varieties using machine learning and MobileNet-v2 deep features. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 669-678. <a href="https://doi.org/10.18280/ts.410210">https://doi.org/10.18280/ts.410210</a>



109	Mahmoud, H., Omer, O.A., Ragab, S., Esmail, H., Abdel-Nasser, M.	Classifying Melanoma in ISIC Dermoscopic Images Using Efficient Convolutional Neural Networks and Deep Transfer Learning	skin cancer, image classification, precise Computer-Aided Diagnosis (CAD), deep learning, Convolutional Neural Network (CNN), dermoscopic images	41, 2, 679-691	<a href="https://doi.org/10.18280/ts.410211">https://doi.org/10.18280/ts.410211</a>	Mahmoud, H., Omer, O.A., Ragab, S., Esmail, H., Abdel-Nasser, M. (2024). Classifying melanoma in ISIC dermoscopic images using efficient Convolutional Neural Networks and deep transfer learning. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 679-691. <a href="https://doi.org/10.18280/ts.410211">https://doi.org/10.18280/ts.410211</a>
110	Shao, T., Xu, J., Dai, Y.Q.	Spinal Cord Injury Identification and Localization Detection Based on MRI Imaging and Deep Learning Technology	spinal cord injury (SCI), Magnetic Resonance Imaging (MRI), convolutional neural network (CNN), faster R-CNN, VGG-16, Resnet50	41, 2, 693-703	<a href="https://doi.org/10.18280/ts.410212">https://doi.org/10.18280/ts.410212</a>	Shao, T., Xu, J., Dai, Y.Q. (2024). Spinal cord injury identification and localization detection based on MRI imaging and deep learning technology. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 693-703. <a href="https://doi.org/10.18280/ts.410212">https://doi.org/10.18280/ts.410212</a>
111	Dutta, M., Gupta, D., Gulzar, Y., Mir, M.S., Onn, C.W., Soomro, A.B.	Leveraging Inception V3 for Precise Early and Late Blight Disease Classification in Potato Crops	deep learning, image classification, precision agriculture, potato disease, disease detection	41, 2, 705-715	<a href="https://doi.org/10.18280/ts.410213">https://doi.org/10.18280/ts.410213</a>	Dutta, M., Gupta, D., Gulzar, Y., Mir, M.S., Onn, C.W., Soomro, A.B. (2024). Leveraging Inception V3 for precise early and late blight disease classification in potato crops. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 705-715. <a href="https://doi.org/10.18280/ts.410213">https://doi.org/10.18280/ts.410213</a>
112	Neelima, M., Prabha, I.S.	Hybrid Feature Optimization for Voice Spoof Detection Using CNN-LSTM	convolutional neural network (CNN), constant Q cepstral coefficients (CQCC), hybrid feature extraction, long short-term memory (LSTM), Mel-frequency cepstral coefficients (MFCC), spectrogram	41, 2, 717-727	<a href="https://doi.org/10.18280/ts.410214">https://doi.org/10.18280/ts.410214</a>	Neelima, M., Prabha, I.S. (2024). Hybrid feature optimization for voice spoof detection using CNN-LSTM. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 717-727. <a href="https://doi.org/10.18280/ts.410214">https://doi.org/10.18280/ts.410214</a>
113	Zuo, B., Xiong, F.	Enhancing Lung Cancer Diagnosis with MixMAE: Integrating Mixup and Masked Autoencoders for Superior Pathological Image Analysis	self-supervised learning (SSL), mask autoencoders (MAE), Mixup, image classification, lung cancer	41, 2, 729-738	<a href="https://doi.org/10.18280/ts.410215">https://doi.org/10.18280/ts.410215</a>	Zuo, B., Xiong, F. (2024). Enhancing lung cancer diagnosis with MixMAE: Integrating Mixup and Masked Autoencoders for superior pathological image analysis. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 729-738. <a href="https://doi.org/10.18280/ts.410215">https://doi.org/10.18280/ts.410215</a>
114	Chaudhary, S., Kumar, U.	Automated Detection and Classification of Rice Crop Diseases Using Advanced Image Processing and Machine Learning Techniques	classification, image processing, feature extraction, machine learning	41, 2, 739-752	<a href="https://doi.org/10.18280/ts.410216">https://doi.org/10.18280/ts.410216</a>	Chaudhary, S., Kumar, U. (2024). Automated detection and classification of rice crop diseases using advanced image processing and machine learning techniques. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 739-752. <a href="https://doi.org/10.18280/ts.410216">https://doi.org/10.18280/ts.410216</a>
115	Balci, F.	Hybrid Elmann-BiLSTM Based Brain Tumor Classification on Augmented Data with Combination of Variational Auto-Encoders and Generative Adversarial Network	variational auto-encoder, Generative Adversarial Networks (GAN), brain tumor classification, deep learning, Elmann RNN	41, 2, 753-769	<a href="https://doi.org/10.18280/ts.410217">https://doi.org/10.18280/ts.410217</a>	Balci, F. (2024). Hybrid Elmann-BiLSTM based brain tumor classification on augmented data with combination of variational auto-encoders and generative adversarial network. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 753-769. <a href="https://doi.org/10.18280/ts.410217">https://doi.org/10.18280/ts.410217</a>
116	Gu, H.W., Wang, P.J., Li, Y., Bao, N., Wang, H.W., Xie, Y.C., Xuan, A.W., Zhao, Y.H., Yu, H.L., Ma, H.	MFP-DeepLabv3+: A Multi-scale Feature Fusion and Parallel Attention Network for Enhanced Bone Metastasis Segmentation	bone metastasis segmentation, DeepLabv3+, AFP, PSCAN, multi-layer skip connection	41, 2, 771-780	<a href="https://doi.org/10.18280/ts.410218">https://doi.org/10.18280/ts.410218</a>	Gu, H.W., Wang, P.J., Li, Y., Bao, N., Wang, H.W., Xie, Y.C., Xuan, A.W., Zhao, Y.H., Yu, H.L., Ma, H. (2024). MFP-DeepLabv3+: A multi-scale feature fusion and parallel attention network for enhanced bone metastasis segmentation. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 771-780. <a href="https://doi.org/10.18280/ts.410218">https://doi.org/10.18280/ts.410218</a>
117	Sapra, V., Sapra, L., Bhardwaj, A., Almogren, A., Bharany, S., Rehman, A.U., Ouahada, K.	Diabetic Retinopathy Detection Using Deep Learning with Optimized Feature Selection	diabetic retinopathy, machine learning, random forest, artificial neural network, feature selection, deep learning	41, 2, 781-790	<a href="https://doi.org/10.18280/ts.410219">https://doi.org/10.18280/ts.410219</a>	Sapra, V., Sapra, L., Bhardwaj, A., Almogren, A., Bharany, S., Rehman, A.U., Ouahada, K. (2024). Diabetic retinopathy detection using deep learning with optimized feature selection. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 781-790. <a href="https://doi.org/10.18280/ts.410219">https://doi.org/10.18280/ts.410219</a>
118	Avaroğlu, E., Kahveci, S., Akkurt, R.	Optimization of Acoustic Entropy Source for Random Sequence Generation Using an Improved Grey Wolf Algorithm	acoustic entropy source, swarm intelligence, random number generator	41, 2, 791-799	<a href="https://doi.org/10.18280/ts.410220">https://doi.org/10.18280/ts.410220</a>	Avaroğlu, E., Kahveci, S., Akkurt, R. (2024). Optimization of acoustic entropy source for random sequence generation using an improved grey wolf algorithm. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 791-799. <a href="https://doi.org/10.18280/ts.410220">https://doi.org/10.18280/ts.410220</a>
119	Chen, R., Li, D.S., Zhu, F., Yan, X.S., Wang, H., Guan, C.K., Ke, X., Zeng, L.J., Zhao, J.	Advanced Techniques in Dynamic Cardiac Ultrasound Imaging for Assessing Left Ventricular Function in Heart Failure Patients	heart failure, cardiac ultrasound imaging, image processing technology, visual attention mechanisms, generative adversarial networks (GAN), dynamic contour models, left ventricular function assessment	41, 2, 801-810	<a href="https://doi.org/10.18280/ts.410221">https://doi.org/10.18280/ts.410221</a>	Chen, R., Li, D.S., Zhu, F., Yan, X.S., Wang, H., Guan, C.K., Ke, X., Zeng, L.J., Zhao, J. (2024). Advanced techniques in dynamic cardiac ultrasound imaging for assessing left ventricular function in heart failure patients. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 801-810. <a href="https://doi.org/10.18280/ts.410221">https://doi.org/10.18280/ts.410221</a>
120	Abdulhussein, M.A., Aldeen, A.W., Al-Abboodi, H.	Differential Cortical Connectivity in Migraine: Insights from High-Density EEG and Steady-State Visual Evoked Potentials	cortical connectivity, high-density EEG, steady-state visual evoked potentials (SSVEP), migraine, cortical spreading depression (CSD), aura	41, 2, 811-826	<a href="https://doi.org/10.18280/ts.410222">https://doi.org/10.18280/ts.410222</a>	Abdulhussein, M.A., Aldeen, A.W., Al-Abboodi, H. (2024). Differential cortical connectivity in migraine: Insights from high-density EEG and steady-state visual evoked potentials. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 811-826. <a href="https://doi.org/10.18280/ts.410222">https://doi.org/10.18280/ts.410222</a>
121	Sivaprasad, P., Venkataraman, A., Murty, P.S.	Advanced Phase Estimation and Design for Next-Generation Radar Systems: A Digital Approach	radar system design, Field-Programmable Gate Array (FPGA), milli-degree phase estimation, CORDIC algorithm, digital signal processing	41, 2, 827-833	<a href="https://doi.org/10.18280/ts.410223">https://doi.org/10.18280/ts.410223</a>	Sivaprasad, P., Venkataraman, A., Murty, P.S. (2024). Advanced phase estimation and design for next-generation radar systems: A digital approach. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 827-833. <a href="https://doi.org/10.18280/ts.410223">https://doi.org/10.18280/ts.410223</a>
122	Karthikeyan, T., Govindarajan, M., Vijayakumar, V.	Enhancing Financial Fraud Detection Through Chimp-Optimized Long Short-Term Memory Networks	financial fraud detection, credit card fraud, neural networks, metaheuristic optimization, chimp optimization, long short-term memory (LSTM), feature selection (FS), performance evaluation	41, 2, 835-845	<a href="https://doi.org/10.18280/ts.410224">https://doi.org/10.18280/ts.410224</a>	Karthikeyan, T., Govindarajan, M., Vijayakumar, V. (2024). Enhancing financial fraud detection through chimp-optimized long short-term memory networks. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 835-845. <a href="https://doi.org/10.18280/ts.410224">https://doi.org/10.18280/ts.410224</a>
123	Akarsu, E., Karacali, T.	Comparison of Video Classification Results with Machine Learning	artificial intelligence, deep learning, video classification, video dataset, pre-training algorithm	41, 2, 847-855	<a href="https://doi.org/10.18280/ts.410225">https://doi.org/10.18280/ts.410225</a>	Akarsu, E., Karacali, T. (2024). Comparison of video classification results with machine learning. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 847-855. <a href="https://doi.org/10.18280/ts.410225">https://doi.org/10.18280/ts.410225</a>
124	Li, J.Y., Lv, Y.B., Yan, X., Weng, H.J., Li, D., Shi, N.	Automatic Cloud Detection and Removal in Satellite Imagery Using Deep Learning Techniques	satellite imagery, cloud detection, cloud removal, superpixel segmentation, generative adversarial networks (GAN), deep learning	41, 2, 857-865	<a href="https://doi.org/10.18280/ts.410226">https://doi.org/10.18280/ts.410226</a>	Li, J.Y., Lv, Y.B., Yan, X., Weng, H.J., Li, D., Shi, N. (2024). Automatic cloud detection and removal in satellite imagery using deep learning techniques. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 857-865. <a href="https://doi.org/10.18280/ts.410226">https://doi.org/10.18280/ts.410226</a>
125	Sundararajan, M., Selvam, S.P.	Optimizing Hyperspectral Image Classification Through Advanced Deep Learning Models Enhanced by Adam	deep learning, hyperspectral images, spatial context, spectral correlation, feature extraction, optimization algorithms, convolutional neural network (CNN), Adam optimizer	41, 2, 867-877	<a href="https://doi.org/10.18280/ts.410227">https://doi.org/10.18280/ts.410227</a>	Sundararajan, M., Selvam, S.P. (2024). Optimizing hyperspectral image classification through advanced deep learning models enhanced by Adam. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 867-877. <a href="https://doi.org/10.18280/ts.410227">https://doi.org/10.18280/ts.410227</a>
126	Al Musalhi, N., Celebi, E.	Advanced Age Group Estimation Using Gait Analysis: A Novel Multi-Energy Image and Invariant Moments Method	age group estimation, age verification, accumulated frame difference energy image (AFDEI), convolutional neural network (CNN), gait energy image (GEI), human gait, invariant moments, view angle variability	41, 2, 879-889	<a href="https://doi.org/10.18280/ts.410228">https://doi.org/10.18280/ts.410228</a>	Al Musalhi, N., Celebi, E. (2024). Advanced age group estimation using gait analysis: A novel multi-energy image and invariant moments method. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 879-889. <a href="https://doi.org/10.18280/ts.410228">https://doi.org/10.18280/ts.410228</a>

127	Cheng, X.Y., Li, J.Y., Mi, M.Q., Wang, H., Wang, J.J., Su, P.	Accuracy Study on Deep Learning-Based CT Image Analysis for Lung Nodule Detection and Classification	deep learning, lung nodule detection, lung nodule classification, CT, domain adaptation, adversarial networks, few-shot learning, deep propagation generation network (DPGN)	41, 2, 891-899	<a href="https://doi.org/10.18280/ts.410229">https://doi.org/10.18280/ts.410229</a>	Cheng, X.Y., Li, J.Y., Mi, M.Q., Wang, H., Wang, J.J., Su, P. (2024). Accuracy study on deep learning-based CT image analysis for lung nodule detection and classification. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 891-899. <a href="https://doi.org/10.18280/ts.410229">https://doi.org/10.18280/ts.410229</a>
128	Arepalli, G.S., Boobalan, P.	Enhanced Security in Biometrics: A Cancelable Multi-Instance Iris Authentication Utilizing Quotient Filter	biometric authentication system, privacy-preserving, cancelable biometrics, quotient filter, multi-instance iris	41, 2, 901-910	<a href="https://doi.org/10.18280/ts.410230">https://doi.org/10.18280/ts.410230</a>	Arepalli, G.S., Boobalan, P. (2024). Enhanced security in biometrics: A cancelable multi-instance iris authentication utilizing quotient filter. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 901-910. <a href="https://doi.org/10.18280/ts.410230">https://doi.org/10.18280/ts.410230</a>
129	Manseur, A., Dendouga, A.	Enhanced Noise Cancellation: A Variable Step Size Normalized Least Mean Square Approach	adaptive filtering, noise cancellation, LMS algorithm, NLMS algorithm, VSS-NLMS algorithm, variable step size, convergence factor, Mean Square Error (MSE)	41, 2, 911-918	<a href="https://doi.org/10.18280/ts.410231">https://doi.org/10.18280/ts.410231</a>	Manseur, A., Dendouga, A. (2024). Enhanced noise cancellation: A variable step size normalized least mean square approach. <i>Traitement du Signal</i> , Vol. 41, No. 2, 911-918. <a href="https://doi.org/10.18280/ts.410231">https://doi.org/10.18280/ts.410231</a>
130	Feng, X.C., Han, J.L., Liu, Y., Hou, R.S., Li, T.L.	Dual-Scale Dataset-Based Intelligent Recognition of Power Equipment for Enhanced Digital Grid Planning	power equipment identification, deep learning, object detection, dual-scale datasets	41, 2, 919-927	<a href="https://doi.org/10.18280/ts.410232">https://doi.org/10.18280/ts.410232</a>	Feng, X.C., Han, J.L., Liu, Y., Hou, R.S., Li, T.L. (2024). Dual-scale dataset-based intelligent recognition of power equipment for enhanced digital grid planning. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 919-927. <a href="https://doi.org/10.18280/ts.410232">https://doi.org/10.18280/ts.410232</a>
131	Fuladi, S., Chaturvedi, H., Nallakaruppan, M.K., Grover, V., Alshahrani, H., Baza, M.	Efficient Approach for Kidney Stone Treatment Using Convolutional Neural Network	CNN, CT scan, ReLU, kidney tumor, deep learning	41, 2, 929-937	<a href="https://doi.org/10.18280/ts.410233">https://doi.org/10.18280/ts.410233</a>	Fuladi, S., Chaturvedi, H., Nallakaruppan, M.K., Grover, V., Alshahrani, H., Baza, M. (2024). Efficient approach for kidney stone treatment using convolutional neural network. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 929-937. <a href="https://doi.org/10.18280/ts.410233">https://doi.org/10.18280/ts.410233</a>
132	Hadjaidji, E., Korba, M.C.A., Khelil, K.	COVID-19 Detection from Cough Sounds Using XGBoost and LSTM Networks	COVID-19 detection, cough detection, deep learning, long short-term memory (LSTM), XGBoost, acoustic features, digital health	41, 2, 939-947	<a href="https://doi.org/10.18280/ts.410234">https://doi.org/10.18280/ts.410234</a>	Hadjaidji, E., Korba, M.C.A., Khelil, K. (2024). COVID-19 detection from cough sounds using XGBoost and LSTM networks. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 939-947. <a href="https://doi.org/10.18280/ts.410234">https://doi.org/10.18280/ts.410234</a>
133	Diba, M., Khosravi, H.	SNResNet: A New Architecture Based on SqNxt Blocks and Rish Activation for Efficient Face Recognition	deep learning, face recognition, Inception-ResNet, activation function, triplet loss, SqNxt block, ArcFace	41, 2, 949-959	<a href="https://doi.org/10.18280/ts.410235">https://doi.org/10.18280/ts.410235</a>	Diba, M., Khosravi, H. (2024). SNResNet: A new architecture based on SqNxt blocks and rish activation for efficient face recognition. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 949-959. <a href="https://doi.org/10.18280/ts.410235">https://doi.org/10.18280/ts.410235</a>
134	Agarwal, K., Dixit, M.	Touchless Fingerprint Recognition with Capsule Networks and PCA Filtration Using Dual-Cross Generative Adversarial Networks	Principal Component Analysis (PCA), Capsule Neural Network (CapsNet), Generative Adversarial Network (GAN), computer vision, image recognition, touchless fingerprint recognition	41, 2, 961-969	<a href="https://doi.org/10.18280/ts.410236">https://doi.org/10.18280/ts.410236</a>	Agarwal, K., Dixit, M. (2024). Touchless fingerprint recognition with capsule networks and PCA filtration using dual-cross generative adversarial networks. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 961-969. <a href="https://doi.org/10.18280/ts.410236">https://doi.org/10.18280/ts.410236</a>
135	Abdullayeva, E., Örnek, H.K.	Diagnosing Epilepsy from EEG Using Machine Learning and Welch Spectral Analysis	Electroencephalogram (EEG), epilepsy, Welch method, Support Vector Machine (SVM), Naive Bayes (NB), Random Forest (RF), Levenberg-Marquardt (LM), Long Short Term Memory (LSTM) neural network	41, 2, 971-977	<a href="https://doi.org/10.18280/ts.410237">https://doi.org/10.18280/ts.410237</a>	Abdullayeva, E., Örnek, H.K. (2024). Diagnosing epilepsy from EEG using machine learning and Welch spectral analysis. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 971-977. <a href="https://doi.org/10.18280/ts.410237">https://doi.org/10.18280/ts.410237</a>
136	Wang, L., Yin, B.Y., Zhu, M.W., Hao, S.	3D Image Modeling and Visual Presentation Technologies for Education	3D image modeling, visual presentation technologies, educational technology, inter-layer feature learning, visual rendering optimization, deep learning, real-time interaction, immersive learning	41, 2, 979-987	<a href="https://doi.org/10.18280/ts.410238">https://doi.org/10.18280/ts.410238</a>	Wang, L., Yin, B.Y., Zhu, M.W., Hao, S. (2024). 3D image modeling and visual presentation technologies for education. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 979-987. <a href="https://doi.org/10.18280/ts.410238">https://doi.org/10.18280/ts.410238</a>
137	Kumari, L.V.R., Jagruti, K., Chandra, G.R., Reddy, M.S., Bhadramma, B.	Transfer Learning Based EfficientNet for Knee Osteoarthritis Classification	deep learning, EfficientNet, Kellgren and Lawrence (KL), Knee Osteoarthritis (KOA), transfer learning	41, 2, 989-997	<a href="https://doi.org/10.18280/ts.410239">https://doi.org/10.18280/ts.410239</a>	Kumari, L.V.R., Jagruti, K., Chandra, G.R., Reddy, M.S., Bhadramma, B. (2024). Transfer learning based EfficientNet for knee osteoarthritis classification. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 989-997. <a href="https://doi.org/10.18280/ts.410239">https://doi.org/10.18280/ts.410239</a>
138	Nair, R.R., Ranganathan, S.S.	Unified Diffusion Smoothing Models for Edge-Preserving Image Denoising Amidst Gaussian and Mixed Noise	image denoising, diffusion smoothing, partial differential equation, mixed noise	41, 2, 999-1007	<a href="https://doi.org/10.18280/ts.410240">https://doi.org/10.18280/ts.410240</a>	Nair, R.R., Ranganathan, S.S. (2024). Classification of lung adenocarcinoma using convolutional neural networks: A bioinformatics approach. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 999-1007. <a href="https://doi.org/10.18280/ts.410240">https://doi.org/10.18280/ts.410240</a>
139	Yang, Y., Xiang, C., Hu, H., Ye, T.X.	Application of High-Resolution Satellite Imagery Techniques in the Assessment of Urban Park Green Cover	urban parks, green cover rate, high-resolution satellite imagery, image enhancement, image segmentation, vision ranging	41, 2, 1009-1017	<a href="https://doi.org/10.18280/ts.410241">https://doi.org/10.18280/ts.410241</a>	Yang, Y., Xiang, C., Hu, H., Ye, T.X. (2024). Application of high-resolution satellite imagery techniques in the assessment of urban park green cover. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 1009-1017. <a href="https://doi.org/10.18280/ts.410241">https://doi.org/10.18280/ts.410241</a>
140	Babu, V.S., Venkatram, N.	Weed Detection and Localization in Soybean Crops Using YOLOv4 Deep Learning Model	weed detection, convolutional neural networks, object detection, localization, precision agriculture, YOLOv4	41, 2, 1019-1025	<a href="https://doi.org/10.18280/ts.410242">https://doi.org/10.18280/ts.410242</a>	Babu, V.S., Venkatram, N. (2024). Weed detection and localization in soybean crops using YOLOv4 deep learning model. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 1019-1025. <a href="https://doi.org/10.18280/ts.410242">https://doi.org/10.18280/ts.410242</a>
141	Aharonu, M., Kumar, R.L.	Classification of Lung Adenocarcinoma Using Convolutional Neural Networks: A Bioinformatics Approach	adenocarcinoma categorization, non-small cell lung cancer (NSCLC), bioinformatics, classification, convolutional neural network (CNN), lung adenocarcinoma	41, 2, 1027-1034	<a href="https://doi.org/10.18280/ts.410243">https://doi.org/10.18280/ts.410243</a>	Aharonu, M., Kumar, R.L. (2024). Classification of lung adenocarcinoma using convolutional neural networks: A bioinformatics approach. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 1027-1034. <a href="https://doi.org/10.18280/ts.410243">https://doi.org/10.18280/ts.410243</a>
142	Elaraby, A., AlMohimeed, A., Saad, R.M.A.	An Enhanced CT Liver Segmentation Framework Using Differential Evolution-Optimized Rényi Entropy	segmentation, liver CT, threshold, fuzzy Rényi entropy, differential evolution	41, 2, 1035-1041	<a href="https://doi.org/10.18280/ts.410244">https://doi.org/10.18280/ts.410244</a>	Elaraby, A., AlMohimeed, A., Saad, R.M.A. (2024). An enhanced CT liver segmentation framework using differential evolution-optimized Rényi entropy. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 1035-1041. <a href="https://doi.org/10.18280/ts.410244">https://doi.org/10.18280/ts.410244</a>
143	Shanmugam, S.D.	Enhanced Low-Power Digital Signal Processing via a Novel Reversible MCML-Based Carry Select Adder	reversible carry select adder, low power design, MOS current-mode logic, digital signal processing, reversible logic	41, 2, 1043-1048	<a href="https://doi.org/10.18280/ts.410245">https://doi.org/10.18280/ts.410245</a>	Shanmugam, S.D. (2024). Enhanced low-power digital signal processing via a novel reversible MCML-based carry select adder. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 1043-1048. <a href="https://doi.org/10.18280/ts.410245">https://doi.org/10.18280/ts.410245</a>
144	Banarjee, K., Pathak, A., Sarkar, C., Choubey, C.K.	Systematic Realization of VDGA-Based Comb Filter for Biomedical Signal Processing	comb filter, biomedical signals, power line interference, voltage differencing gain amplifier	41, 2, 1049-1062	<a href="https://doi.org/10.18280/ts.410246">https://doi.org/10.18280/ts.410246</a>	Banarjee, K., Pathak, A., Sarkar, C., Choubey, C.K. (2024). Systematic realization of VDGA-based comb filter for biomedical signal processing. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 1049-1062. <a href="https://doi.org/10.18280/ts.410246">https://doi.org/10.18280/ts.410246</a>



145	Chen, M.M., Xiang, Y., Xiong, C.X.	Synthesis and Restoration of Traditional Ethnic Musical Instrument Timbres Based on Time-Frequency Analysis	traditional ethnic musical instruments, time-frequency analysis, timbre separation, timbre synthesis, timbre restoration, transformer model, signal processing	41, 2, 1063-1072	<a href="https://doi.org/10.18280/ts.410247">https://doi.org/10.18280/ts.410247</a>	Chen, M.M., Xiang, Y., Xiong, C.X. (2024). Synthesis and restoration of traditional ethnic musical instrument timbres based on time-frequency analysis. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 1063-1072. <a href="https://doi.org/10.18280/ts.410247">https://doi.org/10.18280/ts.410247</a>
146	Gaddala, L.K., Radha, V.K.R., Buraga, S.R., Narla, V.L., Kodepogu, K.R., Yalamanchili, S.	Machine Learning-Based Lung Cancer Classification and Enhanced Accuracy on CT Images	lung cancer, machine learning, classification, benign and malignant	41, 2, 1073-1078	<a href="https://doi.org/10.18280/ts.410248">https://doi.org/10.18280/ts.410248</a>	Gaddala, L.K., Radha, V.K.R., Buraga, S.R., Narla, V.L., Kodepogu, K.R., Yalamanchili, S. (2024). Machine learning-based lung cancer classification and enhanced accuracy on CT images. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 1073-1078. <a href="https://doi.org/10.18280/ts.410248">https://doi.org/10.18280/ts.410248</a>
147	Yu, Z.	Image Super-Resolution Reconstruction in Sports Scenarios and Its Application in Motion Analysis	image super-resolution reconstruction, motion scenarios, dynamic adaptive cascaded network, 3D motion scene imaging, motion analysis	41, 2, 1079-1087	<a href="https://doi.org/10.18280/ts.410249">https://doi.org/10.18280/ts.410249</a>	Yu, Z. (2024). Image super-resolution reconstruction in sports scenarios and its application in motion analysis. <i>Traitement du Signal</i> , Vol. 41, No. 2, pp. 1079-1087. <a href="https://doi.org/10.18280/ts.410249">https://doi.org/10.18280/ts.410249</a>
148	Uçar, G., Dandil, E.	Enhanced Detection of White Matter Hyperintensities via Deep Learning-Enabled MR Imaging Segmentation	white matter hyperintensities (WMH), computer-aided detection, hyper-parameter optimization, deep learning, Mask R-CNN, U-Net, automatic segmentation	41, 1, 1-21	<a href="https://doi.org/10.18280/ts.410101">https://doi.org/10.18280/ts.410101</a>	Uçar, G., Dandil, E. (2024). Enhanced detection of white matter hyperintensities via deep learning-enabled MR imaging segmentation. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 1-21. <a href="https://doi.org/10.18280/ts.410101">https://doi.org/10.18280/ts.410101</a>
149	Shanmugam, S., Radhakrishnan, M.	Autism Classification and Identification of Significant Brain Lobe Using Cepstral Coefficients	autism, EEG, ensemble classifier, Linear Frequency Cepstral Coefficients (LFCC), machine learning	41, 1, 23-34	<a href="https://doi.org/10.18280/ts.410102">https://doi.org/10.18280/ts.410102</a>	Shanmugam, S., Radhakrishnan, M. (2024). Autism classification and identification of significant brain lobe using cepstral coefficients. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 23-34. <a href="https://doi.org/10.18280/ts.410102">https://doi.org/10.18280/ts.410102</a>
150	Zheng, W.S., Cai, J.S., Wang, F.	An Investigation into the Four-Dimensional Acoustic Analogy Model for Homogeneous Media and the Prediction of Flow-Induced Noise in Spatio-Temporal Fields	uniformly moving medium, flow-induced noise, vector acoustic signal, numerical simulation, Doppler effect, convective effect	41, 1, 35-50	<a href="https://doi.org/10.18280/ts.410103">https://doi.org/10.18280/ts.410103</a>	Zheng, W.S., Cai, J.S., Wang, F. (2024). An investigation into the four-dimensional acoustic analogy model for homogeneous media and the prediction of flow-induced noise in spatio-temporal fields. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 35-50. <a href="https://doi.org/10.18280/ts.410103">https://doi.org/10.18280/ts.410103</a>
151	Shrivastav, A., Bhandari, S., Kolte, M.	Enhanced Hearing Aid Performance with an African Buffalo Optimization-Based Frequency Response Masking Filter	African buffalo optimization, bio-inspired optimization algorithm, filter bank, FPGA, FRM, hearing impaired, speech perception	41, 1, 51-61	<a href="https://doi.org/10.18280/ts.410104">https://doi.org/10.18280/ts.410104</a>	Shrivastav, A., Bhandari, S., Kolte, M. (2024). Enhanced hearing aid performance with an African buffalo optimization-based frequency response masking filter. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 51-61. <a href="https://doi.org/10.18280/ts.410104">https://doi.org/10.18280/ts.410104</a>
152	Ornek, A.H., Ceylan, M.	Improving Explainability in CNN-Based Classification of Mask Images with HayCAM+: An Enhanced Visual Explanation Technique	class activation mapping, deep learning, explainable artificial intelligence, HayCAM, visual explanation, weakly-supervised object detection	41, 1, 63-71	<a href="https://doi.org/10.18280/ts.410105">https://doi.org/10.18280/ts.410105</a>	Ornek, A.H., Ceylan, M. (2024). Improving explainability in CNN-based classification of mask images with HayCAM+: An enhanced visual explanation technique. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 63-71. <a href="https://doi.org/10.18280/ts.410105">https://doi.org/10.18280/ts.410105</a>
153	Li, C.C., Cai, Y.T., Li, Y.F., Zhang, P.H.	Fusion of Dual Sensor Features for Fall Risk Assessment with Improved Attention Mechanism	efficient channel attention mechanism, fall risk, feature weighted fusion, inertial sensor, neural network, plantar pressure	41, 1, 73-83	<a href="https://doi.org/10.18280/ts.410106">https://doi.org/10.18280/ts.410106</a>	Li, C.C., Cai, Y.T., Li, Y.F., Zhang, P.H. (2024). Fusion of dual sensor features for fall risk assessment with improved attention mechanism. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 73-83. <a href="https://doi.org/10.18280/ts.410106">https://doi.org/10.18280/ts.410106</a>
154	Elhamzi, W.	Enhancing Medical Image Security with FPGA-Accelerated LED Cryptography and LSB Watermarking	medical imaging, least significant bit (LSB) watermarking, LED lightweight cryptography, parallel computing, high-level synthesis (HLS), field-programmable gate array (FPGA)	41, 1, 85-97	<a href="https://doi.org/10.18280/ts.410107">https://doi.org/10.18280/ts.410107</a>	Elhamzi, W. (2024). Enhancing medical image security with FPGA-accelerated LED cryptography and LSB watermarking. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 85-97. <a href="https://doi.org/10.18280/ts.410107">https://doi.org/10.18280/ts.410107</a>
155	Demirtaş, M.	Multiple-Image Encryption Using Sine Quadratic Polynomial Mapping and U-Shaped Scanning Techniques	chaotic map, image encryption, multiple-image encryption (MIE), sine quadratic polynomial map (SQPM), U-shaped scanning	41, 1, 99-113	<a href="https://doi.org/10.18280/ts.410108">https://doi.org/10.18280/ts.410108</a>	Demirtaş, M. (2024). Multiple-image encryption using sine quadratic polynomial mapping and U-shaped scanning techniques. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 99-113. <a href="https://doi.org/10.18280/ts.410108">https://doi.org/10.18280/ts.410108</a>
156	Wang, Q.J., Yu, Z.W.	Deep Learning-Based Scene Processing and Optimization for Virtual Reality Classroom Environments: A Study	Virtual Reality (VR) classroom, scene image enhancement, visual layout optimization, deep learning, U-net Network, Spatial Pyramid Pooling in Fast Regions with Convolutional Neural Networks (SPPF) structure, visual graph attention model (GAM)	41, 1, 115-125	<a href="https://doi.org/10.18280/ts.410109">https://doi.org/10.18280/ts.410109</a>	Wang, Q.J., Yu, Z.W. (2024). Deep learning-based scene processing and optimization for virtual reality classroom environments: A study. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 115-125. <a href="https://doi.org/10.18280/ts.410109">https://doi.org/10.18280/ts.410109</a>
157	Kumar, A., Saini, R., Kumar, R.	A Comparative Analysis of Machine Learning Algorithms for Breast Cancer Detection and Identification of Key Predictive Features	benign, feature importance, malignant, supervised machine learning, feature selection	41, 1, 127-140	<a href="https://doi.org/10.18280/ts.410110">https://doi.org/10.18280/ts.410110</a>	Kumar, A., Saini, R., Kumar, R. (2024). A comparative analysis of machine learning algorithms for breast cancer detection and identification of key predictive features. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 127-140. <a href="https://doi.org/10.18280/ts.410110">https://doi.org/10.18280/ts.410110</a>
158	Gammoudi, I., Ghozi, R., Mahjoub, M.A.	An Innovative Approach to Multimodal Brain Tumor Segmentation: The Residual Convolution Gated Neural Network and 3D UNet Integration	brain tumor segmentation, 3D UNet, ResNet, Res-Gated-3DUNet, BraTS2020 validation dataset	41, 1, 141-151	<a href="https://doi.org/10.18280/ts.410111">https://doi.org/10.18280/ts.410111</a>	Gammoudi, I., Ghozi, R., Mahjoub, M.A. (2024). An innovative approach to multimodal brain tumor segmentation: The residual convolution gated neural network and 3D UNet integration. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 141-151. <a href="https://doi.org/10.18280/ts.410111">https://doi.org/10.18280/ts.410111</a>
159	Wang, M.N., Ma, J.J., Zhao, X., Xing, X.	Automated Physiological Status Detection and Disease Evaluation of Critically Ill Patients via Image Processing Technologies	medical imaging technology, critical care, physiological status detection, disease evaluation, image segmentation, feature enhancement, deep learning	41, 1, 153-163	<a href="https://doi.org/10.18280/ts.410112">https://doi.org/10.18280/ts.410112</a>	Wang, M.N., Ma, J.J., Zhao, X., Xing, X. (2024). Automated physiological status detection and disease evaluation of critically ill patients via image processing technologies. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 153-163. <a href="https://doi.org/10.18280/ts.410112">https://doi.org/10.18280/ts.410112</a>
160	Narayanrao, P.V., Kohirker, K., Preeth, T.S., Kumari, P.L.S.	Depression Symptom Identification Through Acoustic Speech Analysis: A Transfer Learning Approach	depression, transfer learning (TL), grid search (GS), speech analysis, Multi-Layer Perceptron (MLP) classifier	41, 1, 165-177	<a href="https://doi.org/10.18280/ts.410113">https://doi.org/10.18280/ts.410113</a>	Narayanrao, P.V., Kohirker, K., Preeth, T.S., Kumari, P.L.S. (2024). Depression symptom identification through acoustic speech analysis: A transfer learning approach. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 165-177. <a href="https://doi.org/10.18280/ts.410113">https://doi.org/10.18280/ts.410113</a>
161	Fradi, M., Lazhar, K., Zahzah, E.H., Machhout, M.	FPGA Implementation of a CNN Application for ECG Class Detection	ECG, Pynq-Z2, CNN, co-design (hard/soft), time, accuracy	41, 1, 179-188	<a href="https://doi.org/10.18280/ts.410114">https://doi.org/10.18280/ts.410114</a>	Fradi, M., Lazhar, K., Zahzah, E.H., Machhout, M. (2024). FPGA implementation of a CNN application for ECG class detection. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 179-188. <a href="https://doi.org/10.18280/ts.410114">https://doi.org/10.18280/ts.410114</a>
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163	Vengaiyah, C., Konda, S.R.	A Comparative Study of Convolutional Neural Network Architectures for Enhanced Tomato Leaf Disease Classification Using Refined Statistical Features	tomato leaf disease, CNN, ResNet-152, farmers, background, foreground, deep learning, ResNet-101, VGGNet	41, 1, 201-212	<a href="https://doi.org/10.18280/ts.410116">https://doi.org/10.18280/ts.410116</a>	Vengaiyah, C., Konda, S.R. (2024). A comparative study of convolutional neural network architectures for enhanced tomato leaf disease classification using refined statistical features. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 201-212. <a href="https://doi.org/10.18280/ts.410116">https://doi.org/10.18280/ts.410116</a>
164	Alabdulkreem, E., Elmannaï, H., Saad, A., Kamil, I.S., Elaraby, A.	Deep Learning-Based Classification of Melanoma and Non-Melanoma Skin Cancer	image enhancement, light wight convolutional neural networks (LWCNN), melanoma classification, transfer learning	41, 1, 213-223	<a href="https://doi.org/10.18280/ts.410117">https://doi.org/10.18280/ts.410117</a>	Alabdulkreem, E., Elmannaï, H., Saad, A., Kamil, I.S., Elaraby, A. (2024). Deep learning-based classification of melanoma and non-melanoma skin cancer. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 213-223. <a href="https://doi.org/10.18280/ts.410117">https://doi.org/10.18280/ts.410117</a>
165	Fang, Q., Zhang, Y.W.	Optimizing Remote Teaching Interaction Platforms Through Multimodal Image Recognition Technology	remote teaching, multimodal image recognition, self-attention mechanism, encoder-decoder model, image annotation, visual saliency, education technology optimization	41, 1, 225-235	<a href="https://doi.org/10.18280/ts.410118">https://doi.org/10.18280/ts.410118</a>	Fang, Q., Zhang, Y.W. (2024). Optimizing remote teaching interaction platforms through multimodal image recognition technology. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 225-235. <a href="https://doi.org/10.18280/ts.410118">https://doi.org/10.18280/ts.410118</a>
166	Sharmila Joseph, J., Vidyarthi, A.	Dual Deep Learning and Feature-Based Models for Classification of Laryngeal Squamous Cell Carcinoma Using Narrow Band Imaging	laryngeal cancer, narrow band imaging, contrast enhancement, SqueezeNet, statistical features	41, 1, 237-248	<a href="https://doi.org/10.18280/ts.410119">https://doi.org/10.18280/ts.410119</a>	Sharmila Joseph, J., Vidyarthi, A. (2024). Dual deep learning and feature-based models for classification of Laryngeal Squamous Cell Carcinoma using narrow band imaging. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 237-248. <a href="https://doi.org/10.18280/ts.410119">https://doi.org/10.18280/ts.410119</a>
167	Sun, X.L., Liu, J., Qian, Y.B.	Enhancing Emotion Recognition in College Students' Online Learning: A Research on Integrating Feature Fusion and Attention Mechanisms	online learning, emotion recognition, feature extraction, feature fusion, attention mechanism, Deep Residual Network (ResNet), Deep Residual Shrinkage Network (DRSN)	41, 1, 249-259	<a href="https://doi.org/10.18280/ts.410120">https://doi.org/10.18280/ts.410120</a>	Sun, X.L., Liu, J., Qian, Y.B. (2024). Enhancing emotion recognition in college students' online learning: A research on integrating feature fusion and attention mechanisms. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 249-259. <a href="https://doi.org/10.18280/ts.410120">https://doi.org/10.18280/ts.410120</a>
168	Gavali, P., Saira Banu, J.	Deep Convolutional Neural Network for Automated Bird Species Classification	deep learning, feature extraction, image classification, Birdnet architecture, Indian birds, bird species classification	41, 1, 261-271	<a href="https://doi.org/10.18280/ts.410121">https://doi.org/10.18280/ts.410121</a>	Gavali, P., Saira Banu, J. (2024). Deep convolutional neural network for automated bird species classification. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 261-271. <a href="https://doi.org/10.18280/ts.410121">https://doi.org/10.18280/ts.410121</a>
169	Çeçen, Ş., Çeribaşı, S., Erkuş, M., Özer, A.B., Tuncer, T., Çınar, A.	Classification of Estrus Cycles in Rats by Using Deep Learning	deep learning, histopathology, estrus cycle, estrus staging, pathological image, classification, uterus, YOLOv5	41, 1, 273-282	<a href="https://doi.org/10.18280/ts.410122">https://doi.org/10.18280/ts.410122</a>	Çeçen, Ş., Çeribaşı, S., Erkuş, M., Özer, A.B., Tuncer, T., Çınar, A. (2024). Classification of estrus cycles in rats by using deep learning. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 273-282. <a href="https://doi.org/10.18280/ts.410122">https://doi.org/10.18280/ts.410122</a>
170	He, D.L., Wei, Z.H.	A Multimodal Approach for Attitude Measurement of Near-Earth Daytime Star Sensors	near-Earth, daytime star sensors, attitude measurement, star image superposition, centroid positioning	41, 1, 283-292	<a href="https://doi.org/10.18280/ts.410123">https://doi.org/10.18280/ts.410123</a>	He, D.L., Wei, Z.H. (2024). A multimodal approach for attitude measurement of near-earth daytime star sensors. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 283-292. <a href="https://doi.org/10.18280/ts.410123">https://doi.org/10.18280/ts.410123</a>
171	Murugiah, E., William, J.H., Mariapushpam, I.T., Nesaian, M.L.	Enhancing Myoelectric Signal Classification Through Conditional Spectral Moments and Wavelet-Enhanced Time-Domain Descriptors	electromyography (EMG), myoelectric, prosthesis, pattern recognition, feature extraction, spectral moments, classification	41, 1, 293-302	<a href="https://doi.org/10.18280/ts.410124">https://doi.org/10.18280/ts.410124</a>	Murugiah, E., William, J.H., Mariapushpam, I.T., Nesaian, M.L. (2024). Enhancing myoelectric signal classification through conditional spectral moments and wavelet-enhanced time-domain descriptors. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 293-302. <a href="https://doi.org/10.18280/ts.410124">https://doi.org/10.18280/ts.410124</a>
172	Hao, Y.M., Wang, Y., Wang, X., He, Y., Fu, H.L.	Predicting and Analyzing Rock Mechanical Properties Using Image Processing Techniques	rock mechanical properties, image processing, microscopic structure analysis, image segmentation, minimum threshold method, Laplacian histogram method, maximum interclass variance method, structural parameter extraction	41, 1, 303-312	<a href="https://doi.org/10.18280/ts.410125">https://doi.org/10.18280/ts.410125</a>	Hao, Y.M., Wang, Y., Wang, X., He, Y., Fu, H.L. (2024). Predicting and analyzing rock mechanical properties using image processing techniques. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 303-312. <a href="https://doi.org/10.18280/ts.410125">https://doi.org/10.18280/ts.410125</a>
173	Ainapure, B.S., Appasani, B., Schioppa, A.G., Oproescu, M., Bizon, N.	A Lightweight Deep Learning Model and Web Interface for COVID-19 Detection Using Chest X-Rays	convolutional neural network, COVID-19, X-ray image, accuracy, confusion matrix, web-based model	41, 1, 313-322	<a href="https://doi.org/10.18280/ts.410126">https://doi.org/10.18280/ts.410126</a>	Ainapure, B.S., Appasani, B., Schioppa, A.G., Oproescu, M., Bizon, N. (2024). A lightweight deep learning model and web interface for COVID-19 detection using chest X-rays. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 313-322. <a href="https://doi.org/10.18280/ts.410126">https://doi.org/10.18280/ts.410126</a>
174	Zheng, Y.L., Miao, J.F., Ren, S.F.	Intelligent Recommendation System for Personalized Learning Resources for College Students Based on Image Processing	personalized learning resource recommendation, image semantic annotation, granular computing, second-order Conditional Random Field (CRF), product quantization sparse coding, image retrieval, intelligent recommendation system	41, 1, 323-331	<a href="https://doi.org/10.18280/ts.410127">https://doi.org/10.18280/ts.410127</a>	Zheng, Y.L., Miao, J.F., Ren, S.F. (2024). Intelligent recommendation system for personalized learning resources for college students based on image processing. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 323-331. <a href="https://doi.org/10.18280/ts.410127">https://doi.org/10.18280/ts.410127</a>
175	Omar, N.	EEG-Based Autism Detection Using Multi-Input 1D Convolutional Neural Networks	Autism Spectrum Disorder, EEG signals, multi-input CNN model, EEG channels, deep learning	41, 1, 333-341	<a href="https://doi.org/10.18280/ts.410128">https://doi.org/10.18280/ts.410128</a>	Omar, N. (2024). EEG-based autism detection using multi-input 1D convolutional neural networks. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 333-341. <a href="https://doi.org/10.18280/ts.410128">https://doi.org/10.18280/ts.410128</a>
176	Kundu, T.K., Anguraj, D.K., Bhattacharyya, D.	Utilizing Image Analysis with Machine Learning and Deep Learning to Identify Malaria Parasites in Conventional Microscopic Blood Smear Images	malaria parasitic blood smear, microscopy for object detection, feature extraction and parasite identification, machine learning & hybrid machine learning classification, deep learning technique, malaria diagnosis using mobile microscopy	41, 1, 343-362	<a href="https://doi.org/10.18280/ts.410129">https://doi.org/10.18280/ts.410129</a>	Kundu, T.K., Anguraj, D.K., Bhattacharyya, D. (2024). Utilizing image analysis with machine learning and deep learning to identify malaria parasites in conventional microscopic blood smear images. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 343-362. <a href="https://doi.org/10.18280/ts.410129">https://doi.org/10.18280/ts.410129</a>
177	Cheng, X.L., Zhang, X.J.	Image Processing Techniques for Dynamic Surface Velocity Measurement in Rivers	dynamic river surface velocity, image processing, non-contact measurement, Mean shift algorithm, optical flow technique, calibration technology	41, 1, 363-372	<a href="https://doi.org/10.18280/ts.410130">https://doi.org/10.18280/ts.410130</a>	Cheng, X.L., Zhang, X.J. (2024). Image processing techniques for dynamic surface velocity measurement in rivers. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 363-372. <a href="https://doi.org/10.18280/ts.410130">https://doi.org/10.18280/ts.410130</a>
178	Kavitha, V.R., Hussain, F.B.J., Chillakuru, P., Shanmugam, P.	Automated Classification of Liver Cancer Stages Using Deep Learning on Histopathological Images	histopathological images, R-CNN, GLCM, Fuzzy C-Means algorithm, liver cancer classification	41, 1, 373-381	<a href="https://doi.org/10.18280/ts.410131">https://doi.org/10.18280/ts.410131</a>	Kavitha, V.R., Hussain, F.B.J., Chillakuru, P., Shanmugam, P. (2024). Automated classification of liver cancer stages using deep learning on histopathological images. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 373-381. <a href="https://doi.org/10.18280/ts.410131">https://doi.org/10.18280/ts.410131</a>
179	Djalab, A., Lalaoui, L., Bisker, A., Hadibi, A.	Enhancing Image Classification Through a Hybrid Approach: Integrating Convolutional Neural Networks with Hidden Markov Mod	deep learning, Convolutional Neural Network (CNN), Hidden Markov Model (HMM), hybrid HMM and CNN, image classification	41, 1, 383-390	<a href="https://doi.org/10.18280/ts.410132">https://doi.org/10.18280/ts.410132</a>	Djalab, A., Lalaoui, L., Bisker, A., Hadibi, A. (2024). Enhancing image classification through a hybrid approach: Integrating Convolutional Neural Networks with hidden Markov mod. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 383-390. <a href="https://doi.org/10.18280/ts.410132">https://doi.org/10.18280/ts.410132</a>
180	Wu, Z., Pan, D.D.	The Application and Optimization of Deep Learning in Recognizing Student Learning Emotions	deep learning, learning emotion recognition, facial expression image preprocessing, temporal expression recognition, attention mechanism	41, 1, 391-399	<a href="https://doi.org/10.18280/ts.410133">https://doi.org/10.18280/ts.410133</a>	Wu, Z., Pan, D.D. (2024). The application and optimization of deep learning in recognizing student learning emotions. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 391-399. <a href="https://doi.org/10.18280/ts.410133">https://doi.org/10.18280/ts.410133</a>

181	Palanisamy, G.A., Rajappan, S., Murugasamy, V.	Enhancing Secure Data Transmission in IoT via Advanced Conditional Generative Adversarial Network and Encryption Techniques	Algebraic Matrix Encryption, data transmission, deep learning, Fully Homomorphic Encryption, Generative Adversarial Network, Jaro-Winkler similarity	41, 1, 401-410	<a href="https://doi.org/10.18280/ts.410134">https://doi.org/10.18280/ts.410134</a>	Palanisamy, G.A., Rajappan, S., Murugasamy, V. (2024). Enhancing secure data transmission in IoT via advanced Conditional Generative Adversarial Network and encryption techniques. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 401-410. <a href="https://doi.org/10.18280/ts.410134">https://doi.org/10.18280/ts.410134</a>
182	Gao, W.F.	Electromagnetic Signal Anomaly Detection and Classification Methods Based on Deep Learning	electromagnetic signals, anomaly detection, classification methods, deep learning, adaptive noise suppression, Deep Q-net (DQN), signal processing, communication security	41, 1, 411-419	<a href="https://doi.org/10.18280/ts.410135">https://doi.org/10.18280/ts.410135</a>	Gao, W.F. (2024). Electromagnetic signal anomaly detection and classification methods based on deep learning. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 411-419. <a href="https://doi.org/10.18280/ts.410135">https://doi.org/10.18280/ts.410135</a>
183	Salim, S.P., James, A., Simon, P., Divakaran, B.N.	Multiscale Residual Network for Recognizing Handwritten Malayalam Characters	convolutional neural network (CNN), deep learning, handwritten character recognition (HCR), machine learning, multi-scaled features, neural network, residual network, Malayalam	41, 1, 421-430	<a href="https://doi.org/10.18280/ts.410136">https://doi.org/10.18280/ts.410136</a>	Salim, S.P., James, A., Simon, P., Divakaran, B.N. (2024). Multiscale residual network for recognizing handwritten Malayalam characters. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 421-430. <a href="https://doi.org/10.18280/ts.410136">https://doi.org/10.18280/ts.410136</a>
184	Nie, B.H., Ma, B.	VADNet: Visual-Based Anti-Cheating Detection Network in FPS Games	cheat detection, first-person shooter (FPS) games, visual algorithm	41, 1, 431-440	<a href="https://doi.org/10.18280/ts.410137">https://doi.org/10.18280/ts.410137</a>	Nie, B.H., Ma, B. (2024). VADNet: Visual-based anti-cheating detection network in FPS games. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 431-440. <a href="https://doi.org/10.18280/ts.410137">https://doi.org/10.18280/ts.410137</a>
185	Daphal, S.D., Koli, S.M.	Enhanced Classification of Sugarcane Diseases Through a Modified Learning Rate Policy in Deep Learning	deep learning, learning rate, plant diseases, sugarcane, small databases, mobilenet-v2, learning rate decay	41, 1, 441-449	<a href="https://doi.org/10.18280/ts.410138">https://doi.org/10.18280/ts.410138</a>	Daphal, S.D., Koli, S.M. (2024). Enhanced classification of sugarcane diseases through a modified learning rate policy in deep learning. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 441-449. <a href="https://doi.org/10.18280/ts.410138">https://doi.org/10.18280/ts.410138</a>
186	Keti, F.	A New Proposed Model for Dispersion Compensation via Linear Chirped Fiber Bragg Grating	dispersion compensation, fiber optics, Fiber Bragg Grating, Gaussian filter, Optisystem	41, 1, 451-457	<a href="https://doi.org/10.18280/ts.410139">https://doi.org/10.18280/ts.410139</a>	Keti, F. (2024). A new proposed model for dispersion compensation via Linear Chirped Fiber Bragg Grating. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 451-457. <a href="https://doi.org/10.18280/ts.410139">https://doi.org/10.18280/ts.410139</a>
187	Xu, G.L., Wong, C.U.I.	Deep Learning-Based Educational Image Content Understanding and Personalized Learning Path Recommendation	deep learning, educational image content understanding, personalized learning pathways, bidirectional encoder representations from transformer (BERT) models, attention mechanisms, hierarchical Long Short-Term Memory (LSTM) models, multi-feature Latent Dirichlet Allocation (LDA) recommendation models	41, 1, 459-467	<a href="https://doi.org/10.18280/ts.410140">https://doi.org/10.18280/ts.410140</a>	Xu, G.L., Wong, C.U.I. (2024). Deep learning-based educational image content understanding and personalized learning path recommendation. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 459-467. <a href="https://doi.org/10.18280/ts.410140">https://doi.org/10.18280/ts.410140</a>
188	Urooj, S., Dar, M.A., Mehruz, S., Saleh, W.S.	Optimization of Deep Neural Networks for Enhanced Efficiency in Small Scale Autonomous Vehicles	A.I. autopilot, autonomous vehicles, deep neural networks	41, 1, 469-476	<a href="https://doi.org/10.18280/ts.410141">https://doi.org/10.18280/ts.410141</a>	Urooj, S., Dar, M.A., Mehruz, S., Saleh, W.S. (2024). Optimization of deep neural networks for enhanced efficiency in small scale autonomous vehicles. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 469-476. <a href="https://doi.org/10.18280/ts.410141">https://doi.org/10.18280/ts.410141</a>
189	Sekar, S., Sankaran, L.	Enhanced Karyotyping Through Deep Learning-Assisted Segmentation and Classification of Chromosomal Cells	chromosome cells, deep-learning, VGG-UNet, segmentation, classification, testimonial.	41, 1, 477-484	<a href="https://doi.org/10.18280/ts.410142">https://doi.org/10.18280/ts.410142</a>	Sekar, S., Sankaran, L. (2024). Enhanced karyotyping through deep learning-assisted segmentation and classification of chromosomal cells. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 477-484. <a href="https://doi.org/10.18280/ts.410142">https://doi.org/10.18280/ts.410142</a>
190	Han, J.L., Chen, Z.Y., Hu, P., Li, H.T., Li, G.Y.	Enhanced Detection of Electric Power Facilities Utilizing a Re-Parameterized Convolutional Network	region-based convolutional network (R-CNN), unmanned aerial vehicle (UAV), deep learning, digital twin, electric power facility detection	41, 1, 485-491	<a href="https://doi.org/10.18280/ts.410143">https://doi.org/10.18280/ts.410143</a>	Han, J.L., Chen, Z.Y., Hu, P., Li, H.T., Li, G.Y. (2024). Enhanced detection of electric power facilities utilizing a re-parameterized convolutional network. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 485-491. <a href="https://doi.org/10.18280/ts.410143">https://doi.org/10.18280/ts.410143</a>
191	Chintamaneni, V., Krishna, B.H., Suresh, M., Bukkaptann, K., Sujatha, C.N., Swaraja, K., Kumar, P.M.	Deep Learning-Based Diagnostic Model for Automated Detection of Monkeypox: Introducing MonkeypoxNet	monkeypox virus, skin images, customized deep learning, genetic algorithm, particle swarm optimization, convolution neural network	41, 1, 493-502	<a href="https://doi.org/10.18280/ts.410144">https://doi.org/10.18280/ts.410144</a>	Chintamaneni, V., Krishna, B.H., Suresh, M., Bukkaptann, K., Sujatha, C.N., Swaraja, K., Kumar, P.M. (2024). Deep learning-based diagnostic model for automated detection of monkeypox: Introducing MonkeypoxNet. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 493-502. <a href="https://doi.org/10.18280/ts.410144">https://doi.org/10.18280/ts.410144</a>
192	Saraswat, R., Jhanwar, D., Gupta, M.	Enhanced Solar Power Forecasting Using XG Boost and PCA-Based Sky Image Analysis	solar energy forecasting, XG Boost regression, Principal Component Analysis (PCA), sky image analysis, renewable energy, machine learning, photovoltaic (PV) system	41, 1, 503-510	<a href="https://doi.org/10.18280/ts.410145">https://doi.org/10.18280/ts.410145</a>	Saraswat, R., Jhanwar, D., Gupta, M. (2024). Enhanced solar power forecasting using XG Boost and PCA-based sky image analysis. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 503-510. <a href="https://doi.org/10.18280/ts.410145">https://doi.org/10.18280/ts.410145</a>
193	Liu, J.X., Ma, Y.P., Meng, X., Zhang, S., Liu, Z.G., Song, Y.F.	Enhancing Intrinsic Image Decomposition with Transformer and Laplacian Pyramid Network	Intrinsic Image Decomposition (IID), transformer, Laplacian pyramid, reflectance, shading, feature encoding	41, 1, 511-517	<a href="https://doi.org/10.18280/ts.410146">https://doi.org/10.18280/ts.410146</a>	Liu, J.X., Ma, Y.P., Meng, X., Zhang, S., Liu, Z.G., Song, Y.F. (2024). Enhancing intrinsic image decomposition with transformer and Laplacian pyramid network. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 511-517. <a href="https://doi.org/10.18280/ts.410146">https://doi.org/10.18280/ts.410146</a>
194	Olewi, H.I., Msallam, M.M., Salim, S.K., Al-Behadili, H.A.H.	Enhanced Security Through Integrated Morse Code Encryption and LSB Steganography in Digital Communications	encryption data, steganography, Morse code, cryptography, least significant bit (LSB) technique, data hiding	41, 1, 519-524	<a href="https://doi.org/10.18280/ts.410147">https://doi.org/10.18280/ts.410147</a>	Olewi, H.I., Msallam, M.M., Salim, S.K., Al-Behadili, H.A.H. (2024). Enhanced security through integrated Morse code encryption and LSB steganography in digital communications. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 519-524. <a href="https://doi.org/10.18280/ts.410147">https://doi.org/10.18280/ts.410147</a>
195	Venkatraman, D., Pitchaipillai, V.	Deep Learning-Based Auto-LSTM Approach for Renewable Energy Forecasting: A Hybrid Network Model	long short-term memory (LSTM), deep learning, deep belief network (DBN), renewable energy, forecasting	41, 1, 525-530	<a href="https://doi.org/10.18280/ts.410148">https://doi.org/10.18280/ts.410148</a>	Venkatraman, D., Pitchaipillai, V. (2024). Deep learning-based auto-LSTM approach for renewable energy forecasting: A hybrid network model. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 525-530. <a href="https://doi.org/10.18280/ts.410148">https://doi.org/10.18280/ts.410148</a>
196	Kaya, G.U.	A Novel Hybrid Optical Imaging Sensor for Early Stage Short-Circuit Fault Diagnosis in Printed Circuit Boards	printed circuit board, short circuit fault, lateral shearing digital holography, microscopic fringe projection profilometry, hybrid optical imaging sensor, early fault detection	41, 1, 531-542	<a href="https://doi.org/10.18280/ts.410149">https://doi.org/10.18280/ts.410149</a>	Kaya, G.U. (2024). A novel hybrid optical imaging sensor for early stage short-circuit fault diagnosis in printed circuit boards. <i>Traitement du Signal</i> , Vol. 41, No. 1, pp. 531-542. <a href="https://doi.org/10.18280/ts.410149">https://doi.org/10.18280/ts.410149</a>
197	Efe, E.M., Böcekçi, V.G.	Deep Learning-Driven Regulation of Vehicle Speed Limits in Response to Weather Conditions	deep learning, Kalman filter, morphological transformations, speed estimation, video processing	40, 6, 2321-2336	<a href="https://doi.org/10.18280/ts.400601">https://doi.org/10.18280/ts.400601</a>	Efe, E.M., Böcekçi, V.G. (2023). Deep learning-driven regulation of vehicle speed limits in response to weather conditions. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2321-2336. <a href="https://doi.org/10.18280/ts.400601">https://doi.org/10.18280/ts.400601</a>
198	Chetana, V.L., Seetha, H.	Enhancing Movie Recommendations: An Ensemble-Based Deep Collaborative Filtering Approach Utilizing AdaMVRGO Optimization	adaptive moment variance reduced gradient optimization, matrix factorization, movie recommendation, ensemble deep neural networks and recommendation systems	40, 6, 2337-2351	<a href="https://doi.org/10.18280/ts.400602">https://doi.org/10.18280/ts.400602</a>	Chetana, V.L., Seetha, H. (2023). Enhancing movie recommendations: An ensemble-based deep collaborative filtering approach utilizing AdaMVRGO optimization. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2337-2351. <a href="https://doi.org/10.18280/ts.400602">https://doi.org/10.18280/ts.400602</a>

199	Gao, Y.H., Xu, Z.Z., Xu, X.	Enhanced Cigarette Pack Counting via Image Enhancement Techniques and Advanced SAFECount Methodology	image enhancement techniques, cigarette pack counting, Similarity-Aware Feature Enhancement block for object Counting (SAFECount), Few-shot learning (FSC), warehouse inventory management	40, 6, 2353-2365	<a href="https://doi.org/10.18280/ts.400603">https://doi.org/10.18280/ts.400603</a>	Gao, Y.H., Xu, Z.Z., Xu, X. (2023). Enhanced cigarette pack counting via image enhancement techniques and advanced SAFECount methodology. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2353-2365. <a href="https://doi.org/10.18280/ts.400603">https://doi.org/10.18280/ts.400603</a>
200	Aykat, S., Senan, S.	Advanced Detection of Retinal Diseases via Novel Hybrid Deep Learning Approach	convolutional neural networks, deep learning, disease detection, retinal diseases	40, 6, 2367-2382	<a href="https://doi.org/10.18280/ts.400604">https://doi.org/10.18280/ts.400604</a>	Aykat, S., Senan, S. (2023). Advanced detection of retinal diseases via novel hybrid deep learning approach. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2367-2382. <a href="https://doi.org/10.18280/ts.400604">https://doi.org/10.18280/ts.400604</a>
201	Vasanthrao, C.P., Gupta, N.	A High-Performance, Equus Jubatus-Optimized Deep Learning Model for Satellite Image-Based Change Detection	hybrid deep fusion model, segmentation, change detection, Equus Jubatus optimization, multispectral images	40, 6, 2383-2395	<a href="https://doi.org/10.18280/ts.400605">https://doi.org/10.18280/ts.400605</a>	Vasanthrao, C.P., Gupta, N. (2023). A high-performance, Equus Jubatus-optimized deep learning model for satellite image-based change detection. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2383-2395. <a href="https://doi.org/10.18280/ts.400605">https://doi.org/10.18280/ts.400605</a>
202	Li, F., Xu, M.L., Rosli, M.M.	Application of Multi-Modal Neural Networks in Verifying the Authenticity of News Text and Images	multi-modal neural networks, news authenticity verification, anomalous image block search, gated cooperative attention, tampered and forged images, modality fusion, information security	40, 6, 2397-2407	<a href="https://doi.org/10.18280/ts.400606">https://doi.org/10.18280/ts.400606</a>	Li, F., Xu, M.L., Rosli, M.M. (2023). Application of multi-modal neural networks in verifying the authenticity of news text and images. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2397-2407. <a href="https://doi.org/10.18280/ts.400606">https://doi.org/10.18280/ts.400606</a>
203	Komati, R.D., Nagmode, M.S.	Amplifying Imperceptible Variations in Video Sequences for Time-Varying Process Analysis	Eulerian video magnification, motion amplification, region of interest, vibration frequency measurement	40, 6, 2409-2422	<a href="https://doi.org/10.18280/ts.400607">https://doi.org/10.18280/ts.400607</a>	Komati, R.D., Nagmode, M.S. (2023). Amplifying imperceptible variations in video sequences for time-varying process analysis. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2409-2422. <a href="https://doi.org/10.18280/ts.400607">https://doi.org/10.18280/ts.400607</a>
204	Jaid, U.H., AbdulHassan, A.K.	Optimizing Acoustic Feature Selection for Estimating Speaker Traits: A Novel Threshold-Based Approach	acoustic features, age estimation, feature selection, gender detection, height estimation, speaker profiling, TIMIT dataset	40, 6, 2423-2432	<a href="https://doi.org/10.18280/ts.400608">https://doi.org/10.18280/ts.400608</a>	Jaid, U.H., AbdulHassan, A.K. (2023). Optimizing acoustic feature selection for estimating speaker traits: A novel threshold-based approach. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2423-2432. <a href="https://doi.org/10.18280/ts.400608">https://doi.org/10.18280/ts.400608</a>
205	Wang, H.Z.	Advanced Image Processing Techniques for Enhancing Cargo Capacity Optimization in Intelligent Logistics Vehicles	intelligent logistics, cargo capacity optimization, image processing, stereo matching algorithms, volume measurement	40, 6, 2433-2442	<a href="https://doi.org/10.18280/ts.400609">https://doi.org/10.18280/ts.400609</a>	Wang, H.Z. (2023). Advanced image processing techniques for enhancing cargo capacity optimization in intelligent logistics vehicles. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2433-2442. <a href="https://doi.org/10.18280/ts.400609">https://doi.org/10.18280/ts.400609</a>
206	Ezzat, A., Omer, O.A., Mohamed, U.S., Mubarak, A.S.	Blood Pressure Estimation from Photoplethysmogram Using Hybrid Bidirectional Long Short-Term Memory and Convolutional Neural Network Architecture	arterial blood pressure, blood pressure, deep neural network, Conv-BiLSTM	40, 6, 2443-2453	<a href="https://doi.org/10.18280/ts.400610">https://doi.org/10.18280/ts.400610</a>	Ezzat, A., Omer, O.A., Mohamed, U.S., Mubarak, A.S. (2023). Blood pressure estimation from photoplethysmogram using hybrid bidirectional long short-term memory and convolutional neural network architecture. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2443-2453. <a href="https://doi.org/10.18280/ts.400610">https://doi.org/10.18280/ts.400610</a>
207	Krishna, D.M., Sahu, S.K., Raju, G.	Enhanced Skin Cancer Classification Through a Hybrid Optimized Approach: Deep Echo Network Machine Utilizing Pelican-Optimized Deep Kohonen Features	skin cancer classification, deep convolutional inverse graphics network, skin lesion detection, swarm-based pelican optimization, hybrid deep Kohonen network, deep echo network machine	40, 6, 2455-2469	<a href="https://doi.org/10.18280/ts.400611">https://doi.org/10.18280/ts.400611</a>	Krishna, D.M., Sahu, S.K., Raju, G. (2023). Enhanced skin cancer classification through a hybrid optimized approach: Deep echo network machine utilizing pelican-optimized deep Kohonen features. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2455-2469. <a href="https://doi.org/10.18280/ts.400611">https://doi.org/10.18280/ts.400611</a>
208	Xiao, X.H., Xie, J.G., Cai, B.	Optimizing Water Body Detection in Southeast Hubei Using PCA on Landsat ETM+ Imagery	remote sensing, water body extraction, principal component analysis (PCA), Landsat Enhanced Thematic Mapper Plus (ETM+)	40, 6, 2471-2480	<a href="https://doi.org/10.18280/ts.400612">https://doi.org/10.18280/ts.400612</a>	Xiao, X.H., Xie, J.G., Cai, B. (2023). Optimizing water body detection in southeast Hubei using PCA on Landsat ETM+ imagery. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2471-2480. <a href="https://doi.org/10.18280/ts.400612">https://doi.org/10.18280/ts.400612</a>
209	Ganesan, V., Ramasamy, V., Manoj, C., Tejaswi, T.	Contextual Emotional Classifier: An Advanced AI-Powered Emotional Health Ecosystem for Women Utilizing Edge Devices	Edge AI device, emotional health management for women, women's digital ecosystem, emotional tracker, Contextual Emotional Classifier, text and audio emotions	40, 6, 2481-2494	<a href="https://doi.org/10.18280/ts.400613">https://doi.org/10.18280/ts.400613</a>	Ganesan, V., Ramasamy, V., Manoj, C., Tejaswi, T. (2023). Contextual Emotional Classifier: An advanced AI-powered emotional health ecosystem for women utilizing edge devices. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2481-2494. <a href="https://doi.org/10.18280/ts.400613">https://doi.org/10.18280/ts.400613</a>
210	Ergun, O.N., Ilhan, H.O.	Advancing Diabetic Retinopathy Severity Classification Through Stacked Generalization in Ensemble Deep Learning Models	diabetic retinopathy (DR), ensemble deep learning, hard voting, soft voting, stacked generalization	40, 6, 2495-2506	<a href="https://doi.org/10.18280/ts.400614">https://doi.org/10.18280/ts.400614</a>	Ergun, O.N., Ilhan, H.O. (2023). Advancing diabetic retinopathy severity classification through stacked generalization in ensemble deep learning models. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2495-2506. <a href="https://doi.org/10.18280/ts.400614">https://doi.org/10.18280/ts.400614</a>
211	Li, P.F., Xie, S.D., Xia, H.P., Wang, D.K., Xu, Z.Y.	Advanced Analysis of Blast Pile Fragmentation in Open-Pit Mining Utilizing 3D Point Cloud Technology	3D point cloud, blast pile fragmentation, clustering, contour extraction, block volume	40, 6, 2507-2519	<a href="https://doi.org/10.18280/ts.400615">https://doi.org/10.18280/ts.400615</a>	Li, P.F., Xie, S.D., Xia, H.P., Wang, D.K., Xu, Z.Y. (2023). Advanced analysis of blast pile fragmentation in open-pit mining utilizing 3D point cloud technology. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2507-2519. <a href="https://doi.org/10.18280/ts.400615">https://doi.org/10.18280/ts.400615</a>
212	Vajiram, J., Shanmugasundaram, S.	Improving Segmentation of Pilocytic Astrocytoma in MRI Using Genomic Cluster-Shape Feature Analysis	pilocytic astrocytoma, brain tumor, magnetic resonance imaging, genomic feature selection	40, 6, 2521-2538	<a href="https://doi.org/10.18280/ts.400616">https://doi.org/10.18280/ts.400616</a>	Vajiram, J., Shanmugasundaram, S. (2023). Improving segmentation of pilocytic astrocytoma in MRI using genomic cluster-shape feature analysis. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2521-2538. <a href="https://doi.org/10.18280/ts.400616">https://doi.org/10.18280/ts.400616</a>
213	Eriş, M., Kaya, M.	Leveraging Deep Learning for Identification of Illicit Images in Digital Forensic Investigations	deep learning, pornography detection, child sexual abuse detection, digital forensics, convolutional neural networks, obscene image detection	40, 6, 2539-2552	<a href="https://doi.org/10.18280/ts.400617">https://doi.org/10.18280/ts.400617</a>	Eriş, M., Kaya, M. (2023). Leveraging deep learning for identification of illicit images in digital forensic investigations. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2539-2552. <a href="https://doi.org/10.18280/ts.400617">https://doi.org/10.18280/ts.400617</a>
214	Jiang, L., Lu, X.	Analyzing and Optimizing Virtual Reality Classroom Scenarios: A Deep Learning Approach	Virtual Reality (VR) classroom, deep learning, scene analysis, feature enhancement, feature distillation, multi-scale information, transformer, attention mechanism, semantic segmentation, classification optimization	40, 6, 2553-2563	<a href="https://doi.org/10.18280/ts.400618">https://doi.org/10.18280/ts.400618</a>	Jiang, L., Lu, X. (2023). Analyzing and optimizing Virtual Reality classroom scenarios: A deep learning approach. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2553-2563. <a href="https://doi.org/10.18280/ts.400618">https://doi.org/10.18280/ts.400618</a>
215	Dharmichand, S., Perumal, S.	Leveraging Tripartite Tier Convolutional Neural Network for Human Emotion Recognition: A Multimodal Data Approach	tripartite tier convolutional neural network, classification, emotion recognition, cognitive approach, electroencephalogram, multimodal data	40, 6, 2565-2576	<a href="https://doi.org/10.18280/ts.400619">https://doi.org/10.18280/ts.400619</a>	Dharmichand, S., Perumal, S. (2023). Leveraging tripartite tier convolutional neural network for human emotion recognition: A multimodal data approach. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2565-2576. <a href="https://doi.org/10.18280/ts.400619">https://doi.org/10.18280/ts.400619</a>
216	Ayachi, R., Afif, M., Said, Y., Atri, M., Ben Abdelali, A.	Integrating Recurrent Neural Networks with Convolutional Neural Networks for Enhanced Traffic Light Detection and Tracking	convolutional neural network, recurrent neural network, traffic light detection, and tracking, mobile systems	40, 6, 2577-2586	<a href="https://doi.org/10.18280/ts.400620">https://doi.org/10.18280/ts.400620</a>	Ayachi, R., Afif, M., Said, Y., Atri, M., Ben Abdelali, A. (2023). Integrating recurrent neural networks with convolutional neural networks for enhanced traffic light detection and tracking. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2577-2586. <a href="https://doi.org/10.18280/ts.400620">https://doi.org/10.18280/ts.400620</a>

217	Pang, J.L.	Enhancing Urban Traffic Management: Advanced Strategies in Image Recognition-Based Intelligent Traffic Monitoring	intelligent traffic monitoring system, image recognition, license plate recognition, traffic violation detection, template matching, neural networks, graph convolutional networks, spatial attention modules	40, 6, 2587-2597	<a href="https://doi.org/10.18280/ts.400621">https://doi.org/10.18280/ts.400621</a>	Pang, J.L. (2023). Enhancing urban traffic management: Advanced strategies in image recognition-based intelligent traffic monitoring. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2587-2597. <a href="https://doi.org/10.18280/ts.400621">https://doi.org/10.18280/ts.400621</a>
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219	Özyurt, F., Majidpour, J., Rashid, T.A., Koç, C.	Offline Handwriting Signature Verification: A Transfer Learning and Feature Selection Approach	signature verification, transfer learning, deep learning, MobileNetV2, feature selection, machine learning, SVM	40, 6, 2613-2622	<a href="https://doi.org/10.18280/ts.400623">https://doi.org/10.18280/ts.400623</a>	Özyurt, F., Majidpour, J., Rashid, T.A., Koç, C. (2023). Offline handwriting signature verification: A transfer learning and feature selection approach. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2613-2622. <a href="https://doi.org/10.18280/ts.400623">https://doi.org/10.18280/ts.400623</a>
220	Zhang, L.J., Wu, J.Z., Wei, J.X., Yu, X.Y., Yu, J., Yuan, B.	Enhanced Laboratory Safety Education Through Interactive Applications of Machine Learning-Boosted Image Processing Technologies	laboratory safety education, machine learning, image processing, wavelet threshold denoising, data augmentation, Spatio-Temporal Graph Convolutional Network (ST-GCN), hazardous behavior recognition	40, 6, 2623-2633	<a href="https://doi.org/10.18280/ts.400624">https://doi.org/10.18280/ts.400624</a>	Zhang, L.J., Wu, J.Z., Wei, J.X., Yu, X.Y., Yu, J., Yuan, B. (2023). Enhanced laboratory safety education through interactive applications of machine learning-boosted image processing technologies. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2623-2633. <a href="https://doi.org/10.18280/ts.400624">https://doi.org/10.18280/ts.400624</a>
221	Thokala, B., Doraikannan, S.	Detection and Classification of Plant Stress Using Hybrid Deep Convolution Neural Networks: A Multi-Scale Vision Transformer Approach	plant stress, multi-scale vision transformer, cross-attention, deep convolutional neural network	40, 6, 2635-2647	<a href="https://doi.org/10.18280/ts.400625">https://doi.org/10.18280/ts.400625</a>	Thokala, B., Doraikannan, S. (2023). Detection and classification of plant stress using hybrid deep convolution neural networks: A multi-scale vision transformer approach. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2635-2647. <a href="https://doi.org/10.18280/ts.400625">https://doi.org/10.18280/ts.400625</a>
222	Yücelbaş, C., Yücelbaş, Ş.	Enhanced Cross-Validation Methods Leveraging Clustering Techniques	large-scale classification, cross-validation methodology, k-means, k-medoids, clustering techniques	40, 6, 2649-2660	<a href="https://doi.org/10.18280/ts.400626">https://doi.org/10.18280/ts.400626</a>	Yücelbaş, C., Yücelbaş, Ş. (2023). Enhanced cross-validation methods leveraging clustering techniques. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2649-2660. <a href="https://doi.org/10.18280/ts.400626">https://doi.org/10.18280/ts.400626</a>
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225	Sirt, D., Saykol, E.	COPYNet: Unveiling Suspicious Behaviour in Face-to-Face Exams	abnormal behavior detection, exam copy detection, deep learning, transfer learning	40, 6, 2683-2700	<a href="https://doi.org/10.18280/ts.400629">https://doi.org/10.18280/ts.400629</a>	Sirt, D., Saykol, E. (2023). COPYNet: Unveiling suspicious behaviour in face-to-face exams. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2683-2700. <a href="https://doi.org/10.18280/ts.400629">https://doi.org/10.18280/ts.400629</a>
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227	Shimpi, J.K., Shanmugam, P.	A Hybrid Diabetic Retinopathy Neural Network Model for Early Diabetic Retinopathy Detection and Classification of Fundus Images	diabetic retinopathy, detection, fundus images, classification, deep learning	40, 6, 2711-2722	<a href="https://doi.org/10.18280/ts.400631">https://doi.org/10.18280/ts.400631</a>	Shimpi, J.K., Shanmugam, P. (2023). A hybrid diabetic retinopathy neural network model for early diabetic retinopathy detection and classification of fundus images. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2711-2722. <a href="https://doi.org/10.18280/ts.400631">https://doi.org/10.18280/ts.400631</a>
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229	Luo, X.J., Shao, L.L.	Exploring the Application of Deep Learning in Multi-View Image Fusion in Complex Environments	deep learning, multi-view image fusion, complex environments, moment of inertia axis method, morphological decomposition, attention feature integration	40, 6, 2731-2740	<a href="https://doi.org/10.18280/ts.400633">https://doi.org/10.18280/ts.400633</a>	Luo, X.J., Shao, L.L. (2023). Exploring the application of deep learning in multi-view image fusion in complex environments. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2731-2740. <a href="https://doi.org/10.18280/ts.400633">https://doi.org/10.18280/ts.400633</a>
230	Sony Priya, S., Minu, R.I.	Augmenting Face Detection in Extremely Low-Light CCTV Footage Using the EDCE Enhancement Model	unconstrained video, video enhancement, face detection, zero-reference deep curve estimation, keyframe extraction	40, 6, 2741-2750	<a href="https://doi.org/10.18280/ts.400634">https://doi.org/10.18280/ts.400634</a>	Sony Priya, S., Minu, R.I. (2023). Augmenting face detection in extremely low-light CCTV footage using the EDCE enhancement model. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2741-2750. <a href="https://doi.org/10.18280/ts.400634">https://doi.org/10.18280/ts.400634</a>
231	Sundaravadivelu, B., Santhanakrishnan, K.	Breast Cancer Detection Using Comprising Fuzzy C-Means and Artificial Bee Colony Optimization Segmentation and Grading with Random Forest Classifier	mammogram, breast cancer, Comprising Fuzzy C-Means and Artificial Bee Colony optimization, random forest, grading	40, 6, 2751-2759	<a href="https://doi.org/10.18280/ts.400635">https://doi.org/10.18280/ts.400635</a>	Sundaravadivelu, B., Santhanakrishnan, K. (2023). Breast cancer detection using Comprising Fuzzy C-Means and Artificial Bee Colony optimization segmentation and grading with random forest classifier. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2751-2759. <a href="https://doi.org/10.18280/ts.400635">https://doi.org/10.18280/ts.400635</a>
232	Zhang, C., Wu, Q., Wang, J., Yang, L.Y., Zhang, H.X.	Massage Acupoint Positioning Method of Human Body Images Based on Transfer Learning	transfer learning, human body images, massage acupoints, acupoint positioning	40, 6, 2761-2768	<a href="https://doi.org/10.18280/ts.400636">https://doi.org/10.18280/ts.400636</a>	Zhang, C., Wu, Q., Wang, J., Yang, L.Y., Zhang, H.X. (2023). Massage acupoint positioning method of human body images based on transfer learning. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2761-2768. <a href="https://doi.org/10.18280/ts.400636">https://doi.org/10.18280/ts.400636</a>
233	Asokan, S., Seshadri, A.	Hierarchical Spatial Feature-CNN Employing Grad-CAM for Enhanced Segmentation and Classification in Alzheimer's and Parkinson's Disease Diagnosis via MRI	accuracy, classification, segmentation, Alzheimer's, Parkinson's, features, Magnetic Resonance Imaging, Convolutional Neural Network, Grad-CAM	40, 6, 2769-2778	<a href="https://doi.org/10.18280/ts.400637">https://doi.org/10.18280/ts.400637</a>	Asokan, S., Seshadri, A. (2023). Hierarchical spatial feature-CNN employing Grad-CAM for enhanced segmentation and classification in Alzheimer's and Parkinson's disease diagnosis via MRI. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2769-2778. <a href="https://doi.org/10.18280/ts.400637">https://doi.org/10.18280/ts.400637</a>
234	Aydin, C.	Enhanced Material Classification via MobileSEMNet: Leveraging MobileNetV2 for SEM Image Analysis	MobileSEMNet, MobileNetV2, SEM image processing, deep learning, deep feature engineering	40, 6, 2779-2787	<a href="https://doi.org/10.18280/ts.400638">https://doi.org/10.18280/ts.400638</a>	Aydin, C. (2023). Enhanced material classification via MobileSEMNet: Leveraging MobileNetV2 for SEM image analysis. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2779-2787. <a href="https://doi.org/10.18280/ts.400638">https://doi.org/10.18280/ts.400638</a>

235	Gandikota, P.H., Abirami, S., Kumar, M.S.	Bottleneck Feature-Based U-Net for Automated Detection and Segmentation of Gastrointestinal Tract Tumors from CT Scans	artificial intelligence, deep learning, digestive system cancer, machine learning, segmentation	40, 6, 2789-2797	<a href="https://doi.org/10.18280/ts.400639">https://doi.org/10.18280/ts.400639</a>	Gandikota, P.H., Abirami, S., Kumar, M.S. (2023). Bottleneck Feature-based U-Net for automated detection and segmentation of gastrointestinal tract tumors from CT scans. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2789-2797. <a href="https://doi.org/10.18280/ts.400639">https://doi.org/10.18280/ts.400639</a>
236	Yan, J., Wang, N., Wei, Y.M., Han, M.L.	Personalized Learning Pathway Generation for Online Education Through Image Recognition	online education, personalized learning paths, image recognition, transfer learning, micro-expression recognition	40, 6, 2799-2808	<a href="https://doi.org/10.18280/ts.400640">https://doi.org/10.18280/ts.400640</a>	Yan, J., Wang, N., Wei, Y.M., Han, M.L. (2023). Personalized learning pathway generation for online education through image recognition. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2799-2808. <a href="https://doi.org/10.18280/ts.400640">https://doi.org/10.18280/ts.400640</a>
237	Ganesan, A., Durgamahanthi, V.	Non-Invasive Breast Cancer Detection Using Electrical Impedance Tomography: Design, Analysis and Comparison of Reconstruction Algorithms	breast cancer screening, Electrical Impedance Tomography, COMSOL Multiphysics, finite element analysis, reconstruction, one step Gauss Newton, total variation, K-means clustering	40, 6, 2809-2817	<a href="https://doi.org/10.18280/ts.400641">https://doi.org/10.18280/ts.400641</a>	Ganesan, A., Durgamahanthi, V. (2023). Non-invasive breast cancer detection using Electrical Impedance Tomography: Design, analysis and comparison of reconstruction algorithms. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2809-2817. <a href="https://doi.org/10.18280/ts.400641">https://doi.org/10.18280/ts.400641</a>
238	Mulani, A.O., Birajadar, G., Ivković, N., Salah, B., Darlis, A.R.	Deep Learning Based Detection of Dermatological Diseases Using Convolutional Neural Networks and Decision Trees	YCbCr color model, convolutional neural network, decision tree	40, 6, 2819-2825	<a href="https://doi.org/10.18280/ts.400642">https://doi.org/10.18280/ts.400642</a>	Mulani, A.O., Birajadar, G., Ivković, N., Salah, B., Darlis, A.R. (2023). Deep learning based detection of dermatological diseases using convolutional neural networks and decision trees. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2819-2825. <a href="https://doi.org/10.18280/ts.400642">https://doi.org/10.18280/ts.400642</a>
239	Sreedevi, B., Suresh, G., Mubarakali, A., Lalitha, K.	OD-DeepNet: Semantic Classification by Deep Learning for Optic Disc Localization	Optic Disc, semantic classification, deep learning, glaucoma diagnosis, fundus images	40, 6, 2827-2833	<a href="https://doi.org/10.18280/ts.400643">https://doi.org/10.18280/ts.400643</a>	Sreedevi, B., Suresh, G., Mubarakali, A., Lalitha, K. (2023). OD-DeepNet: Semantic classification by deep learning for Optic Disc Localization. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2827-2833. <a href="https://doi.org/10.18280/ts.400643">https://doi.org/10.18280/ts.400643</a>
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242	Chikmurge, D.V., Raghunathan, S.	Enhanced Recognition of Offline Marathi Handwriting via a Self-Additive Attention Mechanism	optical character recognition, bidirectional long short-term memory, convolutional neural network, encoder-decoder, and connectionist temporal classifier	40, 6, 2853-2860	<a href="https://doi.org/10.18280/ts.400646">https://doi.org/10.18280/ts.400646</a>	Chikmurge, D.V., Raghunathan, S. (2023). Enhanced recognition of offline Marathi handwriting via a self-additive attention mechanism. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2853-2860. <a href="https://doi.org/10.18280/ts.400646">https://doi.org/10.18280/ts.400646</a>
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244	Narasimman, V., Thiyagarajan, K.	A Lightweight, Depth-Wise Separable Convolution-Based CapsNet for Efficient Grape Leaf Disease Detection	imaging, separable convolution, disease recognition, neural network, and classification	40, 6, 2869-2877	<a href="https://doi.org/10.18280/ts.400648">https://doi.org/10.18280/ts.400648</a>	Narasimman, V., Thiyagarajan, K. (2023). A lightweight, depth-wise separable convolution-based CapsNet for efficient grape leaf disease detection. <i>Traitement du Signal</i> , Vol. 40, No. 6, pp. 2869-2877. <a href="https://doi.org/10.18280/ts.400648">https://doi.org/10.18280/ts.400648</a>
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248	Yang, H.D., Guo, R.Y.	Joint Solution for Temporal-Spatial Synchronization of Multi-View Videos and Pedestrian Matching in Crowd Scenes	spatio-temporal localization, binocular cameras, multi-view geometry, short-baseline binocular camera, camera synchronization, external parameter calibration, pedestrian feature matching, spatial-temporal point sets, self-calibration	40, 5, 1807-1820	<a href="https://doi.org/10.18280/ts.400503">https://doi.org/10.18280/ts.400503</a>	Yang, H.D., Guo, R.Y. (2023). Joint solution for temporal-spatial synchronization of multi-view videos and pedestrian matching in crowd scenes. <i>Traitement du Signal</i> , Vol. 40, No. 5, pp. 1807-1820. <a href="https://doi.org/10.18280/ts.400503">https://doi.org/10.18280/ts.400503</a>
249	Salh, C.H., Ali, A.M.	Unveiling Breast Tumor Characteristics: A ResNet152V2 and Mask R-CNN Based Approach for Type and Size Recognition in Mammograms	Mask R-CNN, ResNet152V2, mammogram, CNN, breast tumor	40, 5, 1821-1832	<a href="https://doi.org/10.18280/ts.400504">https://doi.org/10.18280/ts.400504</a>	Salh, C.H., Ali, A.M. (2023). Unveiling breast tumor characteristics: A ResNet152V2 and Mask R-CNN based approach for type and size recognition in mammograms. <i>Traitement du Signal</i> , Vol. 40, No. 5, pp. 1821-1832. <a href="https://doi.org/10.18280/ts.400504">https://doi.org/10.18280/ts.400504</a>
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256	Wu, J.D., Huang, Y.H.	Enhanced Identification of Internal Casting Defects in Vehicle Wheels Using YOLO Object Detection and X-Ray Inspection	vehicle, aluminum wheel, X-ray defect detection, deep learning, YOLO object detection	40, 5, 1909-1920	<a href="https://doi.org/10.18280/ts.400511">https://doi.org/10.18280/ts.400511</a>	Wu, J.D., Huang, Y.H. (2023). Enhanced identification of internal casting defects in vehicle wheels using YOLO object detection and X-ray inspection. <i>Traitement du Signal</i> , Vol. 40, No. 5, pp. 1909-1920. <a href="https://doi.org/10.18280/ts.400511">https://doi.org/10.18280/ts.400511</a>
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305	Fadhel, A.A., Hasan, H.M.	Enhancing ECG Signal Classification Accuracy Through Gaussian Modeling Method	ECG classification, healthcare system, ECG modeling, Gaussian function, arrhythmia, computer aided detection, deep learning, machine learning	40, 4, 1425-1434	<a href="https://doi.org/10.18280/ts.400411">https://doi.org/10.18280/ts.400411</a>	Fadhel, A.A., Hasan, H.M. (2023). Enhancing ECG signal classification accuracy through Gaussian Modeling method. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1425-1434. <a href="https://doi.org/10.18280/ts.400411">https://doi.org/10.18280/ts.400411</a>
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309	Hou, M., Tang, Y.P.	The Influence of Visual Features in Product Images on Sales Volume: A Machine Learning Approach to Extract Color and Deep Learning Super Sampling Features	online shopping, product images, sales volume, visual feature extraction, color analysis, target shape, DLSS features, machine learning	40, 4, 1469-1477	<a href="https://doi.org/10.18280/ts.400415">https://doi.org/10.18280/ts.400415</a>	Hou, M., Tang, Y.P. (2023). The influence of visual features in product images on sales volume: A machine learning approach to extract color and Deep Learning Super Sampling features. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1469-1477. <a href="https://doi.org/10.18280/ts.400415">https://doi.org/10.18280/ts.400415</a>
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314	Bhoi, A., Hendre, V.	Design of a Genetic Algorithm Based Dynamic Learning Method for Improved Channel Modelling in mmWave Radios via Temporal Breakpoint Analysis	channel, modelling, breakpoint, GWO, Q-learning, BER, coverage, estimation, incremental, continuous	40, 4, 1521-1532	<a href="https://doi.org/10.18280/ts.400420">https://doi.org/10.18280/ts.400420</a>	Bhoi, A., Hendre, V. (2023). Design of a genetic algorithm based dynamic learning method for improved channel modelling in mmWave radios via temporal breakpoint analysis. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1521-1532. <a href="https://doi.org/10.18280/ts.400420">https://doi.org/10.18280/ts.400420</a>
315	Wang, Y.C., Sun, J.Y., Wang, F.Y., Li, D.D.	Remote Sensing-Based Estimation of Seedling Density in Nursery Gardens Using YOLOv4 Deep Learning Algorithm	drone, seedling, remote sensing image, target detection, image recognition, deep learning	40, 4, 1533-1541	<a href="https://doi.org/10.18280/ts.400421">https://doi.org/10.18280/ts.400421</a>	Wang, Y.C., Sun, J.Y., Wang, F.Y., Li, D.D. (2023). Remote sensing-based estimation of seedling density in nursery gardens using YOLOv4 deep learning algorithm. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1533-1541. <a href="https://doi.org/10.18280/ts.400421">https://doi.org/10.18280/ts.400421</a>
316	Goluguri, N.V.R., K. S.D., Gogula, S.D., Chhabra, G.S.	ATRLNet: A Deep Learning Model for Enhanced Classification of Oryza Sativa Pathologies	LeNet, atrous convolution, artificial fish swarm optimization, Oryza Sativa plant diseases	40, 4, 1543-1552	<a href="https://doi.org/10.18280/ts.400422">https://doi.org/10.18280/ts.400422</a>	Goluguri, N.V.R., K. S.D., Gogula, S.D., Chhabra, G.S. (2023). ATRLNet: A deep learning model for enhanced classification of Oryza Sativa pathologies. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1543-1552. <a href="https://doi.org/10.18280/ts.400422">https://doi.org/10.18280/ts.400422</a>
317	Baydogan, M.P., Baybars, S.C., Tuncer, S.A.	Age-Net: An Advanced Hybrid Deep Learning Model for Age Estimation Using Orthopantomograph Images	age estimation, deep learning, dental orthopantomographic image, machine learning	40, 4, 1553-1563	<a href="https://doi.org/10.18280/ts.400423">https://doi.org/10.18280/ts.400423</a>	Baydogan, M.P., Baybars, S.C., Tuncer, S.A. (2023). Age-Net: An advanced hybrid deep learning model for age estimation using orthopantomograph images. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1553-1563. <a href="https://doi.org/10.18280/ts.400423">https://doi.org/10.18280/ts.400423</a>
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319	Elaraby, A., Saad, A., Karamti, H., Alruwaili, M.	An Optimized Deep Learning Approach for Robust Image Quality Classification	image quality, deep learning, convolutional neural network, image classification	40, 4, 1573-1579	<a href="https://doi.org/10.18280/ts.400425">https://doi.org/10.18280/ts.400425</a>	Elaraby, A., Saad, A., Karamti, H., Alruwaili, M. (2023). An optimized deep learning approach for robust image quality classification. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1573-1579. <a href="https://doi.org/10.18280/ts.400425">https://doi.org/10.18280/ts.400425</a>
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321	Lei, H.Q., Li, D.Q., Jiang, H.D.	Enhancement of Sonar Detection in Karst Caves Through Advanced Target Location and Image Fusion Algorithms	sonar detection of caves, target setting, image fusion, deep neural network	40, 4, 1593-1660	<a href="https://doi.org/10.18280/ts.400427">https://doi.org/10.18280/ts.400427</a>	Lei, H.Q., Li, D.Q., Jiang, H.D. (2023). Enhancement of sonar detection in karst caves through advanced target location and image fusion algorithms. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1593-1660. <a href="https://doi.org/10.18280/ts.400427">https://doi.org/10.18280/ts.400427</a>
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324	Sun, H.	Optimization of Deep Learning Algorithms for Image Segmentation in High-Dimensional Data Environments	high-dimensional data flow, image segmentation, U-Net-inspired architecture, depth skip connections, lightweight modeling, BCE loss, Dice loss, small object precision segmentation	40, 4, 1621-1628	<a href="https://doi.org/10.18280/ts.400430">https://doi.org/10.18280/ts.400430</a>	Sun, H. (2023). Optimization of deep learning algorithms for image segmentation in high-dimensional data environments. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1621-1628. <a href="https://doi.org/10.18280/ts.400430">https://doi.org/10.18280/ts.400430</a>

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326	Muthu, S.P.V., Devadoss, A.K.V.	Genetically Optimized Neural Network for Early Detection of Glaucoma and Cardiovascular Disease Risk Prediction	deep learning, glaucoma detection, genetic algorithm, network pruning, convolution, Fuzzy C-Means	40, 4, 1641-1651	<a href="https://doi.org/10.18280/ts.400432">https://doi.org/10.18280/ts.400432</a>	Muthu, S.P.V., Devadoss, A.K.V. (2023). Genetically optimized neural network for early detection of glaucoma and cardiovascular disease risk prediction. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1641-1651. <a href="https://doi.org/10.18280/ts.400432">https://doi.org/10.18280/ts.400432</a>
327	Zhao, Q.L., Cheng, H.S.	An Efficient Approach to Human Security Screening Image Recognition Through a Lightweight CNN Utilizing Yolov5s and GhostNet	lightweight CNN model, human security screening, image recognition, Yolov5s	40, 4, 1653-1660	<a href="https://doi.org/10.18280/ts.400433">https://doi.org/10.18280/ts.400433</a>	Zhao, Q.L., Cheng, H.S. (2023). An efficient approach to human security screening image recognition through a lightweight CNN utilizing Yolov5s and GhostNet. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1653-1660. <a href="https://doi.org/10.18280/ts.400433">https://doi.org/10.18280/ts.400433</a>
328	Sirisha, M., Sudha, S.V.	An Advanced Object Detection Framework for UAV Imagery Utilizing Transformer-Based Architecture and Split Attention Module: PVSAMNet	object detection, transformer, split-attention module, cardinal groups, VisDrone-DET, IoU balanced loss	40, 4, 1661-1672	<a href="https://doi.org/10.18280/ts.400434">https://doi.org/10.18280/ts.400434</a>	Sirisha, M., Sudha, S.V. (2023). An advanced object detection framework for UAV imagery utilizing transformer-based architecture and split attention module: PVSAMNet. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1661-1672. <a href="https://doi.org/10.18280/ts.400434">https://doi.org/10.18280/ts.400434</a>
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330	He, Q., Wang, K.	Enhancing Positron Emission Tomography Image Reconstruction: A Bayesian Approach Incorporating Total Variation and Median Root Prior	Bayesian image reconstruction, PET, total variation model, median root prior, Poisson noise suppression	40, 4, 1681-1688	<a href="https://doi.org/10.18280/ts.400436">https://doi.org/10.18280/ts.400436</a>	He, Q., Wang, K. (2023). Enhancing positron emission tomography image reconstruction: A Bayesian approach incorporating total variation and median root prior. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1681-1688. <a href="https://doi.org/10.18280/ts.400436">https://doi.org/10.18280/ts.400436</a>
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334	Chaitanya, P.S., Satpathy, S.K.	A Multilevel De-Noising Approach for Precision Edge-Based Fragmentation in MRI Brain Tumor Segmentation	multilevel denoising, segmentation, denoising, precision edge detection, pre-processing, tumor size detection, feature extraction	40, 4, 1715-1722	<a href="https://doi.org/10.18280/ts.400440">https://doi.org/10.18280/ts.400440</a>	Chaitanya, P.S., Satpathy, S.K. (2023). A multilevel De-noising approach for precision Edge-based fragmentation in MRI brain tumor segmentation. <i>Traitement du Signal</i> , Vol. 40, No. 4, pp. 1715-1722. <a href="https://doi.org/10.18280/ts.400440">https://doi.org/10.18280/ts.400440</a>
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362	Cai, X.L., Wang, X.Y., Zhang, Y.Y., Seng, D.W., Zhang, X.F.	An Examination of Implicit Trust and Influence in Social Recommendation Through Graph Convolutional Networks	user-user trust graph, user-user influence graph, embedding propagation, graph neural networks	40, 3, 1055-1064	<a href="https://doi.org/10.18280/ts.400321">https://doi.org/10.18280/ts.400321</a>	Cai, X.L., Wang, X.Y., Zhang, Y.Y., Seng, D.W., Zhang, X.F. (2023). An examination of implicit trust and influence in social recommendation through graph convolutional networks. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1055-1064. <a href="https://doi.org/10.18280/ts.400321">https://doi.org/10.18280/ts.400321</a>
363	Shimpi, J.K., Shanmugam, P.	Multiclass Adaptive Boosting Approach for Diabetic Retinopathy Prediction Using Diabetic Retinal Images	diabetic retinopathy prediction, VGG19, boosting, image classification, ensemble learning, convolutional neural network, deep learning	40, 3, 1065-1073	<a href="https://doi.org/10.18280/ts.400322">https://doi.org/10.18280/ts.400322</a>	Shimpi, J.K., Shanmugam, P. (2023). Multiclass adaptive boosting approach for diabetic retinopathy prediction using diabetic retinal images. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1065-1073. <a href="https://doi.org/10.18280/ts.400322">https://doi.org/10.18280/ts.400322</a>
364	Temiz, H.	Enhancing the Resolution of Historical Ottoman Texts Using Deep Learning-Based Super-Resolution Techniques	historical text image, super resolution, Ottoman, archive, document, deep learning	40, 3, 1075-1082	<a href="https://doi.org/10.18280/ts.400323">https://doi.org/10.18280/ts.400323</a>	Temiz, H. (2023). Enhancing the resolution of historical Ottoman texts using deep learning-based super-resolution techniques. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1075-1082. <a href="https://doi.org/10.18280/ts.400323">https://doi.org/10.18280/ts.400323</a>
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366	Gaikwad, V.P., Musande, V.	Advanced Prediction of Crop Diseases Using Cetatran-Optimized Deep KNN in Multispectral Imaging	crop leaf disease, cetatran optimization, economy, deep KNN classifier, parameter metrics	40, 3, 1093-1106	<a href="https://doi.org/10.18280/ts.400325">https://doi.org/10.18280/ts.400325</a>	Gaikwad, V.P., Musande, V. (2023). Advanced prediction of crop diseases using Cetatran-optimized deep KNN in multispectral imaging. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1093-1106. <a href="https://doi.org/10.18280/ts.400325">https://doi.org/10.18280/ts.400325</a>
367	Zhou, H.J., Chen, W., Lin, Z.M., Chen, R.Y.	An Examination Monocular Vision Gaze Point Tracking under the Theory of 'Machines Displacing Workers' in the Philosophy of Technology	machines displacing workers, monocular machine vision, gaze point analysis, CarSim, ambient lighting, lighting-attention quantitative model	40, 3, 1107-1117	<a href="https://doi.org/10.18280/ts.400326">https://doi.org/10.18280/ts.400326</a>	Zhou, H.J., Chen, W., Lin, Z.M., Chen, R.Y. (2023). An examination monocular vision gaze point tracking under the theory of 'machines displacing workers' in the philosophy of technology. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1107-1117. <a href="https://doi.org/10.18280/ts.400326">https://doi.org/10.18280/ts.400326</a>
368	Laouamer, L.	Toward a Robust Image Watermarking Method: Exploiting Human Visual System Properties in the Spatial Domain	robustness, informed watermarking, local binary pattern (LBP), imperceptibility	40, 3, 1119-1126	<a href="https://doi.org/10.18280/ts.400327">https://doi.org/10.18280/ts.400327</a>	Laouamer, L. (2023). Toward a robust image watermarking method: Exploiting human visual system properties in the spatial domain. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1119-1126. <a href="https://doi.org/10.18280/ts.400327">https://doi.org/10.18280/ts.400327</a>
369	Zhou, Y.	A Novel Image Recognition-Based Assessment System for Elderly Independent Living Ability and Its Applications	image processing, the elderly, independent living ability assessment, behavior recognition	40, 3, 1127-1135	<a href="https://doi.org/10.18280/ts.400328">https://doi.org/10.18280/ts.400328</a>	Zhou, Y. (2023). A novel image recognition-based assessment system for elderly independent living ability and its applications. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1127-1135. <a href="https://doi.org/10.18280/ts.400328">https://doi.org/10.18280/ts.400328</a>
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371	Thamizhamuthu, R., Maniraj, S.P.	Deep Learning-Based Dermoscopic Image Classification System for Robust Skin Lesion Analysis	image classification system, deep learning, feature extraction, colour moments, local binary pattern, statistical model	40, 3, 1145-1152	<a href="https://doi.org/10.18280/ts.400330">https://doi.org/10.18280/ts.400330</a>	Thamizhamuthu, R., Maniraj, S.P. (2023). Deep learning-based dermoscopic image classification system for robust skin lesion analysis. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1145-1152. <a href="https://doi.org/10.18280/ts.400330">https://doi.org/10.18280/ts.400330</a>
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376	Theera-Ampornpant, N., Treepong, P.	Optimizing Hyperparameters for Thai Cuisine Recognition via Convolutional Neural Networks	food computing, image recognition, object recognition, Thai food	40, 3, 1187-1193	<a href="https://doi.org/10.18280/ts.400335">https://doi.org/10.18280/ts.400335</a>	Theera-Ampornpant, N., Treepong, P. (2023). Optimizing hyperparameters for Thai cuisine recognition via convolutional neural networks. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1187-1193. <a href="https://doi.org/10.18280/ts.400335">https://doi.org/10.18280/ts.400335</a>
377	Ding, X.Y., Hu, W.J.	Advancements in Geological Disaster Monitoring and Early Warning Systems: A Deep Learning and Computer Vision Approach	machine vision, deep learning, geological disaster monitoring, geological disaster early warning	40, 3, 1195-1202	<a href="https://doi.org/10.18280/ts.400336">https://doi.org/10.18280/ts.400336</a>	Ding, X.Y., Hu, W.J. (2023). Advancements in geological disaster monitoring and early warning systems: A deep learning and computer vision approach. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1195-1202. <a href="https://doi.org/10.18280/ts.400336">https://doi.org/10.18280/ts.400336</a>
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383	Latha, Y.M., Rao, B.S.	Advanced Denoising Model for QR Code Images Using Hough Transformation and Convolutional Neural Networks	quick response code, noise, hough transform, noise removal, data identification, matrix representation, complex backgrounds	40, 3, 1243-1249	<a href="https://doi.org/10.18280/ts.400342">https://doi.org/10.18280/ts.400342</a>	Latha, Y.M., Rao, B.S. (2023). Advanced denoising model for QR code images using hough transformation and convolutional neural networks. <i>Traitement du Signal</i> , Vol. 40, No. 3, pp. 1243-1249. <a href="https://doi.org/10.18280/ts.400342">https://doi.org/10.18280/ts.400342</a>
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395	Ay, S., Karabatak, M.	A New Automatic Vehicle Tracking and Detection Algorithm for Multi-Traffic Video Cameras	automatic vehicle tracking, automatic vehicle detection, deep learning, object recognition, faster RCNN, YOLO	40, 2, 457-468	<a href="https://doi.org/10.18280/ts.400205">https://doi.org/10.18280/ts.400205</a>	Ay, S., Karabatak, M. (2023). A new automatic vehicle tracking and detection algorithm for multi-traffic video cameras. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 457-468. <a href="https://doi.org/10.18280/ts.400205">https://doi.org/10.18280/ts.400205</a>
396	Wang, Y.J.	Electrical Control Equipment Patrol Inspection Method Based on High Quality Image Recognition Technology	high quality image processing, electrical control equipment, equipment patrol inspection, image enhancement, image reconstruction	40, 2, 469-478	<a href="https://doi.org/10.18280/ts.400206">https://doi.org/10.18280/ts.400206</a>	Wang, Y.J. (2023). Electrical control equipment patrol inspection method based on high quality image recognition technology. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 469-478. <a href="https://doi.org/10.18280/ts.400206">https://doi.org/10.18280/ts.400206</a>

397	Nath, M., Srivastava, S.	4th Order Shannon Energy Envelope Approach for Localization of S1 and S2 for Early-Stage Detection of Heart Valve Dysfunction	empirical mode decomposition (EMD), modified Shannon energy envelope (MSEE), combined component signal, PCG, ECG, cardio vascular diseases (CVD)	40, 2, 479-490	<a href="https://doi.org/10.18280/ts.400207">https://doi.org/10.18280/ts.400207</a>	Nath, M., Srivastava, S. (2023). 4th order Shannon energy envelope approach for localization of S1 and S2 for early-stage detection of heart valve dysfunction. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 479-490. <a href="https://doi.org/10.18280/ts.400207">https://doi.org/10.18280/ts.400207</a>
398	Guendouzi, F., Attari, M.	Premature Ventricular Contraction Detection Based on Chebyshev Polynomials and K Nearest Neighbours Classifier	Chebyshev polynomials, classification, electrocardiogram (ECG), K-nearest neighbour (KNN), premature ventricular contraction (PVC)	40, 2, 491-500	<a href="https://doi.org/10.18280/ts.400208">https://doi.org/10.18280/ts.400208</a>	Guendouzi, F., Attari, M. (2023). Premature ventricular contraction detection based on Chebyshev polynomials and k nearest neighbours classifier. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 491-500. <a href="https://doi.org/10.18280/ts.400208">https://doi.org/10.18280/ts.400208</a>
399	Yan, X.D., Song, X.G.	Large-Scale Civil Engineering Structure Deformation Monitoring Research Based on Image Recognition	geometric consistency, civil engineering, structural deformation, deformation detection and monitoring	40, 2, 501-509	<a href="https://doi.org/10.18280/ts.400209">https://doi.org/10.18280/ts.400209</a>	Yan, X.D., Song, X.G. (2023). Large-scale civil engineering structure deformation monitoring research based on image recognition. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 501-509. <a href="https://doi.org/10.18280/ts.400209">https://doi.org/10.18280/ts.400209</a>
400	Gopal, A., Alagarsamy, P.C., Kalivaradhan, U.M., Gandhimaruthian, L.	An Automatic Region Based Optimal Segmentation and Detection of Features on Dermoscopy Images Using V-Shaped Waterfall and Water Ridges	watershed segmentation, image gradient, gaussian filter, levelset, Neumann boundary, Dirac	40, 2, 511-522	<a href="https://doi.org/10.18280/ts.400210">https://doi.org/10.18280/ts.400210</a>	Gopal, A., Alagarsamy, P.C., Kalivaradhan, U.M., Gandhimaruthian, L. (2023). An automatic region based optimal segmentation and detection of features on dermoscopy images using v-shaped waterfall and water ridges. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 511-522. <a href="https://doi.org/10.18280/ts.400210">https://doi.org/10.18280/ts.400210</a>
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402	Wang, S.Y., Zhai, Y., Xu, G.F., Wang, N.	Multi-Modal Affective Computing: An Application in Teaching Evaluation Based on Combined Processing of Texts and Images	text and image processing, multi-modal affective computing (MAC), teaching evaluation	40, 2, 533-541	<a href="https://doi.org/10.18280/ts.400212">https://doi.org/10.18280/ts.400212</a>	Wang, S.Y., Zhai, Y., Xu, G.F., Wang, N. (2023). Multi-modal affective computing: An application in teaching evaluation based on combined processing of texts and images. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 533-541. <a href="https://doi.org/10.18280/ts.400212">https://doi.org/10.18280/ts.400212</a>
403	Yüksel, A.S., Karabiyik, M.A.	TraViQuA: Natural Language Driven Traffic Video Querying Using Deep Learning	natural language processing (NLP), you only look once (YOLO), long short-term memory (LSTM), video query, deep learning	40, 2, 543-553	<a href="https://doi.org/10.18280/ts.400213">https://doi.org/10.18280/ts.400213</a>	Yüksel, A.S., Karabiyik, M.A. (2023). TraViQuA: Natural language driven traffic video querying using deep learning. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 543-553. <a href="https://doi.org/10.18280/ts.400213">https://doi.org/10.18280/ts.400213</a>
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405	Zhang, C., Yu, L., Hu, X.Q., Wu, Q., Wang, J., Xu, Z.	A Novel Visual Positioning Algorithm for Massage Acupoints Based on Image Registration	image registration; massage acupoints; visual positioning; convolution neural network (CNN)	40, 2, 567-575	<a href="https://doi.org/10.18280/ts.400215">https://doi.org/10.18280/ts.400215</a>	Zhang, C., Yu, L., Hu, X.Q., Wu, Q., Wang, J., Xu, Z. (2023). A novel visual positioning algorithm for massage acupoints based on image registration. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 567-575. <a href="https://doi.org/10.18280/ts.400215">https://doi.org/10.18280/ts.400215</a>
406	Dogan, Y.	A New Global Pooling Method for Deep Neural Networks: Global Average of Top-K Max-Pooling	global pooling, convolutional neural network, deep learning, image classification, transfer learning	40, 2, 577-587	<a href="https://doi.org/10.18280/ts.400216">https://doi.org/10.18280/ts.400216</a>	Dogan, Y. (2023). A new global pooling method for deep neural networks: Global average of top-k max-pooling. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 577-587. <a href="https://doi.org/10.18280/ts.400216">https://doi.org/10.18280/ts.400216</a>
407	Cherukuvada, S., Kayalvizhi, R.	Modified Gorilla Troops Optimization with Deep Learning Based Epileptic Seizure Prediction Model on EEG Signals	biomedical data, EEG signals, seizure prediction, feature selection, deep learning	40, 2, 589-599	<a href="https://doi.org/10.18280/ts.400217">https://doi.org/10.18280/ts.400217</a>	Cherukuvada, S., Kayalvizhi, R. (2023). Modified gorilla troops optimization with deep learning based epileptic seizure prediction model on EEG signals. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 589-599. <a href="https://doi.org/10.18280/ts.400217">https://doi.org/10.18280/ts.400217</a>
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410	Ennehar, B.C., Samra, B.	Master-Slave Convolutional Deep Architecture for Vehicle Identification and Type Classification	intelligent transportation system, vehicle detection, vehicle classification, convolutional neural network, deep learning, master-slave architecture	40, 2, 619-627	<a href="https://doi.org/10.18280/ts.400220">https://doi.org/10.18280/ts.400220</a>	Ennehar, B.C., Samra, B. (2023). Master-slave convolutional deep architecture for vehicle identification and type classification. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 619-627. <a href="https://doi.org/10.18280/ts.400220">https://doi.org/10.18280/ts.400220</a>
411	Xu, L., Zheng, D.C.	Face Mask Segmentation Method Combining Salient Features and Gender Constraints	salient features, gender constraints, face mask segmentation	40, 2, 629-637	<a href="https://doi.org/10.18280/ts.400221">https://doi.org/10.18280/ts.400221</a>	Xu, L., Zheng, D.C. (2023). Face mask segmentation method combining salient features and gender constraints. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 629-637. <a href="https://doi.org/10.18280/ts.400221">https://doi.org/10.18280/ts.400221</a>
412	Perumal, R., Venkatachalam, S.B.	Non Invasive Decay Analysis of Monument Using Deep Learning Techniques	local binary pattern, multi layer neural network, luminance, clustering, non destructive techniques	40, 2, 639-646	<a href="https://doi.org/10.18280/ts.400222">https://doi.org/10.18280/ts.400222</a>	Perumal, R., Venkatachalam, S.B. (2023). Non invasive decay analysis of monument using deep learning techniques. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 639-646. <a href="https://doi.org/10.18280/ts.400222">https://doi.org/10.18280/ts.400222</a>
413	Sundaram, S.M., Narayanan, R.	Human Face and Facial Expression Recognition Using Deep Learning and SNet Architecture Integrated with BottleNeck Attention Module	facial expression recognition, face recognition, SNet architecture, BottleNeck attention module, CNN, thermal images	40, 2, 647-655	<a href="https://doi.org/10.18280/ts.400223">https://doi.org/10.18280/ts.400223</a>	Sundaram, S.M., Narayanan, R. (2023). Human face and facial expression recognition using deep learning and SNet architecture integrated with BottleNeck attention module. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 647-655. <a href="https://doi.org/10.18280/ts.400223">https://doi.org/10.18280/ts.400223</a>
414	Yu, L., Ali, M., Khan, I.A., Maqsood, T., Wang, Y.L., Gao, H.N.	Smart Energy Monitoring and Analysis Method Based on Image Recognition Technology	image recognition, energy monitoring, monitoring instrument reading recognition	40, 2, 657-665	<a href="https://doi.org/10.18280/ts.400224">https://doi.org/10.18280/ts.400224</a>	Yu, L., Ali, M., Khan, I.A., Maqsood, T., Wang, Y.L., Gao, H.N. (2023). Smart energy monitoring and analysis method based on image recognition technology. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 657-665. <a href="https://doi.org/10.18280/ts.400224">https://doi.org/10.18280/ts.400224</a>

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416	Yusuf, A.A., Ay, B., Fidan, G., Aydin, G.	Exploiting JECAM Database for Agriculture Land Cover Classification of Antsirabe Site Using Sentinel 2 Imagery with Deep Learning	land cover, deep learning, convolution neural network, autoencoder, long short-term memory	40, 2, 675-681	<a href="https://doi.org/10.18280/ts.400226">https://doi.org/10.18280/ts.400226</a>	Yusuf, A.A., Ay, B., Fidan, G., Aydin, G. (2023). Exploiting JECAM database for agriculture land cover classification of antsirabe site using sentinel 2 imagery with deep learning. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 675-681. <a href="https://doi.org/10.18280/ts.400226">https://doi.org/10.18280/ts.400226</a>
417	Wang, S.J., Zhang, R.L.	Multi-Grained Deep Cascade Learning for ECG Biometric Recognition	electrocardiogram, biometric recognition, deep neural networks, deep cascade learning, multiple granularity scanning	40, 2, 683-691	<a href="https://doi.org/10.18280/ts.400227">https://doi.org/10.18280/ts.400227</a>	Wang, S.J., Zhang, R.L. (2023). Multi-grained deep cascade learning for ECG biometric recognition. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 683-691. <a href="https://doi.org/10.18280/ts.400227">https://doi.org/10.18280/ts.400227</a>
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420	Jiao, Y.M.	Mechanical Structure Defect Detection after High Temperature Based on Image Processing	high temperature, mechanical structure defects, image legend, feature fusion	40, 2, 709-717	<a href="https://doi.org/10.18280/ts.400230">https://doi.org/10.18280/ts.400230</a>	Jiao, Y.M. (2023). Mechanical structure defect detection after high temperature based on image processing. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 709-717. <a href="https://doi.org/10.18280/ts.400230">https://doi.org/10.18280/ts.400230</a>
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422	Mohmed, A.R., Çelik, Y.	Feature Extraction for Medical Image Classification: A Novel Statistical Approach	ASPS approach, classification medical images, diabetic retinopathy, features extraction, features selection, healthcare	40, 2, 727-733	<a href="https://doi.org/10.18280/ts.400232">https://doi.org/10.18280/ts.400232</a>	Mohmed, A.R., Çelik, Y. (2023). Feature extraction for medical image classification: A novel statistical approach. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 727-733. <a href="https://doi.org/10.18280/ts.400232">https://doi.org/10.18280/ts.400232</a>
423	Wang, Q.W., Wang, P.X., Chang, Y.Z.	Deep Learning-Based Intelligent Image Recognition and Its Applications in Financial Technology Services	deep learning, intelligent image recognition, financial technology services	40, 2, 735-742	<a href="https://doi.org/10.18280/ts.400233">https://doi.org/10.18280/ts.400233</a>	Wang, Q.W., Wang, P.X., Chang, Y.Z. (2023). Deep learning-based intelligent image recognition and its applications in financial technology services. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 735-742. <a href="https://doi.org/10.18280/ts.400233">https://doi.org/10.18280/ts.400233</a>
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425	Zhu, Z., Zheng, X.Q., Ke, T.P., Chai, G.F.	Emotion Recognition in Learning Scenes Supported by Smart Classroom and Its Application	smart classroom, learning scene, emotion recognition	40, 2, 751-758	<a href="https://doi.org/10.18280/ts.400235">https://doi.org/10.18280/ts.400235</a>	Zhu, Z., Zheng, X.Q., Ke, T.P., Chai, G.F. (2023). Emotion recognition in learning scenes supported by smart classroom and its application. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 751-758. <a href="https://doi.org/10.18280/ts.400235">https://doi.org/10.18280/ts.400235</a>
426	Bayram, H.Y., Bingol, H., Alatas, B.	Automated Classification of Brain Tumor Disease with a Novel CNN Relief and SVM-Based Deep Hybrid Model	brain tumor, artificial intelligence, CNN, relief, SVM	40, 2, 759-766	<a href="https://doi.org/10.18280/ts.400236">https://doi.org/10.18280/ts.400236</a>	Bayram, H.Y., Bingol, H., Alatas, B. (2023). Automated classification of brain tumor disease with a novel CNN relief and SVM-based deep hybrid model. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 759-766. <a href="https://doi.org/10.18280/ts.400236">https://doi.org/10.18280/ts.400236</a>
427	Ekambaram, D., Ponnusamy, V., Natarajan, S.T., Khan, M.F.S.F.	Artificial Intelligence (AI) Powered Precise Classification of Recuperation Exercises for Musculoskeletal Disorders	Artificial Intelligence (AI), deep neural network, work-related musculoskeletal disorder, home-based recuperation training, upper limb exercise	40, 2, 767-773	<a href="https://doi.org/10.18280/ts.400237">https://doi.org/10.18280/ts.400237</a>	Ekambaram, D., Ponnusamy, V., Natarajan, S.T., Khan, M.F.S.F. (2023). Artificial Intelligence (AI) powered precise classification of recuperation exercises for musculoskeletal disorders. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 767-773. <a href="https://doi.org/10.18280/ts.400237">https://doi.org/10.18280/ts.400237</a>
428	Cai, X.L., Wang, J.C., Seng, D.W., Zhang, X.F.	GCNE: Graph Convolution Networks with Explicitly Influence for Recommendation	collaborative filtering, recommender system, embedding propagation, graph neural network	40, 2, 775-781	<a href="https://doi.org/10.18280/ts.400238">https://doi.org/10.18280/ts.400238</a>	Cai, X.L., Wang, J.C., Seng, D.W., Zhang, X.F. (2023). GCNE: Graph convolution networks with explicitly influence for recommendation. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 775-781. <a href="https://doi.org/10.18280/ts.400238">https://doi.org/10.18280/ts.400238</a>
429	Sirisha, U., Chandana, B.S., Harikiran, J.	NAM-YOLOV7: An Improved YOLOv7 Based on Attention Model for Animal Death Detection	dead animals, deep learning, object detection, normalization-based attention module, you only look once architecture	40, 2, 783-789	<a href="https://doi.org/10.18280/ts.400239">https://doi.org/10.18280/ts.400239</a>	Sirisha, U., Chandana, B.S., Harikiran, J. (2023). NAM-YOLOV7: An improved YOLOv7 based on attention model for animal death detection. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 783-789. <a href="https://doi.org/10.18280/ts.400239">https://doi.org/10.18280/ts.400239</a>
430	Jirjees, S.W., Alkhalid, F.F., Hasan, A.M.	Text Encryption by Indexing ASCII of Characters Based on the Locations of Pixels of the Image	text encryption, brute force, cryptanalysis, encoding pixels, key sensitivity	40, 2, 791-796	<a href="https://doi.org/10.18280/ts.400240">https://doi.org/10.18280/ts.400240</a>	Jirjees, S.W., Alkhalid, F.F., Hasan, A.M. (2023). Text encryption by indexing ASCII of characters based on the locations of pixels of the image. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 791-796. <a href="https://doi.org/10.18280/ts.400240">https://doi.org/10.18280/ts.400240</a>
431	Zhang, X.Y., Han, X.X., Fu, C.N.	Comparison of Object Region Segmentation Algorithms of PCB Defect Detection	object region segmentation, PCB, color space threshold segmentation algorithm, morphological edge detection segmentation algorithm, K-means clustering segmentation algorithm	40, 2, 797-802	<a href="https://doi.org/10.18280/ts.400241">https://doi.org/10.18280/ts.400241</a>	Zhang, X.Y., Han, X.X., Fu, C.N. (2023). Comparison of object region segmentation algorithms of PCB defect detection. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 797-802. <a href="https://doi.org/10.18280/ts.400241">https://doi.org/10.18280/ts.400241</a>
432	Rao, K.K., Rohith, K., Rohith, M., Chakradhar, M.S., Greeshmanth, M., Kumari, G.L., Surekha, Y.	Empirical Investigations to Skin Lesion Detection Using DenseNet Convolutional Neural Network	DenseNet CNN, lesion, image	40, 2, 803-809	<a href="https://doi.org/10.18280/ts.400242">https://doi.org/10.18280/ts.400242</a>	Rao, K.K., Rohith, K., Rohith, M., Chakradhar, M.S., Greeshmanth, M., Kumari, G.L., Surekha, Y. (2023). Empirical investigations to skin lesion detection using DenseNet convolutional neural network. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 803-809. <a href="https://doi.org/10.18280/ts.400242">https://doi.org/10.18280/ts.400242</a>

433	Eldem, H., Ülker, E., Işık, O.Y.	Effects of Training Parameters of AlexNet Architecture on Wound Image Classification	wound image classification, AlexNet, parameter optimization, deep learning	40, 2, 811-817	<a href="https://doi.org/10.18280/ts.400243">https://doi.org/10.18280/ts.400243</a>	Eldem, H., Ülker, E., Işık, O.Y. (2023). Effects of training parameters of AlexNet architecture on wound image classification. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 811-817. <a href="https://doi.org/10.18280/ts.400243">https://doi.org/10.18280/ts.400243</a>
434	Hai, B.H.	Eliminate Artifact on ECG Recording Using the Soft Threshold Setting on Wavelet Coefficients at Independent Components of ICA	artifact removal, biomedical signals, ECG recording, independent component analysis, ICA, wavelet transform	40, 2, 819-824	<a href="https://doi.org/10.18280/ts.400244">https://doi.org/10.18280/ts.400244</a>	Hai, B.H. (2023). Eliminate artifact on ECG recording using the soft threshold setting on wavelet coefficients at independent components of ICA. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 819-824. <a href="https://doi.org/10.18280/ts.400244">https://doi.org/10.18280/ts.400244</a>
435	Qin, H.W., Zou, J., He, B.G., Fu, Y., Wang, L.Z.	Damage Identification Method of Wind Turbine Generator System Blades Based on Image Processing Technology	image processing, wind turbine generator system (WTGS) blade, damage identification, sample expansion	40, 2, 825-833	<a href="https://doi.org/10.18280/ts.400245">https://doi.org/10.18280/ts.400245</a>	Qin, H.W., Zou, J., He, B.G., Fu, Y., Wang, L.Z. (2023). Damage identification method of wind turbine generator system blades based on image processing technology. <i>Traitement du Signal</i> , Vol. 40, No. 2, pp. 825-833. <a href="https://doi.org/10.18280/ts.400245">https://doi.org/10.18280/ts.400245</a>
436	Ngong, I.C., Baykan, N.A.	Different Deep Learning Based Classification Models for COVID-19 CT-Scans and Lesion Segmentation Through the cGAN-UNet Hybrid Method	COVID-19 segmentation, COVID-19 classification, conditional generative adversarial network (cGAN), convolutional neural network (CNN), PatchCNN, capsule neural network (CapsNet)	40, 1, 1-20	<a href="https://doi.org/10.18280/ts.400101">https://doi.org/10.18280/ts.400101</a>	Ngong, I.C., Baykan, N.A. (2023). Different deep learning based classification models for COVID-19 CT-scans and lesion segmentation through the cGAN-UNet hybrid method. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 1-20. <a href="https://doi.org/10.18280/ts.400101">https://doi.org/10.18280/ts.400101</a>
437	Sivapatham, D., Arasakumaran, U., Annappan, B., Chandrasekaran, S.	Analysis of Genetic Face Images with Respect to Reflexology for Prediction of Diseases	3-level DWT, principal component analysis, genetically closer	40, 1, 21-30	<a href="https://doi.org/10.18280/ts.400102">https://doi.org/10.18280/ts.400102</a>	Sivapatham, D., Arasakumaran, U., Annappan, B., Chandrasekaran, S. (2023). Analysis of genetic face images with respect to reflexology for prediction of diseases. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 21-30. <a href="https://doi.org/10.18280/ts.400102">https://doi.org/10.18280/ts.400102</a>
438	Fan, H.Y., Zhao, Y.M., Su, G.A., Zhao, T.S., Jin, S.W.	The Multi-View Deep Visual Adaptive Graph Convolution Network and Its Application in Point Cloud	visual selective attention, graph convolution, multi-view, adaptive, rasterization	40, 1, 31-41	<a href="https://doi.org/10.18280/ts.400103">https://doi.org/10.18280/ts.400103</a>	Fan, H.Y., Zhao, Y.M., Su, G.A., Zhao, T.S., Jin, S.W. (2023). The multi-view deep visual adaptive graph convolution network and its application in point cloud. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 31-41. <a href="https://doi.org/10.18280/ts.400103">https://doi.org/10.18280/ts.400103</a>
439	Al-jumaili, S., Duru, A.D., Ibrahim, A.A., Uçan, O.N.	Investigation of Epileptic Seizure Signatures Classification in EEG Using Supervised Machine Learning Algorithms	electroencephalogram (EEG), fast fourier transform (FFT), K-nearest neighbor (KNN), support vector machine (SVM), classification epileptic seizure	40, 1, 43-54	<a href="https://doi.org/10.18280/ts.400104">https://doi.org/10.18280/ts.400104</a>	Al-jumaili, S., Duru, A.D., Ibrahim, A.A., Uçan, O.N. (2023). Investigation of epileptic seizure signatures classification in EEG using supervised machine learning algorithms. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 43-54. <a href="https://doi.org/10.18280/ts.400104">https://doi.org/10.18280/ts.400104</a>
440	Saeed, J.N., Abdulazeez, A.M., Ibrahim, D.A.	An Ensemble DCNNs-Based Regression Model for Automatic Facial Beauty Prediction and Analyzation	facial beauty prediction, CNN-based regression, facial image attractiveness analysis, ensemble learning, Grad-CAM, attention mechanism	40, 1, 55-63	<a href="https://doi.org/10.18280/ts.400105">https://doi.org/10.18280/ts.400105</a>	Saeed, J.N., Abdulazeez, A.M., Ibrahim, D.A. (2023). An ensemble DCNNs-based regression model for automatic facial beauty prediction and analyzation. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 55-63. <a href="https://doi.org/10.18280/ts.400105">https://doi.org/10.18280/ts.400105</a>
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442	Wang, S.Y., Gao, G.H., Shuai, C.Y.	Study on Feedback and Correction of Tomato Picking Localization Information	tomato detection, ShuffleNetV2, visual feedback, localization correction	40, 1, 81-90	<a href="https://doi.org/10.18280/ts.400107">https://doi.org/10.18280/ts.400107</a>	Wang, S.Y., Gao, G.H., Shuai, C.Y. (2023). Study on feedback and correction of tomato picking localization information. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 81-90. <a href="https://doi.org/10.18280/ts.400107">https://doi.org/10.18280/ts.400107</a>
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444	Titrek, F., Baykan, Ö.K.	Finger Vein Recognition Based on Multi-Features Fusion	biometrics, feature extraction, finger vein, fusion, GLRLM, GLCM, HVTP, SFTA	40, 1, 101-113	<a href="https://doi.org/10.18280/ts.400109">https://doi.org/10.18280/ts.400109</a>	Titrek, F., Baykan, Ö.K. (2023). Finger vein recognition based on multi-features fusion. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 101-113. <a href="https://doi.org/10.18280/ts.400109">https://doi.org/10.18280/ts.400109</a>
445	Hanif, M.S., Bilal, M., Balamash, A.S., Al-Saggaf, U.M.	Hypotheses Generation and Verification Based Framework for Crowd Anomaly Detection in Single-Scene Surveillance Videos	crowd anomaly detection, gaussian mixture model, hypercomplex Fourier transform, visual saliency detection	40, 1, 115-122	<a href="https://doi.org/10.18280/ts.400110">https://doi.org/10.18280/ts.400110</a>	Hanif, M.S., Bilal, M., Balamash, A.S., Al-Saggaf, U.M. (2023). Hypotheses generation and verification based framework for crowd anomaly detection in single-scene surveillance videos. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 115-122. <a href="https://doi.org/10.18280/ts.400110">https://doi.org/10.18280/ts.400110</a>
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453	Zhang, Y.H., Feng, L., Wu, J., Wu, P.	Estimation of Low Rotation Frequency Based on Doppler Shift Observations	GNSS, low speed rolling vehicle, doppler frequency shift, roll speed estimation	40, 1, 199-206	<a href="https://doi.org/10.18280/ts.400118">https://doi.org/10.18280/ts.400118</a>	Zhang, Y.H., Feng, L., Wu, J., Wu, P. (2023). Estimation of low rotation frequency based on doppler shift observations. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 199-206. <a href="https://doi.org/10.18280/ts.400118">https://doi.org/10.18280/ts.400118</a>
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465	Xia, Y.Z., Zhu, Z., Zheng, X.Y., Chai, G.F.	A Novel Method for Recognizing Readings in Images of Electric Circuit Inspection Meters Based on Deep Learning	deep learning, electric circuit, recognition of meter readings, image processing	40, 1, 309-315	<a href="https://doi.org/10.18280/ts.400130">https://doi.org/10.18280/ts.400130</a>	Xia, Y.Z., Zhu, Z., Zheng, X.Y., Chai, G.F. (2023). A novel method for recognizing readings in images of electric circuit inspection meters based on deep learning. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 309-315. <a href="https://doi.org/10.18280/ts.400130">https://doi.org/10.18280/ts.400130</a>
466	Aslan, S.	Automatic Detection of Knee Osteoarthritis Disease with the Developed CNN, NCA and SVM Based Hybrid Model	classifiers, CNN, machine learning, NCA, knee osteoarthritis	40, 1, 317-326	<a href="https://doi.org/10.18280/ts.400131">https://doi.org/10.18280/ts.400131</a>	Aslan, S. (2023). Automatic detection of knee osteoarthritis disease with the developed CNN, NCA and SVM based hybrid model. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 317-326. <a href="https://doi.org/10.18280/ts.400131">https://doi.org/10.18280/ts.400131</a>
467	Chikmurge, D.V., Raghunathan, S.	Enhancing Marathi Handwritten Character Recognition Using Ensemble Learning	AlexNet, Lenet-5, VGG-16, ensemble learning, stacking, and voting	40, 1, 327-334	<a href="https://doi.org/10.18280/ts.400132">https://doi.org/10.18280/ts.400132</a>	Chikmurge, D.V., Raghunathan, S. (2023). Enhancing Marathi handwritten character recognition using ensemble learning. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 327-334. <a href="https://doi.org/10.18280/ts.400132">https://doi.org/10.18280/ts.400132</a>
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470	Jawdekar, A., Dixit, M.	Deep Learning and Fuzzy Logic Based Intelligent Technique for the Image Enhancement and Edge Detection Framework	CNN, DnCNN, FIS, PSNR, MSE, SSIM, image enhancement, edge detection	40, 1, 351-359	<a href="https://doi.org/10.18280/ts.400135">https://doi.org/10.18280/ts.400135</a>	Jawdekar, A., Dixit, M. (2023). Deep learning and fuzzy logic based intelligent technique for the image enhancement and edge detection framework. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 351-359. <a href="https://doi.org/10.18280/ts.400135">https://doi.org/10.18280/ts.400135</a>
471	Naceur, A.	Initialization of an Iterative Low-Complexity Method for Signal Precoding in MM-Wave Massive MIMO Systems	massive MIMO systems, linear precoding techniques, low complexity, Jacobi method, SSOR	40, 1, 361-366	<a href="https://doi.org/10.18280/ts.400136">https://doi.org/10.18280/ts.400136</a>	Naceur, A. (2023). Initialization of an iterative low-complexity method for signal precoding in MM-wave massive MIMO systems. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 361-366. <a href="https://doi.org/10.18280/ts.400136">https://doi.org/10.18280/ts.400136</a>
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473	Natarajan, S.K., Rathinasabapathy, R., Narayanasamy, J., Aravind, A.R.	Biometric User Authentication System via Fingerprints Using Novel Hybrid Optimization Tuned Deep Learning Strategy	biometric authentication, spotted hyena optimization minutiae matching, minutiae score evaluation	40, 1, 375-381	<a href="https://doi.org/10.18280/ts.400138">https://doi.org/10.18280/ts.400138</a>	Natarajan, S.K., Rathinasabapathy, R., Narayanasamy, J., Aravind, A.R. (2023). Biometric user authentication system via fingerprints using novel hybrid optimization tuned deep learning strategy. <i>Traitement du Signal</i> , Vol. 40, No. 1, pp. 375-381. <a href="https://doi.org/10.18280/ts.400138">https://doi.org/10.18280/ts.400138</a>
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486	Chen, N., Wu, S.P., Chen, Y.P., Wang, Z.H., Zhang, Z.Q.	A Pose Estimation Algorithm for Multimodal Data Fusion	multimodal fusion, DenseNet, PointNet++, pose estimation	39, 6, 1971-1979	<a href="https://doi.org/10.18280/ts.390609">https://doi.org/10.18280/ts.390609</a>	Chen, N., Wu, S.P., Chen, Y.P., Wang, Z.H., Zhang, Z.Q. (2022). A pose estimation algorithm for multimodal data fusion. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 1971-1979. <a href="https://doi.org/10.18280/ts.390609">https://doi.org/10.18280/ts.390609</a>

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500	Polat, H.	Time-Frequency Complexity Maps for EEG-Based Diagnosis of Alzheimer's Disease Using a Lightweight Deep Neural Network	Alzheimer's disease, EEG, deep learning, entropy, MobileNet, complexity	39, 6, 2103-2113	<a href="https://doi.org/10.18280/ts.390623">https://doi.org/10.18280/ts.390623</a>	Polat, H. (2022). Time-frequency complexity maps for EEG-based diagnosis of Alzheimer's disease using a lightweight deep neural network. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2103-2113. <a href="https://doi.org/10.18280/ts.390623">https://doi.org/10.18280/ts.390623</a>
501	Zhang, B.W., Wang, T.Q.	Visual Image Recognition of Basketball Turning and Dribbling Based on Feature Extraction	feature extraction, feature fusion, basketball, turning and dribbling, image recognition	39, 6, 2115-2121	<a href="https://doi.org/10.18280/ts.390624">https://doi.org/10.18280/ts.390624</a>	Zhang, B.W., Wang, T.Q. (2022). Visual image recognition of basketball turning and dribbling based on feature extraction. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2115-2121. <a href="https://doi.org/10.18280/ts.390624">https://doi.org/10.18280/ts.390624</a>
502	Nasip, Ö.F., Zengin, K.	A Hybrid Model: Multiple Feature Selection Approach Using Transfer Learning for Bacteria Classification	bacteria, classification, feature extraction, feature selection, support vector machine	39, 6, 2123-2131	<a href="https://doi.org/10.18280/ts.390625">https://doi.org/10.18280/ts.390625</a>	Nasip, Ö.F., Zengin, K. (2022). A hybrid model: Multiple feature selection approach using transfer learning for bacteria classification. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2123-2131. <a href="https://doi.org/10.18280/ts.390625">https://doi.org/10.18280/ts.390625</a>
503	He, J.B., Li, C.Q.	Research on Digital Image Intelligent Recognition Method for Industrial Internet of Things Production Data Acquisition	industrial Internet of Things, production images, digital image, image target recognition	39, 6, 2133-2139	<a href="https://doi.org/10.18280/ts.390626">https://doi.org/10.18280/ts.390626</a>	He, J.B., Li, C.Q. (2022). Research on digital image intelligent recognition method for industrial Internet of Things production data acquisition. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2133-2139. <a href="https://doi.org/10.18280/ts.390626">https://doi.org/10.18280/ts.390626</a>
504	Londhe, G.D., Hendre, V.S.	An Effective Kalman Based Hybrid Beamforming for Millimeter Wave Massive MIMO System by Using 2D Overlapped Partially Connected Sub-Array Structure	5G technology, hybrid beamforming, Kalman filter, millimeter-wave, partial connected subarray	39, 6, 2141-2147	<a href="https://doi.org/10.18280/ts.390627">https://doi.org/10.18280/ts.390627</a>	Londhe, G.D., Hendre, V.S. (2022). An effective Kalman based hybrid beamforming for millimeter wave massive MIMO system by using 2D overlapped partially connected sub-array structure. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2141-2147. <a href="https://doi.org/10.18280/ts.390627">https://doi.org/10.18280/ts.390627</a>

505	Ural, A.B.	Systematical Analysis and Pathological Classification of Breast Cancer from Mammographic Images with Using Specific Machine Learning Methods	breast cancer, benign tumor, malign tumor, image classification, feature extraction, machine learning	39, 6, 2149-2156	<a href="https://doi.org/10.18280/ts.390628">https://doi.org/10.18280/ts.390628</a>	Ural, A.B. (2022). Systematical analysis and pathological classification of breast cancer from mammographic images with using specific machine learning methods. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2149-2156. <a href="https://doi.org/10.18280/ts.390628">https://doi.org/10.18280/ts.390628</a>
506	Yao, Z., Guo, L.	Salient Target Detection Method of Video Images Based on Convolution Neural Network	convolution neural network, video images, salient target detection	39, 6, 2157-2163	<a href="https://doi.org/10.18280/ts.390629">https://doi.org/10.18280/ts.390629</a>	Yao, Z., Guo, L. (2022). Salient target detection method of video images based on convolution neural network. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2157-2163. <a href="https://doi.org/10.18280/ts.390629">https://doi.org/10.18280/ts.390629</a>
507	R, A., A, A.N.	Multimodal Human Facial Emotion Recognition Using DenseNet-161 and Image Feature Stabilization Algorithm	facial emotion recognition, convolutional neural network (CNN), deep CNN, transfer learning, image feature stabilization algorithm, DenseNet-161, CK+	39, 6, 2165-2172	<a href="https://doi.org/10.18280/ts.390630">https://doi.org/10.18280/ts.390630</a>	R, A., A, A.N. (2022). Multimodal human facial emotion recognition using DenseNet-161 and image feature stabilization algorithm. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2165-2172. <a href="https://doi.org/10.18280/ts.390630">https://doi.org/10.18280/ts.390630</a>
508	Sun, G.M., Kuang, B., Zhang, Y.K.	Fast Target Recognition Method Based on Multi-Scale Fusion and Deep Learning	multi-scale fusion, deep learning, fast target recognition	39, 6, 2173-2179	<a href="https://doi.org/10.18280/ts.390631">https://doi.org/10.18280/ts.390631</a>	Sun, G.M., Kuang, B., Zhang, Y.K. (2022). Fast target recognition method based on multi-scale fusion and deep learning. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2173-2179. <a href="https://doi.org/10.18280/ts.390631">https://doi.org/10.18280/ts.390631</a>
509	Çalışır, B.	Effect of DNN Approximation for Channel Estimation and Signal Detection on OFDM Applications	OFDM, DNN, signal detection, modulation system	39, 6, 2181-2185	<a href="https://doi.org/10.18280/ts.390632">https://doi.org/10.18280/ts.390632</a>	Çalışır, B. (2022). Effect of DNN approximation for channel estimation and signal detection on OFDM applications. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2181-2185. <a href="https://doi.org/10.18280/ts.390632">https://doi.org/10.18280/ts.390632</a>
510	Pan, X.H.	Noise Signal Recognition and Noise Reduction Algorithm of Ships	signal, active control, compensation, PID	39, 6, 2187-2193	<a href="https://doi.org/10.18280/ts.390633">https://doi.org/10.18280/ts.390633</a>	Pan, X.H. (2022). Noise signal recognition and noise reduction algorithm of ships. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2187-2193. <a href="https://doi.org/10.18280/ts.390633">https://doi.org/10.18280/ts.390633</a>
511	Aslam, C.M., Narayana, D.S., Priya, K.P.	Detection of Breast Cancer Using Modified Markov Model	K-means algorithm, EM algorithm, Gaussian mixture model	39, 6, 2195-2201	<a href="https://doi.org/10.18280/ts.390634">https://doi.org/10.18280/ts.390634</a>	Aslam, C.M., Narayana, D.S., Priya, K.P. (2022). Detection of breast cancer using modified Markov model. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2195-2201. <a href="https://doi.org/10.18280/ts.390634">https://doi.org/10.18280/ts.390634</a>
512	Jiang, J.W.	Signal Feature Extraction of Music Melody Based on Deep Learning	deep learning, convolution network, music signal, melody feature extraction	39, 6, 2203-2209	<a href="https://doi.org/10.18280/ts.390635">https://doi.org/10.18280/ts.390635</a>	Jiang, J.W. (2022). Signal feature extraction of music melody based on deep learning. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2203-2209. <a href="https://doi.org/10.18280/ts.390635">https://doi.org/10.18280/ts.390635</a>
513	Solak, A., Ceylan, R.	Pneumonia Detection with Chest-Caps	binary classification, chest X-ray, capsule network, pneumonia	39, 6, 2211-2216	<a href="https://doi.org/10.18280/ts.390636">https://doi.org/10.18280/ts.390636</a>	Solak, A., Ceylan, R. (2022). Pneumonia detection with chest-caps. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2211-2216. <a href="https://doi.org/10.18280/ts.390636">https://doi.org/10.18280/ts.390636</a>
514	Nakka, S., Komati, T.R., Chekuri, S.S.	A Novel Architecture for Feature Extraction and Convolution for Image Segmentation of Pathology Detection from Chest X-Ray Images	feature extraction, chest x-ray image, neural networks, computer-aided diagnosis, machine learning algorithms	39, 6, 2217-2222	<a href="https://doi.org/10.18280/ts.390637">https://doi.org/10.18280/ts.390637</a>	Nakka, S., Komati, T.R., Chekuri, S.S. (2022). A novel architecture for feature extraction and convolution for image segmentation of pathology detection from chest X-ray images. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2217-2222. <a href="https://doi.org/10.18280/ts.390637">https://doi.org/10.18280/ts.390637</a>
515	Luo, W.M., Sun, J.H., Liao, Y., Zhang, Z.Y.	Research on the Real-Time Detection Method for Image Processing – Based Civil Structure Crack	image processing, civil structure crack, crack detection	39, 6, 2223-2228	<a href="https://doi.org/10.18280/ts.390638">https://doi.org/10.18280/ts.390638</a>	Luo, W.M., Sun, J.H., Liao, Y., Zhang, Z.Y. (2022). Research on the real-time detection method for image processing – based civil structure crack. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2223-2228. <a href="https://doi.org/10.18280/ts.390638">https://doi.org/10.18280/ts.390638</a>
516	Pachala, P.K., Bojja, P.	Development of Medical Image Analytics by Deep Learning Model for Prediction and Classification of CT Image Diseases	CNN, CT images, ResNet, computer vision, large cell carcinoma, squamous cell carcinoma	39, 6, 2229-2235	<a href="https://doi.org/10.18280/ts.390639">https://doi.org/10.18280/ts.390639</a>	Pachala, P.K., Bojja, P. (2022). Development of medical image analytics by deep learning model for prediction and classification of CT image diseases. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2229-2235. <a href="https://doi.org/10.18280/ts.390639">https://doi.org/10.18280/ts.390639</a>
517	Liang, C.H., Ding, C., Li, J.F., Zuo, X.Y.	Research on State Detection Method of Electrical Equipment Based on Wireless Sensor Network Signal Processing	wireless sensor network, signal processing, state detection of electrical equipment	39, 6, 2237-2245	<a href="https://doi.org/10.18280/ts.390640">https://doi.org/10.18280/ts.390640</a>	Liang, C.H., Ding, C., Li, J.F., Zuo, X.Y. (2022). Research on state detection method of electrical equipment based on wireless sensor network signal processing. <i>Traitement du Signal</i> , Vol. 39, No. 6, pp. 2237-2245. <a href="https://doi.org/10.18280/ts.390640">https://doi.org/10.18280/ts.390640</a>
518	Dişkaya, O., Avaroğlu, E., Menken, H., Emsal, A.	A New Encryption Algorithm Based on Fibonacci Polynomials and Matrices	cryptography, Fibonacci polynomial matrix, image encryption, histogram analysis, differential attack	39, 5, 1453-1462	<a href="https://doi.org/10.18280/ts.390501">https://doi.org/10.18280/ts.390501</a>	Dişkaya, O., Avaroğlu, E., Menken, H., Emsal, A. (2022). A new encryption algorithm based on Fibonacci polynomials and matrices. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1453-1462. <a href="https://doi.org/10.18280/ts.390501">https://doi.org/10.18280/ts.390501</a>
519	Nagaraju, M.S., Rao, B.S.	An Outlook of Medical Image Analysis via Transfer Learning Approaches	histopathology images, visualization techniques, GradCam, SmoothGard, deep learning models, image processing techniques	39, 5, 1463-1474	<a href="https://doi.org/10.18280/ts.390502">https://doi.org/10.18280/ts.390502</a>	Nagaraju, M.S., Rao, B.S. (2022). An outlook of medical image analysis via transfer learning approaches. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1463-1474. <a href="https://doi.org/10.18280/ts.390502">https://doi.org/10.18280/ts.390502</a>
520	Zhu, C.J., Ding, T., Min, X.	Emotion Recognition of College Students Based on Audio and Video Image	audio emotion recognition, video image emotion recognition, deep learning, decision-making layer feature fusion, multimodal emotion recognition	39, 5, 1475-1481	<a href="https://doi.org/10.18280/ts.390503">https://doi.org/10.18280/ts.390503</a>	Zhu, C.J., Ding, T., Min, X. (2022). Emotion recognition of college students based on audio and video image. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1475-1481. <a href="https://doi.org/10.18280/ts.390503">https://doi.org/10.18280/ts.390503</a>
521	Omer, O.A., Salah, M., Hassan, A.M., Mubarak, A.S.	Beat-by-Beat ECG Monitoring from Photoplethysmography Based on Scattering Wavelet Transform	ECG, PPG, scattering wavelet transform (SWT)	39, 5, 1483-1488	<a href="https://doi.org/10.18280/ts.390504">https://doi.org/10.18280/ts.390504</a>	Omer, O.A., Salah, M., Hassan, A.M., Mubarak, A.S. (2022). Beat-by-beat ECG monitoring from photoplethysmography based on scattering wavelet transform. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1483-1488. <a href="https://doi.org/10.18280/ts.390504">https://doi.org/10.18280/ts.390504</a>
522	Jarrah, A., Almomany, A., Alkhaftaji, A.	A New Approach of Combining Optical Mapping Algorithm with Adaptive Kalman Filter to Achieve Fast and Early Detection of Cardiac Arrests: A Parallel Implementation	multi-core CPU, parallelization, optimization techniques, multi-threading, optical mapping algorithm, Adaptive Kalman Filter, cardiac arrest	39, 5, 1489-1500	<a href="https://doi.org/10.18280/ts.390505">https://doi.org/10.18280/ts.390505</a>	Jarrah, A., Almomany, A., Alkhaftaji, A. (2022). A new approach of combining optical mapping algorithm with adaptive Kalman filter to achieve fast and early detection of cardiac arrests: A parallel implementation. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1489-1500. <a href="https://doi.org/10.18280/ts.390505">https://doi.org/10.18280/ts.390505</a>

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524	Zhao, Y.M., Su, G.A., Yang, H., Zhao, T.S., Jin, S.W., Yang, J.N.	Graph Convolution Algorithm Based on Visual Selectivity and Point Cloud Analysis Application	visual computing, visual selectivity, graph convolution analysis, receptive field, point cloud topology, support set	39, 5, 1507-1516	<a href="https://doi.org/10.18280/ts.390507">https://doi.org/10.18280/ts.390507</a>	Zhao, Y.M., Su, G.A., Yang, H., Zhao, T.S., Jin, S.W., Yang, J.N. (2022). Graph convolution algorithm based on visual selectivity and point cloud analysis application. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1507-1516. <a href="https://doi.org/10.18280/ts.390507">https://doi.org/10.18280/ts.390507</a>
525	Karaduman, M., Karci, A.	Deep and Statistical Features Classification Model for Electroencephalography Signals	Electroencephalography (EEG), alcohol use disorder (AUD), support vector machine (SVM), hybrid feature, deep learning, Spectrogram, variation mode decomposition (VMD)	39, 5, 1517-1525	<a href="https://doi.org/10.18280/ts.390508">https://doi.org/10.18280/ts.390508</a>	Karaduman, M., Karci, A. (2022). Deep and statistical features classification model for electroencephalography signals. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1517-1525. <a href="https://doi.org/10.18280/ts.390508">https://doi.org/10.18280/ts.390508</a>
526	Wicaksono, P., Philip, S., Alam, I.N., Isa, S.M.	Dealing with Imbalanced Sleep Apnea Data Using DCGAN	DCGAN, deep learning, ECG, imbalance data, sleep apnea	39, 5, 1527-1536	<a href="https://doi.org/10.18280/ts.390509">https://doi.org/10.18280/ts.390509</a>	Wicaksono, P., Philip, S., Alam, I.N., Isa, S.M. (2022). Dealing with imbalanced sleep apnea data using DCGAN. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1527-1536. <a href="https://doi.org/10.18280/ts.390509">https://doi.org/10.18280/ts.390509</a>
527	Chen, Z., Wu, Y.H., Liu, C.	A Lightweight Convolutional Neural Network-Based Method for Cotton Mosaic Disease Identification	cotton leaf disease, ShuffleNet, deep learning, agriculture, shuffle attention	39, 5, 1537-1543	<a href="https://doi.org/10.18280/ts.390510">https://doi.org/10.18280/ts.390510</a>	Chen, Z., Wu, Y.H., Liu, C. (2022). A lightweight convolutional neural network-based method for cotton mosaic disease identification. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1537-1543. <a href="https://doi.org/10.18280/ts.390510">https://doi.org/10.18280/ts.390510</a>
528	Akça, E., Tannöver, Ö.Ö.	A Deep Transfer Learning Based Visual Complexity Evaluation Approach to Mobile User Interfaces	mobile user interface evaluation, transfer learning, visual complexity analysis	39, 5, 1545-1556	<a href="https://doi.org/10.18280/ts.390511">https://doi.org/10.18280/ts.390511</a>	Akça, E., Tannöver, Ö.Ö. (2022). A deep transfer learning based visual complexity evaluation approach to mobile user interfaces. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1545-1556. <a href="https://doi.org/10.18280/ts.390511">https://doi.org/10.18280/ts.390511</a>
529	Wisang, K.	CFLHCF: Simultaneous Detection of the Optic Disc and Exudates Using Color Features, Local Homogeneity and Contextual Features	fundus images, optic disc, exudates detection, local homogeneity, contextual features	39, 5, 1557-1566	<a href="https://doi.org/10.18280/ts.390512">https://doi.org/10.18280/ts.390512</a>	Wisang, K. (2022). CFLHCF: Simultaneous detection of the optic disc and exudates using color features, local homogeneity and contextual features. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1557-1566. <a href="https://doi.org/10.18280/ts.390512">https://doi.org/10.18280/ts.390512</a>
530	Zhang, Y.	Seedlings Supplement Device and Seedling Recognition Based on Convolution Neural Network	plug seedling device, plug seedling identification, convolutional neural network, regularization, data enhancement	39, 5, 1567-1575	<a href="https://doi.org/10.18280/ts.390513">https://doi.org/10.18280/ts.390513</a>	Zhang, Y. (2022). Seedlings supplement device and seedling recognition based on convolution neural network. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1567-1575. <a href="https://doi.org/10.18280/ts.390513">https://doi.org/10.18280/ts.390513</a>
531	Omar, N.	ResNet and LSTM Based Accurate Approach for License Plate Detection and Recognition	license plate detection and recognition, ResNet, deep features, LSTM classification	39, 5, 1577-1583	<a href="https://doi.org/10.18280/ts.390514">https://doi.org/10.18280/ts.390514</a>	Omar, N. (2022). ResNet and LSTM based accurate approach for license plate detection and recognition. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1577-1583. <a href="https://doi.org/10.18280/ts.390514">https://doi.org/10.18280/ts.390514</a>
532	Ataş, I.	Human Gender Prediction Based on Deep Transfer Learning from Panoramic Dental Radiograph Images	DenseNet121, deep convolutional neural network, deep transfer learning, gender prediction, panoramic dental radiograph	39, 5, 1585-1595	<a href="https://doi.org/10.18280/ts.390515">https://doi.org/10.18280/ts.390515</a>	Ataş, I. (2022). Human gender prediction based on deep transfer learning from panoramic dental radiograph images. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1585-1595. <a href="https://doi.org/10.18280/ts.390515">https://doi.org/10.18280/ts.390515</a>
533	Jin, T., Ma, Z., Niu, J.F., Su, P.	Image Segmentation and Target Extraction of Preschool Educational Activity Space for Improving Children's Concentration	children's concentration, preschool education, activity space, image segmentation, object extraction	39, 5, 1597-1603	<a href="https://doi.org/10.18280/ts.390516">https://doi.org/10.18280/ts.390516</a>	Jin, T., Ma, Z., Niu, J.F., Su, P. (2022). Image segmentation and target extraction of preschool educational activity space for improving children's concentration. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1597-1603. <a href="https://doi.org/10.18280/ts.390516">https://doi.org/10.18280/ts.390516</a>
534	Kanchanapalli, B., Vekata, R.R.P.V., Lanka, R.S.	Analysis and Comparison of Performance of Interline Power Flow Controller with Various Control Algorithms under Various Power Stability Problems	interline power flow controller, adaptive weighted feedback algorithm, gravitational search, BAT, and ANT colony optimization	39, 5, 1605-1613	<a href="https://doi.org/10.18280/ts.390517">https://doi.org/10.18280/ts.390517</a>	Kanchanapalli, B., Vekata, R.R.P.V., Lanka, R.S. (2022). Analysis and comparison of performance of interline power flow controller with various control algorithms under various power stability problems. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1605-1613. <a href="https://doi.org/10.18280/ts.390517">https://doi.org/10.18280/ts.390517</a>
535	Sevim, Y.	A New Feature Extraction Method for EMG Signals	AR coefficients, classification, feature extraction, ST transform, wavelet transform	39, 5, 1615-1620	<a href="https://doi.org/10.18280/ts.390518">https://doi.org/10.18280/ts.390518</a>	Sevim, Y. (2022). A new feature extraction method for EMG signals. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1615-1620. <a href="https://doi.org/10.18280/ts.390518">https://doi.org/10.18280/ts.390518</a>
536	Wu, H., Sun, X.Y., Zhong, J., Cao, F.Y.	A Traffic Parameter Detection Algorithm Based on Double Coils	image processing, vehicle speed detection, virtual coils, threshold	39, 5, 1621-1629	<a href="https://doi.org/10.18280/ts.390519">https://doi.org/10.18280/ts.390519</a>	Wu, H., Sun, X.Y., Zhong, J., Cao, F.Y. (2022). A traffic parameter detection algorithm based on double coils. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1621-1629. <a href="https://doi.org/10.18280/ts.390519">https://doi.org/10.18280/ts.390519</a>
537	Duraisamy, K., Thanarajan, T., Alharbi, M.	Implementation of Omar Pigeon Space-Time (OPST) Algorithm to Mitigate the Interference and Peak-to-Average Power Ratio (PAPR) Using RPR Mobile and HST-HM in the 5G	5G communication, multiple-input, multiple-output, orthogonal frequency-division multiplexing, Omar pigeon space-time, peak-to-average power ratio, bit error rate, hybrid space-time, Hadamard matrix	39, 5, 1631-1638	<a href="https://doi.org/10.18280/ts.390520">https://doi.org/10.18280/ts.390520</a>	Duraisamy, K., Thanarajan, T., Alharbi, M. (2022). Implementation of Omar Pigeon Space-Time (OPST) algorithm to mitigate the interference and Peak-to-Average Power Ratio (PAPR) using RPR mobile and HST-HM in the 5G. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1631-1638. <a href="https://doi.org/10.18280/ts.390520">https://doi.org/10.18280/ts.390520</a>
538	Wu, J.D., Sun, H.Y.	Driver Identification System Using Finger Vein and YOLO Object Detection	biometrics, finger vein recognition, image processing, deep learning, YOLO object detection, driver identification	39, 5, 1639-1646	<a href="https://doi.org/10.18280/ts.390521">https://doi.org/10.18280/ts.390521</a>	Wu, J.D., Sun, H.Y. (2022). Driver identification system using finger vein and YOLO object detection. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1639-1646. <a href="https://doi.org/10.18280/ts.390521">https://doi.org/10.18280/ts.390521</a>
539	Ince, E., Karakaya, B., Türk, M.	Chaos Based Pseudo Random Bit Generator Design and Its Application in Secure Image Encryption	chaotic map, fixed-point conversion, post-processor, random number bit generator, statistical tests	39, 5, 1647-1653	<a href="https://doi.org/10.18280/ts.390522">https://doi.org/10.18280/ts.390522</a>	Ince, E., Karakaya, B., Türk, M. (2022). Chaos based pseudo random bit generator design and its application in secure image encryption. <i>Traitement du Signal</i> , Vol. 39, No. 5, pp. 1647-1653. <a href="https://doi.org/10.18280/ts.390522">https://doi.org/10.18280/ts.390522</a>
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572	Zhai, Y., Zeng, W.J., Li, N.	A Novel Detection Method Using YOLOv5 for Vehicle Target under Complex Situation	traffic signs, YOLOv5, haze weather, vehicle detection	39, 4, 1153-1158	<a href="https://doi.org/10.18280/ts.390407">https://doi.org/10.18280/ts.390407</a>	Zhai, Y., Zeng, W.J., Li, N. (2022). A novel detection method using YOLOv5 for vehicle target under complex situation. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1153-1158. <a href="https://doi.org/10.18280/ts.390407">https://doi.org/10.18280/ts.390407</a>
573	Patsariya, S., Dixit, M.	A New Block Based Non-Blind Hybrid Color Image Watermarking Approach Using Lifting Scheme and Chaotic Encryption Based on Arnold Cat Map	watermark, Arnold cat map, chaotic encryption, correlation, PSNR, NCC	39, 4, 1159-1168	<a href="https://doi.org/10.18280/ts.390408">https://doi.org/10.18280/ts.390408</a>	Patsariya, S., Dixit, M. (2022). A new block based non-blind hybrid color image watermarking approach using lifting scheme and chaotic encryption based on Arnold cat map. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1159-1168. <a href="https://doi.org/10.18280/ts.390408">https://doi.org/10.18280/ts.390408</a>
574	Tümen, V.	SpicoNET: A Hybrid Deep Learning Model to Diagnose COVID-19 and Pneumonia Using Chest X-Ray Images	COVID-19, pneumonia, X-ray radiology images, spiking neural network, convolutional neural network	39, 4, 1169-1180	<a href="https://doi.org/10.18280/ts.390409">https://doi.org/10.18280/ts.390409</a>	Tümen, V. (2022). SpicoNET: A hybrid deep learning model to diagnose COVID-19 and pneumonia using chest X-ray images. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1169-1180. <a href="https://doi.org/10.18280/ts.390409">https://doi.org/10.18280/ts.390409</a>
575	Qiu, L., He, Q.H., Yu, D.Q., Xie, J.D.	Remote Sensing Image Information Extraction and Application Based on Improved Pixel Exchange Algorithm	remote sensing image, sub-pixel positioning, bank collapse, monitoring	39, 4, 1181-1189	<a href="https://doi.org/10.18280/ts.390410">https://doi.org/10.18280/ts.390410</a>	Qiu, L., He, Q.H., Yu, D.Q., Xie, J.D. (2022). Remote sensing image information extraction and application based on improved pixel exchange algorithm. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1181-1189. <a href="https://doi.org/10.18280/ts.390410">https://doi.org/10.18280/ts.390410</a>
576	Habchi, Y., Aimer, A.F., Baili, J., Inc, M., Menni, Y., Lorenzini, G.	Improving Medical Video Coding Using Multi Scale Quincunx Lattice: From Low Bitrate to High Quality	healthcare sector, medical images and videos, storage and transmission, multi scale quincunx lattice	39, 4, 1191-1202	<a href="https://doi.org/10.18280/ts.390411">https://doi.org/10.18280/ts.390411</a>	Habchi, Y., Aimer, A.F., Baili, J., Inc, M., Menni, Y., Lorenzini, G. (2022). Improving medical video coding using multi scale quincunx lattice: From low bitrate to high quality. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1191-1202. <a href="https://doi.org/10.18280/ts.390411">https://doi.org/10.18280/ts.390411</a>



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578	Yao, Z.	Low-Light Image Enhancement and Target Detection Based on Deep Learning	computer vision, low-light images, color correction, image enhancement, object detection	39, 4, 1213-1220	<a href="https://doi.org/10.18280/ts.390413">https://doi.org/10.18280/ts.390413</a>	Yao, Z. (2022). Low-light image enhancement and target detection based on deep learning. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1213-1220. <a href="https://doi.org/10.18280/ts.390413">https://doi.org/10.18280/ts.390413</a>
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583	Singh, A., Pandey, P., Puig, D., Nandi, G.C., Abdel-Nasser, M.	Reliable Scene Recognition Approach for Mobile Robots with Limited Resources Based on Deep Learning and Neuro-Fuzzy Inference	indoor scene recognition, deep learning, CNNs, neuro-fuzzy, transfer learning	39, 4, 1255-1265	<a href="https://doi.org/10.18280/ts.390418">https://doi.org/10.18280/ts.390418</a>	Singh, A., Pandey, P., Puig, D., Nandi, G.C., Abdel-Nasser, M. (2022). Reliable scene recognition approach for mobile robots with limited resources based on deep learning and neuro-fuzzy inference. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1255-1265. <a href="https://doi.org/10.18280/ts.390418">https://doi.org/10.18280/ts.390418</a>
584	Baskar, C., Govindasamy, G.P., Anbalagan, S., Roomi, S.M.M.	Computer Graphic and Photographic Image Classification Using Transfer Learning Approach	computer graphic images, photographic images, transfer learning, CNN	39, 4, 1267-1273	<a href="https://doi.org/10.18280/ts.390419">https://doi.org/10.18280/ts.390419</a>	Baskar, C., Govindasamy, G.P., Anbalagan, S., Roomi, S.M.M. (2022). Computer graphic and photographic image classification using transfer learning approach. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1267-1273. <a href="https://doi.org/10.18280/ts.390419">https://doi.org/10.18280/ts.390419</a>
585	He, S.H., Wang, Y., Liu, H.D.	Image Information Recognition and Classification of Warehoused Goods in Intelligent Logistics Based on Machine Vision Technology	machine vision, intelligent logistics, warehoused goods, image information recognition, goods classification	39, 4, 1275-1282	<a href="https://doi.org/10.18280/ts.390420">https://doi.org/10.18280/ts.390420</a>	He, S.H., Wang, Y., Liu, H.D. (2022). Image information recognition and classification of warehoused goods in intelligent logistics based on machine vision technology. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1275-1282. <a href="https://doi.org/10.18280/ts.390420">https://doi.org/10.18280/ts.390420</a>
586	He, S.H., Wang, Y., Liu, H.D.	Morphological and Otsu's Technique Based Mammography Mass Detection and Deep Neural Network Classifier Based Prediction	Otsu's technique, neural network, MIAS, morphological operation, deep learning	39, 4, 1283-1294	<a href="https://doi.org/10.18280/ts.390421">https://doi.org/10.18280/ts.390421</a>	Chugh, S., Goyal, S., Pandey, A., Joshi, S. (2022). Morphological and Otsu's technique based mammography mass detection and deep neural network classifier based prediction. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1283-1294. <a href="https://doi.org/10.18280/ts.390421">https://doi.org/10.18280/ts.390421</a>
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588	Fang, N.L., Hu, T., Shi, M.D., Liu, Z.H.	Effects of Different Visual Feedback Types on Perception of Online Wait	time perception, cognitive absorption, online wait, music	39, 4, 1303-1312	<a href="https://doi.org/10.18280/ts.390423">https://doi.org/10.18280/ts.390423</a>	Fang, N.L., Hu, T., Shi, M.D., Liu, Z.H. (2022). Effects of different visual feedback types on perception of online wait. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1303-1312. <a href="https://doi.org/10.18280/ts.390423">https://doi.org/10.18280/ts.390423</a>
589	Reddy, S.P.K., Harikiran, J.	Cast Shadow Angle Detection in Morphological Aerial Images Using Faster R-CNN	shadow detection, shadow angle prediction, image processing, segmentation, multi-layer approach, tagged features	39, 4, 1313-1321	<a href="https://doi.org/10.18280/ts.390424">https://doi.org/10.18280/ts.390424</a>	Reddy, S.P.K., Harikiran, J. (2022). Cast Shadow Angle Detection in morphological aerial images using faster R-CNN. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1313-1321. <a href="https://doi.org/10.18280/ts.390424">https://doi.org/10.18280/ts.390424</a>
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593	Tao, M.J., Lou, J.S., Wang, L.	MRI Liver Image Assisted Diagnosis Based on Improved Faster R-CNN	MRI images, liver occupancy, image segmentation, deep learning, Faster R-CNN	39, 4, 1347-1355	<a href="https://doi.org/10.18280/ts.390428">https://doi.org/10.18280/ts.390428</a>	Tao, M.J., Lou, J.S., Wang, L. (2022). MRI liver image assisted diagnosis based on improved faster R-CNN. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1347-1355. <a href="https://doi.org/10.18280/ts.390428">https://doi.org/10.18280/ts.390428</a>
594	Premkumar, M., Sathiyapriya, S., Arun, M., Sachan, V.	Medical Signal Processing via Digital Filter and Transmission Reception Using Cognitive Radio Technology	cognitive radio, digital filter, electro cardiogram, noise cancellation	39, 4, 1357-1362	<a href="https://doi.org/10.18280/ts.390429">https://doi.org/10.18280/ts.390429</a>	Premkumar, M., Sathiyapriya, S., Arun, M., Sachan, V. (2022). Medical signal processing via digital filter and transmission reception using cognitive radio technology. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1357-1362. <a href="https://doi.org/10.18280/ts.390429">https://doi.org/10.18280/ts.390429</a>

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596	Wang, Y., Wang, Y.F., Zhang, S.Y., Lin, S.M., Chen, C.	Automatic Recognition for IoT Supervision Images Based on Modal Decomposition	modal decomposition, Internet of Things, supervision images, automatic recognition	39, 4, 1371-1377	<a href="https://doi.org/10.18280/ts.390431">https://doi.org/10.18280/ts.390431</a>	Wang, Y., Wang, Y.F., Zhang, S.Y., Lin, S.M., Chen, C. (2022). Automatic recognition for IoT supervision images based on modal decomposition. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1371-1377. <a href="https://doi.org/10.18280/ts.390431">https://doi.org/10.18280/ts.390431</a>
597	Abdelfatih, B., Ismail, B.H.	An Adaptive Image Fusion Algorithm in the NSST Based on CDF 9/7 for Neurodegenerative Diseases	image fusion, image gradient, non-sampled shearlet transform (NSST), modified pulse coupled neural network (M-PCNN)	39, 4, 1379-1385	<a href="https://doi.org/10.18280/ts.390432">https://doi.org/10.18280/ts.390432</a>	Abdelfatih, B., Ismail, B.H. (2022). An adaptive image fusion algorithm in the NSST based on CDF 9/7 for neurodegenerative diseases. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1379-1385. <a href="https://doi.org/10.18280/ts.390432">https://doi.org/10.18280/ts.390432</a>
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604	Bhatia, M., Kaur, A., Bhatia, S., Mridula, Dwivedi, P.	Detection of Parkinson's Disease in Alzheimer's Patients Utilizing Brain Imaging	Parkinson's disease, MRI, SPM, MarsBar	39, 4, 1443-1451	<a href="https://doi.org/10.18280/ts.390439">https://doi.org/10.18280/ts.390439</a>	Bhatia, M., Kaur, A., Bhatia, S., Mridula, Dwivedi, P. (2022). Detection of Parkinson's disease in Alzheimer's patients utilizing brain imaging. <i>Traitement du Signal</i> , Vol. 39, No. 4, pp. 1443-1451. <a href="https://doi.org/10.18280/ts.390439">https://doi.org/10.18280/ts.390439</a>
605	Brahimi, M., Inc, M., Ahmad, H., Menni, Y., Lorenzini, G.	Synthesis of a Radiating Elements for Side Lobe Reduction Using a Hybrid Beamforming Technique Based on Non-Linear Programming and Stochastic Optimization	non-linear programming, stochastic optimization, mathematical modeling, circular antenna elements, side lobe level, particle swarm enhancement	39, 3, 771-780	<a href="https://doi.org/10.18280/ts.390301">https://doi.org/10.18280/ts.390301</a>	Brahimi, M., Inc, M., Ahmad, H., Menni, Y., Lorenzini, G. (2022). Synthesis of a radiating elements for side lobe reduction using a hybrid beamforming technique based on non-linear programming and stochastic optimization. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 771-780. <a href="https://doi.org/10.18280/ts.390301">https://doi.org/10.18280/ts.390301</a>
606	Kumar, A., Singh, K.U., Swarup, C., Singh, T., Raja, L., Kumar, A.	Detection of Copy-Move Forgery Using Euclidean Distance and Texture Features	GLCM, PCA, Haar, Euclidean distance	39, 3, 781-788	<a href="https://doi.org/10.18280/ts.390302">https://doi.org/10.18280/ts.390302</a>	Kumar, A., Singh, K.U., Swarup, C., Singh, T., Raja, L., Kumar, A. (2022). Detection of copy-move forgery using Euclidean distance and texture features. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 781-788. <a href="https://doi.org/10.18280/ts.390302">https://doi.org/10.18280/ts.390302</a>
607	Yang, J.	Image Segmentation of the Continuous Action of Spiking in Volleyball Based on Spatial Neighborhood Information	spatial neighborhood information, the continuous action of spiking in volleyball, image segmentation, fuzzy c-means (FCM) clustering	39, 3, 789-795	<a href="https://doi.org/10.18280/ts.390303">https://doi.org/10.18280/ts.390303</a>	Yang, J. (2022). Image segmentation of the continuous action of spiking in volleyball based on spatial neighborhood information. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 789-795. <a href="https://doi.org/10.18280/ts.390303">https://doi.org/10.18280/ts.390303</a>
608	Abu-Faraj, M., Alqadi, Z., Zubi, M.	Creating Color Image Features Based on Morphology Image Processing	clustering methods, digital images, feature extraction, image recognition, morphology	39, 3, 797-803	<a href="https://doi.org/10.18280/ts.390304">https://doi.org/10.18280/ts.390304</a>	Abu-Faraj, M., Alqadi, Z., Zubi, M. (2022). Creating color image features based on morphology image processing. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 797-803. <a href="https://doi.org/10.18280/ts.390304">https://doi.org/10.18280/ts.390304</a>
609	Mhaouch, A., Elhamzi, W., Abdelali, A.B., Atri, M.	Optimized Piccolo Lightweight Block Cipher: Area Efficient Implementation	piccolo block cipher, serial architectures, hardware implementation, low-resource, VHDL, FPGA, security analysis	39, 3, 805-814	<a href="https://doi.org/10.18280/ts.390305">https://doi.org/10.18280/ts.390305</a>	Mhaouch, A., Elhamzi, W., Abdelali, A.B., Atri, M. (2022). Optimized Piccolo lightweight block cipher: Area efficient implementation. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 805-814. <a href="https://doi.org/10.18280/ts.390305">https://doi.org/10.18280/ts.390305</a>
610	Tang, Y., Xi, C.P., Gong, Z., Li, L.	Scoliosis Detection Based on Feature Extraction from Region-of-Interest	digital image processing, region of interest (ROI), feature extraction, Cobb angle, curve fitting, scoliosis	39, 3, 815-822	<a href="https://doi.org/10.18280/ts.390306">https://doi.org/10.18280/ts.390306</a>	Tang, Y., Xi, C.P., Gong, Z., Li, L. (2022). Scoliosis detection based on feature extraction from region-of-interest. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 815-822. <a href="https://doi.org/10.18280/ts.390306">https://doi.org/10.18280/ts.390306</a>
611	Yilmaz, A.A.	A Novel Hyperparameter Optimization Aided Hand Gesture Recognition Framework Based on Deep Learning Algorithms	hand gesture recognition, deep neural network, transfer learning, deep learning, genetic algorithm	39, 3, 823-833	<a href="https://doi.org/10.18280/ts.390307">https://doi.org/10.18280/ts.390307</a>	Yilmaz, A.A. (2022). A novel hyperparameter optimization aided hand gesture recognition framework based on deep learning algorithms. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 823-833. <a href="https://doi.org/10.18280/ts.390307">https://doi.org/10.18280/ts.390307</a>
612	Khezzar, Z.A., Benzi, R., Saidi, L., Smail, M.K.	Envelope Detection by Shannon Energy Calculation in DCT Domain and DFS-Based Notch Filter for Interference Mitigation in GNSS Receivers	GNSS, satellite navigation, interference mitigation, discrete Fourier series, discrete cosine transform, Shannon energy, envelope detection, notch filter	39, 3, 835-843	<a href="https://doi.org/10.18280/ts.390308">https://doi.org/10.18280/ts.390308</a>	Khezzar, Z.A., Benzi, R., Saidi, L., Smail, M.K. (2022). Envelope detection by Shannon energy calculation in DCT domain and DFS-based notch filter for interference mitigation in GNSS receivers. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 835-843. <a href="https://doi.org/10.18280/ts.390308">https://doi.org/10.18280/ts.390308</a>

613	Cui, Z., Cai, Z.H.	Feature Extraction of Hyperspectral Images Based on Subspace Band Selection and Transform-Domain Recursive Filtering	feature extraction, hyperspectral image, subspace band selection, transform-domain recursive filtering	39, 3, 845-852	<a href="https://doi.org/10.18280/ts.390309">https://doi.org/10.18280/ts.390309</a>	Cui, Z., Cai, Z.H. (2022). Feature extraction of hyperspectral images based on subspace band selection and transform-domain recursive filtering. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 845-852. <a href="https://doi.org/10.18280/ts.390309">https://doi.org/10.18280/ts.390309</a>
614	Singh, R.K., Gupta, G., Singh, T., Dubey, K., Mehto, A.	Circulate Matrix and Compression Sensing Based Multi-Level Image Encryption	cryptography, sensing matrix, compressive sensing, random matrix, Arnold cat map	39, 3, 853-862	<a href="https://doi.org/10.18280/ts.390310">https://doi.org/10.18280/ts.390310</a>	Singh, R.K., Gupta, G., Singh, T., Dubey, K., Mehto, A. (2022). Circulate matrix and compression sensing based multi-level image encryption. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 853-862. <a href="https://doi.org/10.18280/ts.390310">https://doi.org/10.18280/ts.390310</a>
615	Yigit, T., Sengöz, N., Özmen, Ö., Hemanth, J., İşık, A.H.	Diagnosis of Paratuberculosis in Histopathological Images Based on Explainable Artificial Intelligence and Deep Learning	paratuberculosis, deep learning, explainable artificial intelligence (XAI), histopathology, medical imaging	39, 3, 863-869	<a href="https://doi.org/10.18280/ts.390311">https://doi.org/10.18280/ts.390311</a>	Yigit, T., Sengöz, N., Özmen, Ö., Hemanth, J., İşık, A.H. (2022). Diagnosis of paratuberculosis in histopathological images based on explainable artificial intelligence and deep learning. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 863-869. <a href="https://doi.org/10.18280/ts.390311">https://doi.org/10.18280/ts.390311</a>
616	Zheng, X., Wang, L., Zhou, H.J.	Image Feature Extraction and Retrieval Optimization of Book Pages Based on Convolutional Neural Network	convolutional neural network (CNN), image labeling, image page retrieval, VGG-Fast	39, 3, 871-877	<a href="https://doi.org/10.18280/ts.390312">https://doi.org/10.18280/ts.390312</a>	Zheng, X., Wang, L., Zhou, H.J. (2022). Image feature extraction and retrieval optimization of book pages based on convolutional neural network. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 871-877. <a href="https://doi.org/10.18280/ts.390312">https://doi.org/10.18280/ts.390312</a>
617	Unnikrishnan, H., Azad, R.B.	Non-Local Retinex Based Dehazing and Low Light Enhancement of Images	image dehazing, dark channel prior, non-local retinex, low light image, guided filter	39, 3, 879-892	<a href="https://doi.org/10.18280/ts.390313">https://doi.org/10.18280/ts.390313</a>	Unnikrishnan, H., Azad, R.B. (2022). Non-local retinex based dehazing and low light enhancement of images. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 879-892. <a href="https://doi.org/10.18280/ts.390313">https://doi.org/10.18280/ts.390313</a>
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620	Yildirim, M.	Diagnosis of Heart Diseases Using Heart Sound Signals with the Developed Interpolation, CNN, and Relief Based Model	heart sound, classifiers, interpolation, relief, Darknet53	39, 3, 907-914	<a href="https://doi.org/10.18280/ts.390316">https://doi.org/10.18280/ts.390316</a>	Yildirim, M. (2022). Diagnosis of heart diseases using heart sound signals with the developed interpolation, CNN, and relief based model. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 907-914. <a href="https://doi.org/10.18280/ts.390316">https://doi.org/10.18280/ts.390316</a>
621	Annamalai, T., Chinnasamy, M., Pandian, M.J.S.S.	A Hybrid Model Particle Swarm Optimization Based Mammogram Classification Using Kernel Support Vector Machine	feature extraction, image classification, mammogram, particle swarm optimization, segmentation, support vector machine	39, 3, 915-922	<a href="https://doi.org/10.18280/ts.390317">https://doi.org/10.18280/ts.390317</a>	Annamalai, T., Chinnasamy, M., Pandian, M.J.S.S. (2022). A hybrid model particle swarm optimization based mammogram classification using kernel support vector machine. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 915-922. <a href="https://doi.org/10.18280/ts.390317">https://doi.org/10.18280/ts.390317</a>
622	Said, Y., Ayachi, R.	Embedded Implementation of Social Distancing Detector Based on One Stage Convolutional Neural Network Detector	COVID-19 prevention, social distance detection, deep learning, convolutional neural networks (CNNs), embedded implementation	39, 3, 923-929	<a href="https://doi.org/10.18280/ts.390318">https://doi.org/10.18280/ts.390318</a>	Said, Y., Ayachi, R. (2022). Embedded implementation of social distancing detector based on one stage convolutional neural network detector. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 923-929. <a href="https://doi.org/10.18280/ts.390318">https://doi.org/10.18280/ts.390318</a>
623	Xu, Y.P.	A Deep Learning-Based Cluster Analysis Method for Large-Scale Multi-Label Images	deep learning, large-scale, multi-label images, cluster analysis	39, 3, 931-937	<a href="https://doi.org/10.18280/ts.390319">https://doi.org/10.18280/ts.390319</a>	Xu, Y.P. (2022). A deep learning-based cluster analysis method for large-scale multi-label images. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 931-937. <a href="https://doi.org/10.18280/ts.390319">https://doi.org/10.18280/ts.390319</a>
624	Mirza, N.M., Taban, D.A., Karam, A.J., Al-Saleh, A.H., Al-Zuky, A.A.	Static Hand Gesture Angle Recognition via Aggregated Channel Features (ACF) Detector	static hand gesture, image labelling, aggregate channel features (ACF) detector, AdaBoost algorithm, hand angle detection	39, 3, 939-944	<a href="https://doi.org/10.18280/ts.390320">https://doi.org/10.18280/ts.390320</a>	Mirza, N.M., Taban, D.A., Karam, A.J., Al-Saleh, A.H., Al-Zuky, A.A. (2022). Static hand gesture angle recognition via aggregated channel features (ACF) detector. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 939-944. <a href="https://doi.org/10.18280/ts.390320">https://doi.org/10.18280/ts.390320</a>
625	Wu, P., Feng, L., Tong, H.B., Zhang, Z.X.	Approximate Position Estimation Method of Weak-Signal Receiver of Global Navigation Satellite Systems Assisted by Barometric Altimeter	satellite navigation, global navigation satellite system (GNSS), signal transmission time recovery, high dynamics, first positioning time	39, 3, 945-950	<a href="https://doi.org/10.18280/ts.390321">https://doi.org/10.18280/ts.390321</a>	Wu, P., Feng, L., Tong, H.B., Zhang, Z.X. (2022). Approximate position estimation method of weak-signal receiver of global navigation satellite systems assisted by barometric altimeter. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 945-950. <a href="https://doi.org/10.18280/ts.390321">https://doi.org/10.18280/ts.390321</a>
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627	Albayrak, A.	Artificial Intelligence Based Social Distance Monitoring in Public Areas	social distancing, pedestrian detection, COVID-19, artificial intelligence, deep learning	39, 3, 961-967	<a href="https://doi.org/10.18280/ts.390323">https://doi.org/10.18280/ts.390323</a>	Albayrak, A. (2022). Artificial intelligence based social distance monitoring in public areas. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 961-967. <a href="https://doi.org/10.18280/ts.390323">https://doi.org/10.18280/ts.390323</a>
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629	Zhang, J.H., Zhu, Q., Song, F., Zhang, L.C., Wang, J., Liu, C.J.	Multi-Scale Edge Detection of Crack in Extra-High Arch Dam Based on Orthogonal Wavelet Construction	wavelet construction, image edge detection based on wavelet modulus maxima, biorthogonal wavelet, constant-length compactly supported biorthogonal wavelet, ultra-high arch dam, concrete crack	39, 3, 977-989	<a href="https://doi.org/10.18280/ts.390325">https://doi.org/10.18280/ts.390325</a>	Zhang, J.H., Zhu, Q., Song, F., Zhang, L.C., Wang, J., Liu, C.J. (2022). Multi-scale edge detection of crack in extra-high arch dam based on orthogonal wavelet construction. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 977-989. <a href="https://doi.org/10.18280/ts.390325">https://doi.org/10.18280/ts.390325</a>
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633	Zhu, L., Sheng, X.	On Image-Processing-Based Identification Method of Express Logistics Information	image processing, express shipments, text information identification	39, 3, 1019-1025	<a href="https://doi.org/10.18280/ts.390329">https://doi.org/10.18280/ts.390329</a>	Zhu, L., Sheng, X. (2022). On image-processing-based identification method of express logistics information. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 1019-1025. <a href="https://doi.org/10.18280/ts.390329">https://doi.org/10.18280/ts.390329</a>
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635	S, S.S., Gopakumar, K.	Hand Gesture Recognizing Model Using Optimized Capsule Neural Network	hand gestures, human-computer interface (HCI), deep learning, SoftMax layer, capsule neural network (CapsNet)	39, 3, 1039-1050	<a href="https://doi.org/10.18280/ts.390331">https://doi.org/10.18280/ts.390331</a>	S, S.S., Gopakumar, K. (2022). Hand gesture recognizing model using optimized capsule neural network. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 1039-1050. <a href="https://doi.org/10.18280/ts.390331">https://doi.org/10.18280/ts.390331</a>
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637	Xu, S.H., Qi, M.M., Wang, X.M., Zhao, H.L., Hu, Z.Y., Sun, H.Y.	A Positive-Unlabeled Generative Adversarial Network for Super-Resolution Image Reconstruction Using a Charbonnier Loss	positive-unlabeled generative adversarial network (PUGAN), super-resolution reconstruction, charbonnier loss, robustness	39, 3, 1061-1069	<a href="https://doi.org/10.18280/ts.390333">https://doi.org/10.18280/ts.390333</a>	Xu, S.H., Qi, M.M., Wang, X.M., Zhao, H.L., Hu, Z.Y., Sun, H.Y. (2022). A positive-unlabeled generative adversarial network for super-resolution image reconstruction using a Charbonnier loss. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 1061-1069. <a href="https://doi.org/10.18280/ts.390333">https://doi.org/10.18280/ts.390333</a>
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639	Naim, F., Mustafa, M., Sulaiman, N., Zahari, Z.L.	Dual-Layer Ranking Feature Selection Method Based on Statistical Formula for Driver Fatigue Detection of EMG Signals	feature selection, electromyography, driver drowsiness, time-domain features, frequency-domain features, statistical rank	39, 3, 1079-1088	<a href="https://doi.org/10.18280/ts.390335">https://doi.org/10.18280/ts.390335</a>	Naim, F., Mustafa, M., Sulaiman, N., Zahari, Z.L. (2022). Dual-layer ranking feature selection method based on statistical formula for driver fatigue detection of EMG signals. <i>Traitement du Signal</i> , Vol. 39, No. 3, pp. 1079-1088. <a href="https://doi.org/10.18280/ts.390335">https://doi.org/10.18280/ts.390335</a>
640	Mehanović, D., Zejnilović, E., Husukić, E., Mašetić, Z.	Prediction of Human Movement in Open Public Spaces: Case Study of Sarajevo	COVID-19, human movement prediction, linear regression, open public space, space syntax, video processing	39, 2, 399-406	<a href="https://doi.org/10.18280/ts.390201">https://doi.org/10.18280/ts.390201</a>	Mehanović, D., Zejnilović, E., Husukić, E., Mašetić, Z. (2022). Prediction of human movement in open public spaces: Case study of Sarajevo. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 399-406. <a href="https://doi.org/10.18280/ts.390201">https://doi.org/10.18280/ts.390201</a>
641	Chen, N., Chen, Y.P., Wang, Q.F., Wu, S.P., Zhang, H.Y.	MAF-DeepLab: A Multiscale Attention Fusion Network for Semantic Segmentation	atrous spatial pyramid pooling, attention mechanism, deepLab V3+, multiscale features fusion, semantic segmentation	39, 2, 407-417	<a href="https://doi.org/10.18280/ts.390202">https://doi.org/10.18280/ts.390202</a>	Chen, N., Chen, Y.P., Wang, Q.F., Wu, S.P., Zhang, H.Y. (2022). MAF-DeepLab: A multiscale attention fusion network for semantic segmentation. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 407-417. <a href="https://doi.org/10.18280/ts.390202">https://doi.org/10.18280/ts.390202</a>
642	Eali, S.N.J., Bhattacharyya, D., Nakka, T.R., Hong, S.P.	A Novel Approach in Bio-Medical Image Segmentation for Analyzing Brain Cancer Images with U-NET Semantic Segmentation and TPLD Models Using SVM	probability density function, U-Net, medical image decathlon, deep learning, supervised learning, brain cancer segmentation, support vector machine, expectation maximization (EM) algorithm	39, 2, 419-430	<a href="https://doi.org/10.18280/ts.390203">https://doi.org/10.18280/ts.390203</a>	Eali, S.N.J., Bhattacharyya, D., Nakka, T.R., Hong, S.P. (2022). A novel approach in bio-medical image segmentation for analyzing brain cancer images with U-NET semantic segmentation and TPLD models using SVM. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 419-430. <a href="https://doi.org/10.18280/ts.390203">https://doi.org/10.18280/ts.390203</a>
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644	Gao, H.B., Wang, Z.J., Sun, X.L.	Biological Image Identity Detection and Authentication in the Field of Financial Payment Security	financial payment security, biological features, identity detection, image processing	39, 2, 441-447	<a href="https://doi.org/10.18280/ts.390205">https://doi.org/10.18280/ts.390205</a>	Gao, H.B., Wang, Z.J., Sun, X.L. (2022). Biological image identity detection and authentication in the field of financial payment security. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 441-447. <a href="https://doi.org/10.18280/ts.390205">https://doi.org/10.18280/ts.390205</a>
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646	Tikar, S.S., Patil, R.A.	A Novel Fast Responding Driver Assistance Technique with Efficient Lane Detection and Collision Avoidance Using Dynamic Feature Extraction in Any Environment	driver assistance system, lane detection, collision avoidance, real time application	39, 2, 459-468	<a href="https://doi.org/10.18280/ts.390207">https://doi.org/10.18280/ts.390207</a>	Tikar, S.S., Patil, R.A. (2022). A novel fast responding driver assistance technique with efficient lane detection and collision avoidance using dynamic feature extraction in any environment. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 459-468. <a href="https://doi.org/10.18280/ts.390207">https://doi.org/10.18280/ts.390207</a>
647	Rizal, A., Siregar, F.D.A.A., Fauzi, H.T.	Obstructive Sleep Apnea (OSA) Classification Based on Heart Rate Variability (HRV) on Electrocardiogram (ECG) Signal Using Support Vector Machine (SVM)	obstructive sleep apnea, ECG signal, heart-rate variability, support vector machine	39, 2, 469-474	<a href="https://doi.org/10.18280/ts.390208">https://doi.org/10.18280/ts.390208</a>	Rizal, A., Siregar, F.D.A.A., Fauzi, H.T. (2022). Obstructive sleep apnea (OSA) classification based on heart rate variability (HRV) on electrocardiogram (ECG) signal using support vector machine (SVM). <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 469-474. <a href="https://doi.org/10.18280/ts.390208">https://doi.org/10.18280/ts.390208</a>
648	Shi, M.D., Hu, T., Yu, J.W.	Pointing Cursor Interaction in Virtual Reality from the Perspective of Distance Perception	virtual reality (VR), perception of absolute distance, man-machine interaction, pointing cursor	39, 2, 475-483	<a href="https://doi.org/10.18280/ts.390209">https://doi.org/10.18280/ts.390209</a>	Shi, M.D., Hu, T., Yu, J.W. (2022). Pointing cursor interaction in virtual reality from the perspective of distance perception. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 475-483. <a href="https://doi.org/10.18280/ts.390209">https://doi.org/10.18280/ts.390209</a>

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650	Wu, J.D., Chang, C.H.	Driver Drowsiness Detection and Alert System Development Using Object Detection	fatigue driving, driver drowsiness detection, object detection, advanced driver assistance system	39, 2, 493-499	<a href="https://doi.org/10.18280/ts.390211">https://doi.org/10.18280/ts.390211</a>	Wu, J.D., Chang, C.H. (2022). Driver drowsiness detection and alert system development using object detection. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 493-499. <a href="https://doi.org/10.18280/ts.390211">https://doi.org/10.18280/ts.390211</a>
651	Yetiş, H., Karaköse, M.	A New Framework Containing Convolution and Pooling Circuits for Image Processing and Deep Learning Applications with Quantum Computing Implementation	quantum computing, quantum deep learning, quantum information processing	39, 2, 501-512	<a href="https://doi.org/10.18280/ts.390212">https://doi.org/10.18280/ts.390212</a>	Yetiş, H., Karaköse, M. (2022). A new framework containing convolution and pooling circuits for image processing and deep learning applications with quantum computing implementation. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 501-512. <a href="https://doi.org/10.18280/ts.390212">https://doi.org/10.18280/ts.390212</a>
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653	Burçak, K.C., Uğuz, K.	A New Hybrid Breast Cancer Diagnosis Model Using Deep Learning Model and ReliefF	breast cancer, convolutional neural network, deep learning, feature selection, ReliefF, transfer learning	39, 2, 521-529	<a href="https://doi.org/10.18280/ts.390214">https://doi.org/10.18280/ts.390214</a>	Burçak, K.C., Uğuz, K. (2022). A new hybrid breast cancer diagnosis model using deep learning model and ReliefF. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 521-529. <a href="https://doi.org/10.18280/ts.390214">https://doi.org/10.18280/ts.390214</a>
654	Pugazhendhi, L.T., Kothandaraman, R., Karnan, B.	Implementation of Visual Clustering Strategy in Self-Organizing Map for Wear Studies Samples Printed Using FDM	fused deposition modeling, linear regression, neural network, self-organizing map, wear study	39, 2, 531-539	<a href="https://doi.org/10.18280/ts.390215">https://doi.org/10.18280/ts.390215</a>	Pugazhendhi, L.T., Kothandaraman, R., Karnan, B. (2022). Implementation of visual clustering strategy in self-organizing map for wear studies samples printed using FDM. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 531-539. <a href="https://doi.org/10.18280/ts.390215">https://doi.org/10.18280/ts.390215</a>
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656	Feng, L., Wu, P., Zheng, L.H.	Roll Rate Estimation for Cylindrical Spinning Vehicle Based on Pseudorange Observations	Global Navigation Satellite System (GNSS), spinning vehicle, baseband signal processing, pseudorange observations, roll rate estimation	39, 2, 559-566	<a href="https://doi.org/10.18280/ts.390217">https://doi.org/10.18280/ts.390217</a>	Feng, L., Wu, P., Zheng, L.H. (2022). Roll rate estimation for cylindrical spinning vehicle based on pseudorange observations. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 559-566. <a href="https://doi.org/10.18280/ts.390217">https://doi.org/10.18280/ts.390217</a>
657	Feng, L., Wu, P., Zheng, L.H.	A Hybrid System for Handwritten Character Recognition with High Robustness	text recognition, pattern recognition, shape analysis, machine learning, FDCT, PCA, LDA, LS-SVM, RF	39, 2, 567-576	<a href="https://doi.org/10.18280/ts.390218">https://doi.org/10.18280/ts.390218</a>	Sethy, A., Patra, P.K., Nayak, S.R. (2022). A hybrid system for handwritten character recognition with high robustness. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 567-576. <a href="https://doi.org/10.18280/ts.390218">https://doi.org/10.18280/ts.390218</a>
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659	Gündoğdu, S., Çolak, Ö.H., Polat, Ö.	Investigation of the Effect of eSport on HRV Signal by Using Poincaré Plot Analysis	heart rate variability, Poincaré plot analysis, eSport	39, 2, 589-594	<a href="https://doi.org/10.18280/ts.390220">https://doi.org/10.18280/ts.390220</a>	Gündoğdu, S., Çolak, Ö.H., Polat, Ö. (2022). Investigation of the effect of eSport on HRV signal by using Poincaré plot analysis. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 589-594. <a href="https://doi.org/10.18280/ts.390220">https://doi.org/10.18280/ts.390220</a>
660	Zhao, H.	Image Target Recognition Based on Multiregional Features under Hybrid Attention Mechanism	hybrid attention, multiregional features, image target recognition	39, 2, 595-601	<a href="https://doi.org/10.18280/ts.390221">https://doi.org/10.18280/ts.390221</a>	Zhao, H. (2022). Image target recognition based on multiregional features under hybrid attention mechanism. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 595-601. <a href="https://doi.org/10.18280/ts.390221">https://doi.org/10.18280/ts.390221</a>
661	Raghu, K., Sadanandam, M.	Emotion Recognition from Speech Utterances with Hybrid Spectral Features Using Machine Learning Algorithms	SER, speech prosody, feature extraction, SVM, MLP	39, 2, 603-609	<a href="https://doi.org/10.18280/ts.390222">https://doi.org/10.18280/ts.390222</a>	Raghu, K., Sadanandam, M. (2022). Emotion recognition from speech utterances with hybrid spectral features using machine learning algorithms. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 603-609. <a href="https://doi.org/10.18280/ts.390222">https://doi.org/10.18280/ts.390222</a>
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663	Deng, W.Z., Zhou, F.Y., Gong, Z., Cui, Y.J., Liu, L., Chi, Q.	Disease Feature Recognition of Hydroponic Lettuce Images Based on Support Vector Machine	hydroponic lettuce, leafroll, brown blotch disease (BBD), support vector machine, image processing	39, 2, 617-625	<a href="https://doi.org/10.18280/ts.390224">https://doi.org/10.18280/ts.390224</a>	Deng, W.Z., Zhou, F.Y., Gong, Z., Cui, Y.J., Liu, L., Chi, Q. (2022). Disease feature recognition of hydroponic lettuce images based on support vector machine. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 617-625. <a href="https://doi.org/10.18280/ts.390224">https://doi.org/10.18280/ts.390224</a>
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666	Özyurt, F., Mira, A., Çoban, A.	Face Mask Detection Using Lightweight Deep Learning Architecture and Raspberry Pi Hardware: An Approach to Reduce Risk of Coronavirus Spread While Entrance to Indoor Spaces	COVID-19, face-mask detection, raspberry pi, automatic door system	39, 2, 645-650	<a href="https://doi.org/10.18280/ts.390227">https://doi.org/10.18280/ts.390227</a>	Özyurt, F., Mira, A., Çoban, A. (2022). Face mask detection using lightweight deep learning architecture and raspberry Pi hardware: An approach to reduce risk of coronavirus spread while entrance to indoor spaces. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 645-650. <a href="https://doi.org/10.18280/ts.390227">https://doi.org/10.18280/ts.390227</a>

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668	Tung, H., Tekin, R.	New Feature Extraction Approaches Based on Spatial Points for Visual-Only Lip-Reading	lip reading, image processing, feature extraction, spatial features, deep learning	39, 2, 659-668	<a href="https://doi.org/10.18280/ts.390229">https://doi.org/10.18280/ts.390229</a>	Tung, H., Tekin, R. (2022). New feature extraction approaches based on spatial points for visual-only lip-reading. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 659-668. <a href="https://doi.org/10.18280/ts.390229">https://doi.org/10.18280/ts.390229</a>
669	Rajyalakshmi, C., Rao, K.R.M., Rao, R.R.	Compressed High Resolution Satellite Image Processing to Detect Water Bodies with Combined Bilateral Filtering and Threshold Techniques	multi sensor, high resolution, water body, bilateral filter, threshold	39, 2, 669-675	<a href="https://doi.org/10.18280/ts.390230">https://doi.org/10.18280/ts.390230</a>	Rajyalakshmi, C., Rao, K.R.M., Rao, R.R. (2022). Compressed high resolution satellite image processing to detect water bodies with combined bilateral filtering and threshold techniques. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 669-675. <a href="https://doi.org/10.18280/ts.390230">https://doi.org/10.18280/ts.390230</a>
670	Cao, F.Y., Lu, S.J., Zhong, J.	Recognition of Cheating Behaviors Based on Finetuning of Model Parameters	behavior recognition, transfer learning, parameter finetuning, pretrained network model	39, 2, 677-682	<a href="https://doi.org/10.18280/ts.390231">https://doi.org/10.18280/ts.390231</a>	Cao, F.Y., Lu, S.J., Zhong, J. (2022). Recognition of cheating behaviors based on finetuning of model parameters. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 677-682. <a href="https://doi.org/10.18280/ts.390231">https://doi.org/10.18280/ts.390231</a>
671	Yadav, J.K.P.S., Singh, L., Jaffrey, Z.A.	A Robust Automatic Fingerprint Recognition System Using Multi-Connection Hopfield Neural Network	biometrics, Hopfield neural network, Fingerprint, multi-connection Hopfield neural network, FVC-2004, NIST-4	39, 2, 683-694	<a href="https://doi.org/10.18280/ts.390232">https://doi.org/10.18280/ts.390232</a>	Yadav, J.K.P.S., Singh, L., Jaffrey, Z.A. (2022). A robust automatic fingerprint recognition system using multi-connection hopfield neural network. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 683-694. <a href="https://doi.org/10.18280/ts.390232">https://doi.org/10.18280/ts.390232</a>
672	Choubey, H., Sharma, S., Singh, R.B., Ray, V.K.	HFD and MCFET Based Feature Extraction Technique for Detection of Epilepsy Using ANN Classifier	Higuchi fractal dimension (HFD), electroencephalogram (EEG) signal, Levenberg Marquardt (LM), k-Nearest neighbour (kNN), least fitting square (LS)	39, 2, 695-700	<a href="https://doi.org/10.18280/ts.390233">https://doi.org/10.18280/ts.390233</a>	Choubey, H., Sharma, S., Singh, R.B., Ray, V.K. (2022). HFD and MCFET based feature extraction technique for detection of epilepsy using ANN classifier. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 695-700. <a href="https://doi.org/10.18280/ts.390233">https://doi.org/10.18280/ts.390233</a>
673	Chen, W., Zheng, X., Zhou, H.J., Li, Z.	Automatic Classification and Identification of Road Garbage Images and Evaluation of Environmental Health Based on UNet++	semantic segmentation, UNet++, garbage classification, eye tracking analyzer, attention mechanism, evaluation method of environmental health	39, 2, 701-710	<a href="https://doi.org/10.18280/ts.390234">https://doi.org/10.18280/ts.390234</a>	Chen, W., Zheng, X., Zhou, H.J., Li, Z. (2022). Automatic classification and identification of road garbage images and evaluation of environmental health based on UNet++. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 701-710. <a href="https://doi.org/10.18280/ts.390234">https://doi.org/10.18280/ts.390234</a>
674	Nandan, D., Singh, M.K., Kumar, S.K., Yadav, H.K.	Speaker Identification Based on Physical Variation of Speech Signal	acoustic feature, classifier, disguised voice, speaker identification	39, 2, 711-716	<a href="https://doi.org/10.18280/ts.390235">https://doi.org/10.18280/ts.390235</a>	Nandan, D., Singh, M.K., Kumar, S.K., Yadav, H.K. (2020). Speaker identification based on physical variation of speech signal. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 711-716. <a href="https://doi.org/10.18280/ts.390235">https://doi.org/10.18280/ts.390235</a>
675	Babu, V.S., Ram, N.V.	Deep Residual CNN with Contrast Limited Adaptive Histogram Equalization for Weed Detection in Soybean Crops	CLAHE, classification, CNN, data augmentation, deep residual weed and crop	39, 2, 717-722	<a href="https://doi.org/10.18280/ts.390236">https://doi.org/10.18280/ts.390236</a>	Babu, V.S., Ram, N.V. (2020). Deep residual CNN with contrast limited adaptive histogram equalization for weed detection in soybean crops. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 717-722. <a href="https://doi.org/10.18280/ts.390236">https://doi.org/10.18280/ts.390236</a>
676	Yuan, H.F., Huang, L., Si, G.L., Lv, Y., Nie, T., Liu, C.X.	Time-Frequency Analysis and Type Identification of High-Density Communication Countermeasure Electronic Signals	high-density signals, communication countermeasure, electronic signals, time-frequency analysis, type identification	39, 2, 723-729	<a href="https://doi.org/10.18280/ts.390237">https://doi.org/10.18280/ts.390237</a>	Yuan, H.F., Huang, L., Si, G.L., Lv, Y., Nie, T., Liu, C.X. (2022). Time-frequency analysis and type identification of high-density communication countermeasure electronic signals. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 723-729. <a href="https://doi.org/10.18280/ts.390237">https://doi.org/10.18280/ts.390237</a>
677	Sari, F., Ulas, A.B.	Deep Learning Application in Detecting Glass Defects with Color Space Conversion and Adaptive Histogram Equalization	adaptive histogram equalization, color space conversion, glass defect detection, deep learning	39, 2, 731-736	<a href="https://doi.org/10.18280/ts.390238">https://doi.org/10.18280/ts.390238</a>	Sari, F., Ulas, A.B. (2022). Deep learning application in detecting glass defects with color space conversion and adaptive histogram equalization. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 731-736. <a href="https://doi.org/10.18280/ts.390238">https://doi.org/10.18280/ts.390238</a>
678	Rajpoot, V., Dubey, R., Khan, S.S., Maheshwari, S., Dixit, A., Deo, A., Doohan, N.V.	Orchard Boumans Algorithm and MRF Approach Based on Full Threshold Segmentation for Dental X-Ray Images	thresholding, segmentation, specificity, X-ray, Markov random field, orchard humans, gaussian mixture model (GMM), grabCut method	39, 2, 737-744	<a href="https://doi.org/10.18280/ts.390239">https://doi.org/10.18280/ts.390239</a>	Rajpoot, V., Dubey, R., Khan, S.S., Maheshwari, S., Dixit, A., Deo, A., Doohan, N.V. (2022). Orchard Boumans algorithm and MRF approach based on full threshold segmentation for dental X-ray images. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 737-744. <a href="https://doi.org/10.18280/ts.390239">https://doi.org/10.18280/ts.390239</a>
679	Huang, L., Nong, S.K., Wang, X.F., Zhao, X.H., Wen C.R., Nie, T.	Combined Spatial-Spectral Hyperspectral Image Classification Based on Adaptive Guided Filtering	combined spatial-spectral hyperspectral image classification, enhanced spatial-spectral information, improved description of local binary pattern (LBP), adaptive guided filtering	39, 2, 745-754	<a href="https://doi.org/10.18280/ts.390240">https://doi.org/10.18280/ts.390240</a>	Huang, L., Nong, S.K., Wang, X.F., Zhao, X.H., Wen C.R., Nie, T. (2022). Combined spatial-spectral hyperspectral image classification based on adaptive guided filtering. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 745-754. <a href="https://doi.org/10.18280/ts.390240">https://doi.org/10.18280/ts.390240</a>
680	Kumar, M.V., Sharma, D.	Enhancement of Gain and Reduction of Backward Radiation Using Metasurface Antenna for Energy Harvesting Applications	reflective metasurface, rectifier, conventional CPW, electromagnetic energy	39, 2, 755-762	<a href="https://doi.org/10.18280/ts.390241">https://doi.org/10.18280/ts.390241</a>	Kumar, M.V., Sharma, D. (2022). Enhancement of gain and reduction of backward radiation using metasurface antenna for energy harvesting applications. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 755-762. <a href="https://doi.org/10.18280/ts.390241">https://doi.org/10.18280/ts.390241</a>
681	Rode, K.N., Siddamalliah, R.J.	Image Segmentation with Priority Based Apposite Feature Extraction Model for Detection of Multiple Sclerosis in MR Images Using Deep Learning Technique	multiple sclerosis, deep learning, MR images, image segmentation, feature extraction, feature selection, apposite features	39, 2, 763-769	<a href="https://doi.org/10.18280/ts.390242">https://doi.org/10.18280/ts.390242</a>	Rode, K.N., Siddamalliah, R.J. (2022). Image segmentation with priority based apposite feature extraction model for detection of multiple sclerosis in MR images using deep learning technique. <i>Traitement du Signal</i> , Vol. 39, No. 2, pp. 763-769. <a href="https://doi.org/10.18280/ts.390242">https://doi.org/10.18280/ts.390242</a>
682	Liu, S., Tan, Y., Wu, C.Y.	Interaction Model of the Cabin of Combined Sugarcane Harvesters	Human-machine interface (HMI), interaction mode, harvester cabin, physiological feedback, eye movement	39, 1, 1-9	<a href="https://doi.org/10.18280/ts.390101">https://doi.org/10.18280/ts.390101</a>	Liu, S., Tan, Y., Wu, C.Y. (2020). Interaction model of the cabin of combined sugarcane harvesters. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 1-9. <a href="https://doi.org/10.18280/ts.390101">https://doi.org/10.18280/ts.390101</a>
683	Ramdane, M.A., Benallal, A., Maamoun, M., Hassani, I.	Partial Update Simplified Fast Transversal Filter Algorithms for Acoustic Echo Cancellation	adaptive filtering, acoustic echo cancellation, computational complexity, partial update, fast transversal filter, tracking capability	39, 1, 11-19	<a href="https://doi.org/10.18280/ts.390102">https://doi.org/10.18280/ts.390102</a>	Ramdane, M.A., Benallal, A., Maamoun, M., Hassani, I. (2022). Partial update simplified fast transversal filter algorithms for acoustic echo cancellation. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 11-19. <a href="https://doi.org/10.18280/ts.390102">https://doi.org/10.18280/ts.390102</a>
684	Aguilar-Domínguez, K.S., Pinto-Elias, R., González-Serna, J.G., Magadán-Salazar, A.	Image Description Using the Relation Between Color and Texture in Retrieval Task	content-based image retrieval, image representation, microstructures, multi-integration features, texture descriptor, color descriptor	39, 1, 21-29	<a href="https://doi.org/10.18280/ts.390103">https://doi.org/10.18280/ts.390103</a>	Aguilar-Domínguez, K.S., Pinto-Elias, R., González-Serna, J.G., Magadán-Salazar, A. (2022). Image description using the relation between color and texture in retrieval task. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 21-29. <a href="https://doi.org/10.18280/ts.390103">https://doi.org/10.18280/ts.390103</a>



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686	Hammad, D.A., Monkaresi, H.	ECG - Based Emotion Detection via Parallel - Extraction of Temporal and Spatial Features Using Convolutional Neural Network	emotion detection, convolutional neural network (CNN), ECG signal, grid search optimization (GSO), DNN	39, 1, 43-57	<a href="https://doi.org/10.18280/ts.390105">https://doi.org/10.18280/ts.390105</a>	Hammad, D.A., Monkaresi, H. (2022). ECG - based emotion detection via parallel - extraction of temporal and spatial features using convolutional neural network. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 43-57. <a href="https://doi.org/10.18280/ts.390105">https://doi.org/10.18280/ts.390105</a>
687	Feng, L., Li, H.B., Cheng, D.F., Zhang, W.M., Xiao, C.J.	An Improved Saliency Detection Algorithm Based on Edge Boxes and Bayesian Model	saliency detection, edge boxes, Bayesian model	39, 1, 59-70	<a href="https://doi.org/10.18280/ts.390106">https://doi.org/10.18280/ts.390106</a>	Feng, L., Li, H.B., Cheng, D.F., Zhang, W.M., Xiao, C.J. (2022). An improved saliency detection algorithm based on edge boxes and Bayesian model. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 59-70. <a href="https://doi.org/10.18280/ts.390106">https://doi.org/10.18280/ts.390106</a>
688	Özyurt, F., Sert, E., Avci, D.	Ensemble Residual Network Features and Cubic-SVM Based Tomato Leaves Disease Classification System	residual network, NCA, tomato leaf disease, deep learning	39, 1, 71-77	<a href="https://doi.org/10.18280/ts.390107">https://doi.org/10.18280/ts.390107</a>	Özyurt, F., Sert, E., Avci, D. (2022). Ensemble residual network features and cubic-SVM based tomato leaves disease classification system. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 71-77. <a href="https://doi.org/10.18280/ts.390107">https://doi.org/10.18280/ts.390107</a>
689	Noureddine, A., Boussif, M., Adnane, C.	A Modified Ultraspherical Window and Its Application for Speech Enhancement	ultraspherical window, quadrature mirror filters banks, speech enhancement, discrete wavelet transforms	39, 1, 79-86	<a href="https://doi.org/10.18280/ts.390108">https://doi.org/10.18280/ts.390108</a>	Noureddine, A., Boussif, M., Adnane, C. (2022). A modified ultraspherical window and its application for speech enhancement. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 79-86. <a href="https://doi.org/10.18280/ts.390108">https://doi.org/10.18280/ts.390108</a>
690	Janardhan, N., Kumaresh, N.	Improving Depression Prediction Accuracy Using Fisher Score-Based Feature Selection and Dynamic Ensemble Selection Approach Based on Acoustic Features of Speech	acoustic features, depression, dynamic ensemble selection, feature selection, fisher score, METADES, openSMILE, KNORAU	39, 1, 87-107	<a href="https://doi.org/10.18280/ts.390109">https://doi.org/10.18280/ts.390109</a>	Janardhan, N., Kumaresh, N. (2022). Improving depression prediction accuracy using fisher score-based feature selection and dynamic ensemble selection approach based on acoustic features of speech. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 87-107. <a href="https://doi.org/10.18280/ts.390109">https://doi.org/10.18280/ts.390109</a>
691	Jiang, F.C., Zhang, H.Y., Feng, C.W., Zhu, C.	A Closed-Loop Detection Algorithm for Indoor Simultaneous Localization and Mapping Based on You Only Look Once v3	simultaneous localization and mapping (SLAM), you only look once (YOLO) v3, closed-loop detection	39, 1, 109-117	<a href="https://doi.org/10.18280/ts.390110">https://doi.org/10.18280/ts.390110</a>	Jiang, F.C., Zhang, H.Y., Feng, C.W., Zhu, C. (2022). A closed-loop detection algorithm for indoor simultaneous localization and mapping based on you only look once v3. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 109-117. <a href="https://doi.org/10.18280/ts.390110">https://doi.org/10.18280/ts.390110</a>
692	Jo, B., Kim, S.	Comparative Analysis of OpenPose, PoseNet, and MoveNet Models for Pose Estimation in Mobile Devices	mobile devices, MoveNet, OpenPose, pose estimation, PoseNet	39, 1, 119-124	<a href="https://doi.org/10.18280/ts.390111">https://doi.org/10.18280/ts.390111</a>	Jo, B., Kim, S. (2022). Comparative analysis of OpenPose, PoseNet, and MoveNet models for pose estimation in mobile devices. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 119-124. <a href="https://doi.org/10.18280/ts.390111">https://doi.org/10.18280/ts.390111</a>
693	Sevinc, O., Mehruboğlu, M., Guzel, M.S., Askerzade, I.	An Effective Medical Image Classification: Transfer Learning Enhanced by Auto Encoder and Classified with SVM	transfer learning, auto encoder, SVM, COVID-19, blood cells	39, 1, 125-131	<a href="https://doi.org/10.18280/ts.390112">https://doi.org/10.18280/ts.390112</a>	Sevinc, O., Mehruboğlu, M., Guzel, M.S., Askerzade, I. (2022). An effective medical image classification: transfer learning enhanced by auto encoder and classified with SVM. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 125-131. <a href="https://doi.org/10.18280/ts.390112">https://doi.org/10.18280/ts.390112</a>
694	Bhardwaj, L., Mishra, R.K.	Downlink Processing of Massive MIMO-NOMA Networks Using Cell Sectored Approach for 5G Communication	cell sectoring, channel state information, massive multiple-input multiple-output, non-orthogonal multiple access, pilot contamination, spectral efficiency	39, 1, 133-144	<a href="https://doi.org/10.18280/ts.390113">https://doi.org/10.18280/ts.390113</a>	Bhardwaj, L., Mishra, R.K. (2022). Downlink processing of massive MIMO-NOMA networks using cell sectored approach for 5G communication. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 133-144. <a href="https://doi.org/10.18280/ts.390113">https://doi.org/10.18280/ts.390113</a>
695	Zhang, Z., Xie, X.	Application of Image Processing and Identification Technology for Digital Archive Information Management	digital archive, archive information management, image processing	39, 1, 145-152	<a href="https://doi.org/10.18280/ts.390114">https://doi.org/10.18280/ts.390114</a>	Zhang, Z., Xie, X. (2022). Application of image processing and identification technology for digital archive information management. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 145-152. <a href="https://doi.org/10.18280/ts.390114">https://doi.org/10.18280/ts.390114</a>
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698	Abu-Faraj, M.M., Aldebei, K., Alqadi, Z.A.	Simple, Efficient, Highly Secure, and Multiple Purposed Method on Data Cryptography	cryptography, throughput, speed up, data quality, MSE, PSNR	39, 1, 173-178	<a href="https://doi.org/10.18280/ts.390117">https://doi.org/10.18280/ts.390117</a>	Abu-Faraj, M.M., Aldebei, K., Alqadi, Z.A. (2022). Simple, efficient, highly secure, and multiple purposed method on data cryptography. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 173-178. <a href="https://doi.org/10.18280/ts.390117">https://doi.org/10.18280/ts.390117</a>
699	Jia, D.R., Yang, J.J.	A Multi-Scale Image Enhancement Algorithm Based on Deep Learning and Illumination Compensation	deep learning, illumination compensation, multi-scale image enhancement	39, 1, 179-185	<a href="https://doi.org/10.18280/ts.390118">https://doi.org/10.18280/ts.390118</a>	Jia, D.R., Yang, J.J. (2022). A multi-scale image enhancement algorithm based on deep learning and illumination compensation. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 179-185. <a href="https://doi.org/10.18280/ts.390118">https://doi.org/10.18280/ts.390118</a>
700	Saad, A., Ahmed, J., Elaraby, A.	Classification of Bird Sound Using High-and Low-Complexity Convolutional Neural Networks	convolutional neural network, spectrogram, bird sound classification, res net, mobile net	39, 1, 187-193	<a href="https://doi.org/10.18280/ts.390119">https://doi.org/10.18280/ts.390119</a>	Saad, A., Ahmed, J., Elaraby, A. (2022). Classification of bird sound using high-and low-complexity convolutional neural networks. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 187-193. <a href="https://doi.org/10.18280/ts.390119">https://doi.org/10.18280/ts.390119</a>
701	Manikyam, N.R.H., Devi, M.S.	An Image Decompression Model with Reversible Pixel Interchange Decryption Model Using Data Deduplication	data deduplication, image decompression, reversible pixel interchange, storage provider, decryption	39, 1, 195-203	<a href="https://doi.org/10.18280/ts.390120">https://doi.org/10.18280/ts.390120</a>	Manikyam, N.R.H., Devi, M.S. (2022). An image decompression model with reversible pixel interchange decryption model using data deduplication. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 195-203. <a href="https://doi.org/10.18280/ts.390120">https://doi.org/10.18280/ts.390120</a>
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704	Ponnaganti, N.D., Anitha, R.	A Novel Ensemble Bagging Classification Method for Breast Cancer Classification Using Machine Learning Techniques	breast cancer, ensemble bagging, weighted voting, ensemble bagging weighted voting classification	39, 1, 229-237	<a href="https://doi.org/10.18280/ts.390123">https://doi.org/10.18280/ts.390123</a>	Ponnaganti, N.D., Anitha, R. (2022). A novel ensemble bagging classification method for breast cancer classification using machine learning techniques. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 229-237. <a href="https://doi.org/10.18280/ts.390123">https://doi.org/10.18280/ts.390123</a>
705	Sivasankaran, P., Dhanaraj, K.	A Rapid Advancing Image Segmentation Approach in Dental to Predict Cryst	CAD, X-ray images, maximal IsoCenters, Fastly marching methodology, image processing, detection of dentistry cysts, radiologists	39, 1, 239-246	<a href="https://doi.org/10.18280/ts.390124">https://doi.org/10.18280/ts.390124</a>	Sivasankaran, P., Dhanaraj, K. (2022). A rapid advancing image segmentation approach in dental to predict cryst. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 239-246. <a href="https://doi.org/10.18280/ts.390124">https://doi.org/10.18280/ts.390124</a>
706	Liu, Y., Zhang, Q., Lu, S., Liu, L., Zhang, J., Ma, S.	Emotional Analysis and Annotation of Tourism Landscape Images Based on Tourist Experience	tourist experience, tourism landscape images (TLIs), emotional information, emotion annotation	39, 1, 247-253	<a href="https://doi.org/10.18280/ts.390125">https://doi.org/10.18280/ts.390125</a>	Liu, Y., Zhang, Q., Lu, S., Liu, L., Zhang, J., Ma, S. (2022). Emotional analysis and annotation of tourism landscape images based on tourist experience. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 247-253. <a href="https://doi.org/10.18280/ts.390125">https://doi.org/10.18280/ts.390125</a>
707	Kareem, O.S., Al-Sulaifanie, A.K.	Classification of COVID-19 Cases from X-Ray Images Based on a Modified VGG-16 Model	Convolutional Neural Network, COVID-19, deep learning, VGG-16, computer-aided diagnosis, transfer learning, X-ray images, artificial neural network	39, 1, 255-263	<a href="https://doi.org/10.18280/ts.390126">https://doi.org/10.18280/ts.390126</a>	Kareem, O.S., Al-Sulaifanie, A.K. (2022). Classification of COVID-19 cases from X-ray images based on a modified VGG-16 model. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 255-263. <a href="https://doi.org/10.18280/ts.390126">https://doi.org/10.18280/ts.390126</a>
708	Singh, K.U., Hsieh, S.Y., Swarup, C., Singh, T.	Authentication of NIFTI Neuroimages Using Lifting Wavelet Transform, Arnold Cat Map, Z-Transform, and Hessenberg Decomposition	watermarking, NIFTI, lifting wavelet transform (LWT), image, Z-transform	39, 1, 265-274	<a href="https://doi.org/10.18280/ts.390127">https://doi.org/10.18280/ts.390127</a>	Singh, K.U., Hsieh, S.Y., Swarup, C., Singh, T. (2022). Authentication of NIFTI neuroimages using lifting wavelet transform, Arnold cat map, Z-transform, and Hessenberg decomposition. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 265-274. <a href="https://doi.org/10.18280/ts.390127">https://doi.org/10.18280/ts.390127</a>
709	M S. M., R. A.C., S S. S.R.	Optimal Squeeze Net with Deep Neural Network-Based Aerial Image Classification Model in Unmanned Aerial Vehicles	unmanned aerial vehicles, aerial image classification, deep learning, SqueezeNet, hyperparameter tuning	39, 1, 275-281	<a href="https://doi.org/10.18280/ts.390128">https://doi.org/10.18280/ts.390128</a>	M S. M., R. A.C., S S. S.R. (2022). Optimal squeeze net with deep neural network-based aerial image classification model in unmanned aerial vehicles. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 275-281. <a href="https://doi.org/10.18280/ts.390128">https://doi.org/10.18280/ts.390128</a>
710	Bhyrapuneni, S., Rajendran, A.	A Comparative Analysis for Optical Character Recognition for Text Extraction from Images Using Artificial Neural Network Fuzzy Inference System	text extraction, fuzzy rules, fuzzy structures, pattern identification, artificial neural networks	39, 1, 283-289	<a href="https://doi.org/10.18280/ts.390129">https://doi.org/10.18280/ts.390129</a>	Bhyrapuneni, S., Rajendran, A. (2022). A comparative analysis for optical character recognition for text extraction from images using artificial neural network fuzzy inference system. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 283-289. <a href="https://doi.org/10.18280/ts.390129">https://doi.org/10.18280/ts.390129</a>
711	Gao, G.H., Wang, S.Y., Shuai, C.Y., Zhang, Z.H., Zhang, S., Feng, Y.B.	Recognition and Detection of Greenhouse Tomatoes in Complex Environment	you only look once v5 (YOLO v5), recognition and detection, tomato, deep learning	39, 1, 291-298	<a href="https://doi.org/10.18280/ts.390130">https://doi.org/10.18280/ts.390130</a>	Gao, G.H., Wang, S.Y., Shuai, C.Y., Zhang, Z.H., Zhang, S., Feng, Y.B. (2022). Recognition and detection of greenhouse tomatoes in complex environment. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 291-298. <a href="https://doi.org/10.18280/ts.390130">https://doi.org/10.18280/ts.390130</a>
712	Shrivastava, Y., Neha, E., Singh, B., Shrivastava, P.K., Murthy, K.V.S.R., Nandan, D.	Analysis of Regenerative Raw Signals Using Variational Mode Decomposition	regenerative chatter, signal processing, variational mode decomposition, chatter index	39, 1, 299-304	<a href="https://doi.org/10.18280/ts.390131">https://doi.org/10.18280/ts.390131</a>	Shrivastava, Y., Neha, E., Singh, B., Shrivastava, P.K., Murthy, K.V.S.R., Nandan, D. (2022). Analysis of regenerative raw signals using variational mode decomposition. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 299-304. <a href="https://doi.org/10.18280/ts.390131">https://doi.org/10.18280/ts.390131</a>
713	Rakesh, G., Rajamanickam, V.	A Novel Deep Learning Algorithm for Optical Disc Segmentation for Glaucoma Diagnosis	glaucoma, deep learning, modified U-net	39, 1, 305-311	<a href="https://doi.org/10.18280/ts.390132">https://doi.org/10.18280/ts.390132</a>	Rakesh, G., Rajamanickam, V. (2022). A novel deep learning algorithm for optical disc segmentation for glaucoma diagnosis. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 305-311. <a href="https://doi.org/10.18280/ts.390132">https://doi.org/10.18280/ts.390132</a>
714	Zheng, X., Chen, W., Zhou, H.J., Li, Z., Zhang, T.F., Yuan, Q.	Emoji-Integrated Polyseme Probabilistic Analysis Model: Sentiment Analysis of Short Review Texts on Library Service Quality	framework for emotional classification of library service quality (FECLSQ), short text, polyseme, emoji, probabilistic linguistic term sets (PLTS)	39, 1, 313-322	<a href="https://doi.org/10.18280/ts.390133">https://doi.org/10.18280/ts.390133</a>	Zheng, X., Chen, W., Zhou, H.J., Li, Z., Zhang, T.F., Yuan, Q. (2022). Emoji-integrated polyseme probabilistic analysis model: Sentiment analysis of short review texts on library service quality. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 313-322. <a href="https://doi.org/10.18280/ts.390133">https://doi.org/10.18280/ts.390133</a>
715	Sathyan, N.M., Karthikeyan, S.R.	Infrared Thermal Image Enhancement in Cold Spot Detection of Condenser Air Ingress	thermal imaging, IR, canny edge detection, high-resolution autoencoder, condenser image, SNR, MSE, structural similarity index measure	39, 1, 323-329	<a href="https://doi.org/10.18280/ts.390134">https://doi.org/10.18280/ts.390134</a>	Sathyan, N.M., Karthikeyan, S.R. (2022). Infrared thermal image enhancement in cold spot detection of condenser air ingress. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 323-329. <a href="https://doi.org/10.18280/ts.390134">https://doi.org/10.18280/ts.390134</a>
716	Muthusamy, T., Eswaran, G.	Detection of Sugarcane Mosaic Diseases Using Deep Learning Architecture to Avoid Annealing Temperature of PCR Primer in Laboratory Testing	sugarcane leaf diseases detection, convolution neural network, pretrained models, sugarcane mosaic disease and sugarcane streak, mosaic disease	39, 1, 331-339	<a href="https://doi.org/10.18280/ts.390135">https://doi.org/10.18280/ts.390135</a>	Muthusamy, T., Eswaran, G. (2022). Detection of sugarcane mosaic diseases using deep learning architecture to avoid annealing temperature of PCR primer in laboratory testing. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 331-339. <a href="https://doi.org/10.18280/ts.390135">https://doi.org/10.18280/ts.390135</a>
717	Benghenia, H.A., Zine-Eddine, H.S., Alexandre, A.	Automated Recognition of Sleep Apnea-Hypopnea Syndrome Using Continuous Wavelet Transform-Based Multiscale Dispersion Entropy of Single-Lead ECG Signal	electrocardiogram (ECG), sleep apnea-hypopnea events (SAHE), continuous wavelet transform (CWT), multiscale dispersion entropy (MDE), classifiers	39, 1, 341-353	<a href="https://doi.org/10.18280/ts.390136">https://doi.org/10.18280/ts.390136</a>	Benghenia, H.A., Zine-Eddine, H.S., Alexandre, A. (2022). Automated recognition of sleep apnea-hypopnea syndrome using continuous wavelet transform-based multiscale dispersion entropy of single-lead ECG signal. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 341-353. <a href="https://doi.org/10.18280/ts.390136">https://doi.org/10.18280/ts.390136</a>
718	Shu, J.F., Ding, R.T., Jin, A.X., Zhu, H., Chen, S.	Acupoint Selection for Autonomous Massage Based on Infrared Thermography	infrared thermography, temperature specificity, image preprocessing, edge detection, acupoint positioning	39, 1, 355-362	<a href="https://doi.org/10.18280/ts.390137">https://doi.org/10.18280/ts.390137</a>	Shu, J.F., Ding, R.T., Jin, A.X., Zhu, H., Chen, S. (2022). Acupoint selection for autonomous massage based on infrared thermography. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 355-362. <a href="https://doi.org/10.18280/ts.390137">https://doi.org/10.18280/ts.390137</a>
719	Metlapalli, A.C., Muthusamy, T., Battula, B.P.	Classification of Image Spam Using Convolution Neural Network	spam data, convolutional neural network (CNN), deep learning (DL), classification, Dredze dataset	39, 1, 363-369	<a href="https://doi.org/10.18280/ts.390138">https://doi.org/10.18280/ts.390138</a>	Metlapalli, A.C., Muthusamy, T., Battula, B.P. (2022). Classification of image spam using convolution neural network. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 363-369. <a href="https://doi.org/10.18280/ts.390138">https://doi.org/10.18280/ts.390138</a>
720	Shoaib, M., Sayed, N.	YOLO Object Detector and Inception-V3 Convolutional Neural Network for Improved Brain Tumor Segmentation	brain tumor, magnetic resonance imaging, YOLO detector, inception-V3, segmentation	39, 1, 371-380	<a href="https://doi.org/10.18280/ts.390139">https://doi.org/10.18280/ts.390139</a>	Shoaib, M., Sayed, N. (2022). YOLO object detector and inception-V3 convolutional neural network for improved brain tumor segmentation. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 371-380. <a href="https://doi.org/10.18280/ts.390139">https://doi.org/10.18280/ts.390139</a>

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722	Morab, F., Hegde, R., Hegde, V.N.	Detection, Estimation and Radiation Formation Using Smart Antennas for the Spatial Location	smart antennas, DoA, beamforming, phased antenna array, 5G, adaptive array antennas, array signal processing	39, 1, 389-398	<a href="https://doi.org/10.18280/ts.390141">https://doi.org/10.18280/ts.390141</a>	Morab, F., Hegde, R., Hegde, V.N. (2022). Detection, estimation and radiation formation using smart antennas for the spatial location. <i>Traitement du Signal</i> , Vol. 39, No. 1, pp. 389-398. <a href="https://doi.org/10.18280/ts.390141">https://doi.org/10.18280/ts.390141</a>
723	Ozdemir, C., Gedik, M.A., Kaya, Y.	Age Estimation from Left-Hand Radiographs with Deep Learning Methods	bone age estimation, CNN, computer-aided diagnosis, deep learning	38, 6, 1565-1574	<a href="https://doi.org/10.18280/ts.380601">https://doi.org/10.18280/ts.380601</a>	Ozdemir, C., Gedik, M.A., Kaya, Y. (2021). Age estimation from left-hand radiographs with deep learning methods. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1565-1574. <a href="https://doi.org/10.18280/ts.380601">https://doi.org/10.18280/ts.380601</a>
724	Ayeche, F., Alti, A.	Facial Expressions Recognition Based on Delaunay Triangulation of Landmark and Machine Learning	facial image, Delaunay triangulation, shape features, facial expressions, QDA, emotion	38, 6, 1575-1586	<a href="https://doi.org/10.18280/ts.380602">https://doi.org/10.18280/ts.380602</a>	Ayeche, F., Alti, A. (2021). Facial expressions recognition based on Delaunay triangulation of landmark and machine learning. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1575-1586. <a href="https://doi.org/10.18280/ts.380602">https://doi.org/10.18280/ts.380602</a>
725	Ariyapadath, S.	Plant Leaf Classification and Comparative Analysis of Combined Feature Set Using Machine Learning Techniques	plant classification, optimal feature set, GIST, local binary pattern, pyramid histogram oriented gradient, machine learning, neighbourhood component analysis, artificial neural network	38, 6, 1587-1598	<a href="https://doi.org/10.18280/ts.380603">https://doi.org/10.18280/ts.380603</a>	Ariyapadath, S. (2021). Plant leaf classification and comparative analysis of combined feature set using machine learning techniques. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1587-1598. <a href="https://doi.org/10.18280/ts.380603">https://doi.org/10.18280/ts.380603</a>
726	Yang, H., Zhao, Y.M., Su, G.A., Liu, X.Y., Jin, S.W., Fan, H.Y., Shang, Y.H.	Slow Feature Extraction Algorithm Based on Visual Selection Consistency Continuity and Its Application	visual invariance, visual selection consistency continuity, natural image, slow feature, Lipschitz consistency	38, 6, 1599-1611	<a href="https://doi.org/10.18280/ts.380604">https://doi.org/10.18280/ts.380604</a>	Yang, H., Zhao, Y.M., Su, G.A., Liu, X.Y., Jin, S.W., Fan, H.Y., Shang, Y.H. (2021). Slow feature extraction algorithm based on visual selection consistency continuity and its application. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1599-1611. <a href="https://doi.org/10.18280/ts.380604">https://doi.org/10.18280/ts.380604</a>
727	Moussa, M., Douik, A.	Synthesis and Comparison of Improved Edge Detection Technique Based on Metaheuristic and Intelligent Algorithm Optimization	edge detection, neural network, fuzzy logic, Shannon entropy, conditional entropy, joint entropy, metaheuristic algorithm	38, 6, 1613-1622	<a href="https://doi.org/10.18280/ts.380605">https://doi.org/10.18280/ts.380605</a>	Moussa, M., Douik, A. (2021). Synthesis and comparison of improved edge detection technique based on metaheuristic and intelligent algorithm optimization. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1613-1622. <a href="https://doi.org/10.18280/ts.380605">https://doi.org/10.18280/ts.380605</a>
728	Shoab, M., Sayed, N.	A Deep Learning Based System for the Detection of Human Violence in Video Data	violence detection, deep learning, convolutional neural network, image classification object localization	38, 6, 1623-1635	<a href="https://doi.org/10.18280/ts.380606">https://doi.org/10.18280/ts.380606</a>	Shoab, M., Sayed, N. (2021). A deep learning based system for the detection of human violence in video data. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1623-1635. <a href="https://doi.org/10.18280/ts.380606">https://doi.org/10.18280/ts.380606</a>
729	Reddy, K.T., Reddy, S.N.	An Improved Medical Image Watermarking Technique Based on Weber's Law Descriptors	watermarking, embedding capacity, medical image, blind watermarking, Weber's Local Descriptor (WLD), Arnold chaotic map	38, 6, 1637-1646	<a href="https://doi.org/10.18280/ts.380607">https://doi.org/10.18280/ts.380607</a>	Reddy, K.T., Reddy, S.N. (2021). An improved medical image watermarking technique based on Weber's law descriptors. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1637-1646. <a href="https://doi.org/10.18280/ts.380607">https://doi.org/10.18280/ts.380607</a>
730	Bi, Q.L., Lai, M.L., Tang, H.L., Guo, Y.Y., Li, J.Y., Zeng, X.H., Liu, Z.J.	Precise Inspection of Geometric Parameters for Polyvinyl Chloride Pipe Section Based on Computer Vision	polyvinyl chloride (PVC) pipe, geometric parameters, visual inspection, region of interest (ROI), edge operator	38, 6, 1647-1655	<a href="https://doi.org/10.18280/ts.380608">https://doi.org/10.18280/ts.380608</a>	Bi, Q.L., Lai, M.L., Tang, H.L., Guo, Y.Y., Li, J.Y., Zeng, X.H., Liu, Z.J. (2021). Precise inspection of geometric parameters for polyvinyl chloride pipe section based on computer vision. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1647-1655. <a href="https://doi.org/10.18280/ts.380608">https://doi.org/10.18280/ts.380608</a>
731	Wagle, S.A., R, H., Sampe, J., Mohammad, F., Md Ali, S.H.	Effect of Data Augmentation in the Classification and Validation of Tomato Plant Disease with Deep Learning Methods	classification, data augmentation, ResNet models, validation	38, 6, 1657-1670	<a href="https://doi.org/10.18280/ts.380609">https://doi.org/10.18280/ts.380609</a>	Wagle, S.A., R, H., Sampe, J., Mohammad, F., Md Ali, S.H. (2021). Effect of data augmentation in the classification and validation of tomato plant disease with deep learning methods. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1657-1670. <a href="https://doi.org/10.18280/ts.380609">https://doi.org/10.18280/ts.380609</a>
732	Elaraby, A., Taha, A.	A Framework for Cross-Modality Guided Contrast Enhancement of CT Liver Using MRI	medical image, multimodal, image enhancement, liver, CT, MRI	38, 6, 1671-1675	<a href="https://doi.org/10.18280/ts.380610">https://doi.org/10.18280/ts.380610</a>	Elaraby, A., Taha, A. (2021). A framework for cross-modality guided contrast enhancement of CT liver using MRI. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1671-1675. <a href="https://doi.org/10.18280/ts.380610">https://doi.org/10.18280/ts.380610</a>
733	Liu, C., Yang, J., Zhang, Y.N., Zhang, X., Zhao, W.N., Miao, F.J., Shao, Y.K.	Non-Global Privacy Protection Facing Sensitive Areas in Face Images	differential privacy, interactive framework, non-globality, landmark positioning, regional growth	38, 6, 1677-1687	<a href="https://doi.org/10.18280/ts.380611">https://doi.org/10.18280/ts.380611</a>	Liu, C., Yang, J., Zhang, Y.N., Zhang, X., Zhao, W.N., Miao, F.J., Shao, Y.K. (2021). Non-global privacy protection facing sensitive areas in face images. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1677-1687. <a href="https://doi.org/10.18280/ts.380611">https://doi.org/10.18280/ts.380611</a>
734	Toraman, S., Dursun, Ö.O.	GameEmo-CapsNet: Emotion Recognition from Single-Channel EEG Signals Using the 1D Capsule Networks	emotion estimation, EEG, fusion, deep learning, capsule networks	38, 6, 1689-1698	<a href="https://doi.org/10.18280/ts.380612">https://doi.org/10.18280/ts.380612</a>	Toraman, S., Dursun, Ö.O. (2021). GameEmo-CapsNet: Emotion recognition from single-channel EEG signals using the 1D capsule networks. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1689-1698. <a href="https://doi.org/10.18280/ts.380612">https://doi.org/10.18280/ts.380612</a>
735	Tiwari, D., Dixit, M., Gupta, K.	Deep Multi-View Breast Cancer Detection: A Multi-View Concatenated Infrared Thermal Images Based Breast Cancer Detection System Using Deep Transfer Learning	thermal infrared images, multi-view, breast cancer, VGG16, VGG19, ResNet50, Inception Net, augmentation	38, 6, 1699-1711	<a href="https://doi.org/10.18280/ts.380613">https://doi.org/10.18280/ts.380613</a>	Tiwari, D., Dixit, M., Gupta, K. (2021). Deep multi-view breast cancer detection: A multi-view concatenated infrared thermal images based breast cancer detection system using deep transfer learning. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1699-1711. <a href="https://doi.org/10.18280/ts.380613">https://doi.org/10.18280/ts.380613</a>
736	Manda, M.P., Hyun, D.	Double Thresholding with Sine Entropy for Thermal Image Segmentation	image segmentation, thermal images, long-range correlations, sine entropy, double thresholding	38, 6, 1713-1718	<a href="https://doi.org/10.18280/ts.380614">https://doi.org/10.18280/ts.380614</a>	Manda, M.P., Hyun, D. (2021). Double thresholding with sine entropy for thermal image segmentation. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1713-1718. <a href="https://doi.org/10.18280/ts.380614">https://doi.org/10.18280/ts.380614</a>
737	Zhu, T.B., Wang, D., Li, Y.H., Dong, W.J.	Three-Dimensional Image Reconstruction for Virtual Talent Training Scene	virtual training, three-dimensional (3D) image, image reconstruction	38, 6, 1719-1726	<a href="https://doi.org/10.18280/ts.380615">https://doi.org/10.18280/ts.380615</a>	Zhu, T.B., Wang, D., Li, Y.H., Dong, W.J. (2021). Three-dimensional image reconstruction for virtual talent training scene. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1719-1726. <a href="https://doi.org/10.18280/ts.380615">https://doi.org/10.18280/ts.380615</a>
738	Vamsi, B., Bhattacharyya, D., Midhunchakkravarthy, D., Kim, J.	Early Detection of Hemorrhagic Stroke Using a Lightweight Deep Learning Neural Network Model	Convolution Neural Network (CNN), computed tomographic, deep learning, hemorrhagic stroke, light weight model, medical image segmentation	38, 6, 1727-1736	<a href="https://doi.org/10.18280/ts.380616">https://doi.org/10.18280/ts.380616</a>	Vamsi, B., Bhattacharyya, D., Midhunchakkravarthy, D., Kim, J. (2021). Early detection of hemorrhagic stroke using a lightweight deep learning neural network model. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1727-1736. <a href="https://doi.org/10.18280/ts.380616">https://doi.org/10.18280/ts.380616</a>

739	Ben Slama, A., Sahli, H., Maalmi, R., Trabelsi, H.	ConvNet: 1D-Convolutional Neural Networks for Cardiac Arrhythmia Recognition Using ECG Signals	cardiac arrhythmia disease, ECG data, QRS complex signals, classification, convolutional neural network	38, 6, 1737-1745	<a href="https://doi.org/10.18280/ts.380617">https://doi.org/10.18280/ts.380617</a>	Ben Slama, A., Sahli, H., Maalmi, R., Trabelsi, H. (2021). ConvNet: 1D-convolutional neural networks for cardiac arrhythmia recognition using ECG signals. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1737-1745. <a href="https://doi.org/10.18280/ts.380617">https://doi.org/10.18280/ts.380617</a>
740	Zhang, Q., Lu, S., Liu, L., Liu, Y., Zhang, J., Shi, D.Y.	Color Enhancement of Low Illumination Garden Landscape Images	low illumination, garden landscape images (GLIs), color enhancement, convolutional neural network (CNN)	38, 6, 1747-1754	<a href="https://doi.org/10.18280/ts.380618">https://doi.org/10.18280/ts.380618</a>	Zhang, Q., Lu, S., Liu, L., Liu, Y., Zhang, J., Shi, D.Y. (2021). Color enhancement of low illumination garden landscape images. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1747-1754. <a href="https://doi.org/10.18280/ts.380618">https://doi.org/10.18280/ts.380618</a>
741	Upadhyay, S.K., Kumar, A.	Early-Stage Brown Spot Disease Recognition in Paddy Using Image Processing and Deep Learning Techniques	brown spot, disease recognition, rice, plants, CNN, infection severity	38, 6, 1755-1766	<a href="https://doi.org/10.18280/ts.380619">https://doi.org/10.18280/ts.380619</a>	Upadhyay, S.K., Kumar, A. (2021). Early-stage brown spot disease recognition in paddy using image processing and deep learning techniques. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1755-1766. <a href="https://doi.org/10.18280/ts.380619">https://doi.org/10.18280/ts.380619</a>
742	Korkmaz, O.E., Aydemir, O., Oral, E.A., Ozbek, I.Y.	Investigating the Effect of COVID-19 Infection on P300 Based BCI Application Performance	COVID-19, brain computer interface, event related potentials, P300, classification, EEG	38, 6, 1767-1773	<a href="https://doi.org/10.18280/ts.380620">https://doi.org/10.18280/ts.380620</a>	Korkmaz, O.E., Aydemir, O., Oral, E.A., Ozbek, I.Y. (2021). Investigating the effect of COVID-19 infection on P300 based BCI application performance. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1767-1773. <a href="https://doi.org/10.18280/ts.380620">https://doi.org/10.18280/ts.380620</a>
743	Jiang, N.	Image Segmentation for Review of Cerebral Apoplexy	cerebral apoplexy, review, image segmentation, lesion change features	38, 6, 1775-1782	<a href="https://doi.org/10.18280/ts.380621">https://doi.org/10.18280/ts.380621</a>	Jiang, N. (2021). Image segmentation for review of cerebral apoplexy. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1775-1782. <a href="https://doi.org/10.18280/ts.380621">https://doi.org/10.18280/ts.380621</a>
744	Arshaghi, A., Ashourin, M., Ghabeli, L.	Detection and Classification of Potato Diseases Potato Using a New Convolution Neural Network Architecture	convolutional neural networks, deep learning, defect detection, potato diseases	38, 6, 1783-1791	<a href="https://doi.org/10.18280/ts.380622">https://doi.org/10.18280/ts.380622</a>	Arshaghi, A., Ashourin, M., Ghabeli, L. (2021). Detection and classification of potato diseases potato using a new convolution neural network architecture. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1783-1791. <a href="https://doi.org/10.18280/ts.380622">https://doi.org/10.18280/ts.380622</a>
745	Satla, S., Manchala, S.	Dialect Identification in Telugu Language Speech Utterance Using Modified Features with Deep Neural Network	DNN, Telugu language, dialects, multilayer perceptron, HMM, GMM, MFCC	38, 6, 1793-1799	<a href="https://doi.org/10.18280/ts.380623">https://doi.org/10.18280/ts.380623</a>	Satla, S., Manchala, S. (2021). Dialect identification in Telugu language speech utterance using modified features with deep neural network. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1793-1799. <a href="https://doi.org/10.18280/ts.380623">https://doi.org/10.18280/ts.380623</a>
746	Wu, S.J.	Image Recognition of Standard Actions in Sports Videos Based on Feature Fusion	sports, action recognition, local feature extraction, time-space feature fusion	38, 6, 1801-1807	<a href="https://doi.org/10.18280/ts.380624">https://doi.org/10.18280/ts.380624</a>	Wu, S.J. (2021). Image recognition of standard actions in sports videos based on feature fusion. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1801-1807. <a href="https://doi.org/10.18280/ts.380624">https://doi.org/10.18280/ts.380624</a>
747	Yechuri, P.K., Ramadass, S.	Classification of Image and Text Data Using Deep Learning-Based LSTM Model	LSTM, IMDB, Sentiment Analysis (SA), Natural Language Processing (NLP)	38, 6, 1809-1817	<a href="https://doi.org/10.18280/ts.380625">https://doi.org/10.18280/ts.380625</a>	Yechuri, P.K., Ramadass, S. (2021). Classification of image and text data using deep learning-based LSTM model. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1809-1817. <a href="https://doi.org/10.18280/ts.380625">https://doi.org/10.18280/ts.380625</a>
748	Wu, J.D., Hsieh, C.Y., Luo, W.J.	Sound Visualization and Convolutional Neural Network in Fault Diagnosis of Electric Motorbike	fault diagnosis, convolutional neural network, sound visualization, spectrogram picture recognition, electric motorbike	38, 6, 1819-1827	<a href="https://doi.org/10.18280/ts.380626">https://doi.org/10.18280/ts.380626</a>	Wu, J.D., Hsieh, C.Y., Luo, W.J. (2021). Sound visualization and convolutional neural network in fault diagnosis of electric motorbike. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1819-1827. <a href="https://doi.org/10.18280/ts.380626">https://doi.org/10.18280/ts.380626</a>
749	Zou, J., Zhang, C., Ma, Z.J., Yu, L., Sun, K.W., Liu, T.F.	Image Feature Analysis and Dynamic Measurement of Plantar Pressure Based on Fusion Feature Extraction	fusion feature extraction, plantar pressure, feature analysis, dynamic parameter measurement	38, 6, 1829-1835	<a href="https://doi.org/10.18280/ts.380627">https://doi.org/10.18280/ts.380627</a>	Zou, J., Zhang, C., Ma, Z.J., Yu, L., Sun, K.W., Liu, T.F. (2021). Image feature analysis and dynamic measurement of plantar pressure based on fusion feature extraction. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1829-1835. <a href="https://doi.org/10.18280/ts.380627">https://doi.org/10.18280/ts.380627</a>
750	Kumar, M.S., Rao, K.V., Kumar, G.A.	MRI Image Based Classification Model for Lung Tumor Detection Using Convolutional Neural Networks	lung tumor, pre-processing, feature selection, classification, tumor detection, machine learning	38, 6, 1837-1842	<a href="https://doi.org/10.18280/ts.380628">https://doi.org/10.18280/ts.380628</a>	Kumar, M.S., Rao, K.V., Kumar, G.A. (2021). MRI image based classification model for lung tumor detection using convolutional neural networks. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1837-1842. <a href="https://doi.org/10.18280/ts.380628">https://doi.org/10.18280/ts.380628</a>
751	Soltani, O., Benabdelkader, S.	Euclidean Distance Versus Manhattan Distance for New Representative SFA Skin Samples for Human Skin Segmentation	face detection, skin segmentation, skin samples, Euclidean distance, Manhattan distance	38, 6, 1843-1851	<a href="https://doi.org/10.18280/ts.380629">https://doi.org/10.18280/ts.380629</a>	Soltani, O., Benabdelkader, S. (2021). Euclidean distance versus Manhattan distance for new representative SFA skin samples for human skin segmentation. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1843-1851. <a href="https://doi.org/10.18280/ts.380629">https://doi.org/10.18280/ts.380629</a>
752	Chen, W., Zheng, X., Zhou, H.J., Li, Z.	Evaluation of Logistics Service Quality: Sentiment Analysis of Comment Text Based on Multi-Level Graph Neural Network	logistics service quality, text sentiment analysis, attention mechanism, multi-level graph neural network (MLGNN)	38, 6, 1853-1860	<a href="https://doi.org/10.18280/ts.380630">https://doi.org/10.18280/ts.380630</a>	Chen, W., Zheng, X., Zhou, H.J., Li, Z. (2021). Evaluation of logistics service quality: Sentiment analysis of comment text based on multi-level graph neural network. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1853-1860. <a href="https://doi.org/10.18280/ts.380630">https://doi.org/10.18280/ts.380630</a>
753	Raghu, K., Sadanandam, M.	A Perspective Study on Speech Emotion Recognition: Databases, Features and Classification Models	ASR, HCl, SER, Telugu emotional speech, acoustic, SVM, MLP, CNN	38, 6, 1861-1873	<a href="https://doi.org/10.18280/ts.380631">https://doi.org/10.18280/ts.380631</a>	Raghu, K., Sadanandam, M. (2021). A perspective study on speech emotion recognition: Databases, features and classification models. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1861-1873. <a href="https://doi.org/10.18280/ts.380631">https://doi.org/10.18280/ts.380631</a>
754	Jayaswal, R., Dixit, M.	Detection of Hidden Facial Surface Masking in Stored and Real Time Captured Images: A Deep Learning Perspective in Covid Time	COVID-19, face mask detection, DNN models, optimizers, CLAHE-SSD_V3 model, RTFMD dataset	38, 6, 1875-1885	<a href="https://doi.org/10.18280/ts.380632">https://doi.org/10.18280/ts.380632</a>	Jayaswal, R., Dixit, M. (2021). Detection of hidden facial surface masking in stored and real time captured images: A deep learning perspective in COVID time. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1875-1885. <a href="https://doi.org/10.18280/ts.380632">https://doi.org/10.18280/ts.380632</a>
755	Zhang, C., Zou, J., Ma, Z.J., Wu, Q., Sheng, Z.G., Yan, Z.	Upper Limb Action Identification Based on Physiological Signals and Its Application in Limb Rehabilitation Training	physiological signals, upper limb motor function, upper limb action identification, limb rehabilitation	38, 6, 1887-1894	<a href="https://doi.org/10.18280/ts.380633">https://doi.org/10.18280/ts.380633</a>	Zhang, C., Zou, J., Ma, Z.J., Wu, Q., Sheng, Z.G., Yan, Z. (2021). Upper limb action identification based on physiological signals and its application in limb rehabilitation training. <i>Traitement du Signal</i> , Vol. 38, No. 6, pp. 1887-1894. <a href="https://doi.org/10.18280/ts.380633">https://doi.org/10.18280/ts.380633</a>
756	Rashid, M., Mustafa, M., Sulaiman, N., Abdullah, N.R.H., Samad, R.	Random Subspace K-NN Based Ensemble Classifier for Driver Fatigue Detection Utilizing Selected EEG Channels	electroencephalogram (EEG), driver fatigue, channel selection, ensemble classifier, correlation coefficient, random subspace k-NN	38, 5, 1259-1270	<a href="https://doi.org/10.18280/ts.380501">https://doi.org/10.18280/ts.380501</a>	Rashid, M., Mustafa, M., Sulaiman, N., Abdullah, N.R.H., Samad, R. (2021). Random subspace K-NN based ensemble classifier for driver fatigue detection utilizing selected EEG channels. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1259-1270. <a href="https://doi.org/10.18280/ts.380501">https://doi.org/10.18280/ts.380501</a>

757	Ornek, A.H., Ceylan, M.	Explainable Artificial Intelligence (XAI): Classification of Medical Thermal Images of Neonates Using Class Activation Maps	class activation maps, deep learning, explainable artificial intelligence, medicine, neonates, thermography, visualization	38, 5, 1271-1279	<a href="https://doi.org/10.18280/ts.380502">https://doi.org/10.18280/ts.380502</a>	Ornek, A.H., Ceylan, M. (2021). Explainable artificial intelligence (XAI): Classification of medical thermal images of neonates using class activation maps. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1271-1279. <a href="https://doi.org/10.18280/ts.380502">https://doi.org/10.18280/ts.380502</a>
758	Obeidat, Y., Alqudah, A.M.	A Hybrid Lightweight 1D CNN-LSTM Architecture for Automated ECG Beat-Wise Classification	convolutional neural network (CNN), electrocardiogram (ECG), long short-term memory (LSTM), deep learning (DL), classification, arrhythmia, cardiovascular disease (CVD)	38, 5, 1281-1291	<a href="https://doi.org/10.18280/ts.380503">https://doi.org/10.18280/ts.380503</a>	Obeidat, Y., Alqudah, A.M. (2021). A hybrid lightweight 1D CNN-LSTM architecture for automated ECG beat-wise classification. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1281-1291. <a href="https://doi.org/10.18280/ts.380503">https://doi.org/10.18280/ts.380503</a>
759	Hamdini, R., Diffeallah, N., Namane, A.	Color Based Object Categorization Using Histograms of Oriented Hue and Saturation	categorization, descriptor, HOG, HSL, KNN, recognition, robots, SVM	38, 5, 1293-1307	<a href="https://doi.org/10.18280/ts.380504">https://doi.org/10.18280/ts.380504</a>	Hamdini, R., Diffeallah, N., Namane, A. (2021). Color based object categorization using histograms of oriented hue and saturation. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1293-1307. <a href="https://doi.org/10.18280/ts.380504">https://doi.org/10.18280/ts.380504</a>
760	Zhao, J., Feng, Q.J.	Deep Att-ResGAN: A Retinal Vessel Segmentation Network for Color Fundus Images	retinal vessel segmentation, generative adversarial networks (GANs), attention module	38, 5, 1309-1317	<a href="https://doi.org/10.18280/ts.380505">https://doi.org/10.18280/ts.380505</a>	Zhao, J., Feng, Q.J. (2021). Deep Att-ResGAN: A retinal vessel segmentation network for color fundus images. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1309-1317. <a href="https://doi.org/10.18280/ts.380505">https://doi.org/10.18280/ts.380505</a>
761	Nogay, H.S.	Comparative Experimental Investigation of Deep Convolutional Neural Networks for Latent Fingerprint Pattern Classification	fingerprint, deep learning, transfer learning, DCNN, pattern recognition	38, 5, 1319-1326	<a href="https://doi.org/10.18280/ts.380506">https://doi.org/10.18280/ts.380506</a>	Nogay, H.S. (2021). Comparative experimental investigation of deep convolutional neural networks for latent fingerprint pattern classification. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1319-1326. <a href="https://doi.org/10.18280/ts.380506">https://doi.org/10.18280/ts.380506</a>
762	Banerjee, S., Singh, S.K., Chakraborty, A., Basu, S., Das, A., Bag, R.	Diagnosis of Melanoma Lesion Using Neutrosophic and Deep Learning	skin cancer, melanoma, skin lesion segmentation, Keras, deep learning, neutrosophic	38, 5, 1327-1338	<a href="https://doi.org/10.18280/ts.380507">https://doi.org/10.18280/ts.380507</a>	Banerjee, S., Singh, S.K., Chakraborty, A., Basu, S., Das, A., Bag, R. (2021). Diagnosis of melanoma lesion using neutrosophic and deep learning. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1327-1338. <a href="https://doi.org/10.18280/ts.380507">https://doi.org/10.18280/ts.380507</a>
763	Kabache, M., Guerti, M.	Acoustic Analysis of Voice Signal of Patients with Unilateral Laryngeal Paralysis a View to Objective Evaluation after Rehabilitation	acoustic analysis, vocal signal, speech pathology, unilateral laryngeal paralysis	38, 5, 1339-1344	<a href="https://doi.org/10.18280/ts.380508">https://doi.org/10.18280/ts.380508</a>	Kabache, M., Guerti, M. (2021). Acoustic analysis of voice signal of patients with unilateral laryngeal paralysis a view to objective evaluation after rehabilitation. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1339-1344. <a href="https://doi.org/10.18280/ts.380508">https://doi.org/10.18280/ts.380508</a>
764	Prakash, S.J., Chetty, M.S.R., A. J.	Contrast Enhancement of Images Using Meta-Heuristic Algorithm	image processing, contrast enhancement, meta-heuristic, chaotic crow search, optimization	38, 5, 1345-1351	<a href="https://doi.org/10.18280/ts.380509">https://doi.org/10.18280/ts.380509</a>	Prakash, S.J., Chetty, M.S.R., A. J. (2021). Contrast enhancement of images using meta-heuristic algorithm. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1345-1351. <a href="https://doi.org/10.18280/ts.380509">https://doi.org/10.18280/ts.380509</a>
765	Cao, F.Y.	Depth Estimation of Single Defocused Images Based on Multi-Feature Fusion	single defocused images, depth estimation, multi-feature fusion, edge sparse blur	38, 5, 1353-1360	<a href="https://doi.org/10.18280/ts.380510">https://doi.org/10.18280/ts.380510</a>	Cao, F.Y. (2021). Depth estimation of single defocused images based on multi-feature fusion. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1353-1360. <a href="https://doi.org/10.18280/ts.380510">https://doi.org/10.18280/ts.380510</a>
766	Senalp, F.M., Ceylan, M.	Deep Learning Based Super Resolution and Classification Applications for Neonatal Thermal Images	classification, datasets, deep learning, super-resolution, thermal imaging	38, 5, 1361-1368	<a href="https://doi.org/10.18280/ts.380511">https://doi.org/10.18280/ts.380511</a>	Senalp, F.M., Ceylan, M. (2021). Deep learning based super resolution and classification applications for neonatal thermal images. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1361-1368. <a href="https://doi.org/10.18280/ts.380511">https://doi.org/10.18280/ts.380511</a>
767	Lalitha, A., Reddy, G.H.	An Integrated Signal Allocation Model with Effective Collision Resolution Model for Performance Enhancement of Wireless Sensor Networks	signal allocation, collision reduction, performance enhancement, integrated model, labelled weighted model	38, 5, 1369-1375	<a href="https://doi.org/10.18280/ts.380512">https://doi.org/10.18280/ts.380512</a>	Lalitha, A., Reddy, G.H. (2021). An integrated signal allocation model with effective collision resolution model for performance enhancement of wireless sensor networks. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1369-1375. <a href="https://doi.org/10.18280/ts.380512">https://doi.org/10.18280/ts.380512</a>
768	Vankayalapati, R., Muddana, A.L.	Accurate Brain Tumor Recognition Using Double-Weighted Feature Extraction Labelling Model with Priority Weighted Feature Selection	brain tumor, feature extraction, feature selection, MRI images, classification, tumor cells, double weighted labelling, priority weights, tumor detection	38, 5, 1377-1383	<a href="https://doi.org/10.18280/ts.380513">https://doi.org/10.18280/ts.380513</a>	Vankayalapati, R., Muddana, A.L. (2021). Accurate brain tumor recognition using double-weighted feature extraction labelling model with priority weighted feature selection. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1377-1383. <a href="https://doi.org/10.18280/ts.380513">https://doi.org/10.18280/ts.380513</a>
769	Liu, C., Yang, J., Zhao, W.N., Zhang, Y.N., Shi, C.P., Miao, F.J., Zhang, J.S.	Differential Privacy Protection of Face Images Based on Region Growing	face image publication, interactive framework, differential privacy, region growing, growth rule	38, 5, 1385-1401	<a href="https://doi.org/10.18280/ts.380514">https://doi.org/10.18280/ts.380514</a>	Liu, C., Yang, J., Zhao, W.N., Zhang, Y.N., Shi, C.P., Miao, F.J., Zhang, J.S. (2021). Differential privacy protection of face images based on region growing. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1385-1401. <a href="https://doi.org/10.18280/ts.380514">https://doi.org/10.18280/ts.380514</a>
770	Othman, N.A., Aydin, I.	Challenges and Limitations in Human Action Recognition on Unmanned Aerial Vehicles: A Comprehensive Survey	human action recognition, human detection, unmanned aerial vehicle, image processing, smart city	38, 5, 1403-1411	<a href="https://doi.org/10.18280/ts.380515">https://doi.org/10.18280/ts.380515</a>	Othman, N.A., Aydin, I. (2021). Challenges and limitations in human action recognition on unmanned aerial vehicles: A comprehensive survey. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1403-1411. <a href="https://doi.org/10.18280/ts.380515">https://doi.org/10.18280/ts.380515</a>
771	Sreenivasulu, V., Wajeed, M.A.	Image Based Classification of Rumor Information from the Social Network Platform	image spam data, text spam data, internet sources, fake emails, fake information, image classification, text classification, security	38, 5, 1413-1421	<a href="https://doi.org/10.18280/ts.380516">https://doi.org/10.18280/ts.380516</a>	Sreenivasulu, V., Wajeed, M.A. (2021). Image based classification of rumor information from the social network platform. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1413-1421. <a href="https://doi.org/10.18280/ts.380516">https://doi.org/10.18280/ts.380516</a>
772	Efe, E., Özsen, S.	A New Approach for Automatic Sleep Staging: Siamese Neural Networks	electroencephalogram (EEG), Siamese neural networks (SNNs), automatic sleep staging, convolutional neural networks (CNNs), classification, data augmentation	38, 5, 1423-1430	<a href="https://doi.org/10.18280/ts.380517">https://doi.org/10.18280/ts.380517</a>	Efe, E., Özsen, S. (2021). A new approach for automatic sleep staging: Siamese neural networks. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1423-1430. <a href="https://doi.org/10.18280/ts.380517">https://doi.org/10.18280/ts.380517</a>
773	Jiang, Y.	Application of Deep Learning and Brain Images in Diagnosis of Alzheimer's Patients	deep learning, brain image recognition, Alzheimer's disease	38, 5, 1431-1438	<a href="https://doi.org/10.18280/ts.380518">https://doi.org/10.18280/ts.380518</a>	Jiang, Y. (2021). Application of deep learning and brain images in diagnosis of Alzheimer's patients. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1431-1438. <a href="https://doi.org/10.18280/ts.380518">https://doi.org/10.18280/ts.380518</a>
774	Zahari, Z.L., Mustafa, M., Zain, Z.M., Abdubrani, R., Naim, F.	The Enhancement on Stress Levels Based on Physiological Signal and Self-Stress Assessment	stress, EEG, MCCA, multimodal, indices, accuracy	38, 5, 1439-1447	<a href="https://doi.org/10.18280/ts.380519">https://doi.org/10.18280/ts.380519</a>	Zahari, Z.L., Mustafa, M., Zain, Z.M., Abdubrani, R., Naim, F. (2021). The enhancement on stress levels based on physiological signal and self-stress assessment. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1439-1447. <a href="https://doi.org/10.18280/ts.380519">https://doi.org/10.18280/ts.380519</a>

775	Kumar, A., Singh, K.U., Raja, L., Singh, T., Swarup, C., Kumar, A.	Design a Framework for Content Based Image Retrieval Using Hybrid Features Analysis	RGB, HSV, image content, histogram, CBIR, efficiency	38, 5, 1449-1457	<a href="https://doi.org/10.18280/ts.380520">https://doi.org/10.18280/ts.380520</a>	Kumar, A., Singh, K.U., Raja, L., Singh, T., Swarup, C., Kumar, A. (2021). Design a framework for content based image retrieval using hybrid features analysis. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1449-1459. <a href="https://doi.org/10.18280/ts.380520">https://doi.org/10.18280/ts.380520</a>
776	Guler, H.	Development of Real-Time Fuzzy Synchronization of Chaos Based System for Image Encryption	chaotic circuit, synchronization, fuzzy, image encryption	38, 5, 1461-1467	<a href="https://doi.org/10.18280/ts.380521">https://doi.org/10.18280/ts.380521</a>	Guler, H. (2021). Development of real-time fuzzy synchronization of chaos based system for image encryption. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1461-1467. <a href="https://doi.org/10.18280/ts.380521">https://doi.org/10.18280/ts.380521</a>
777	Zhang, G.H., Ogihara, A., Zhou, S.Y., Yang, X.T., Wang, Y.J., Ma, X.W., Li, S.W., Li, K.	A Home Efficacy Multi-Modal Intelligent Evaluation System for Wearable Treatment Equipment of Insomnia Through Integration Between Traditional Chinese Medicine and Modern Medicine	home treatment, multi-modal intelligent evaluation system (MIES), traditional Chinese medicine (TCM), wearable TCM treatment equipment, insomnia	38, 5, 1469-1476	<a href="https://doi.org/10.18280/ts.380522">https://doi.org/10.18280/ts.380522</a>	Zhang, G.H., Ogihara, A., Zhou, S.Y., Yang, X.T., Wang, Y.J., Ma, X.W., Li, S.W., Li, K. (2021). A home efficacy multi-modal intelligent evaluation system for wearable treatment equipment of insomnia through integration between traditional Chinese medicine and modern medicine. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1469-1476. <a href="https://doi.org/10.18280/ts.380522">https://doi.org/10.18280/ts.380522</a>
778	Yilmaz, M.	Wavelet Based and Statistical EEG Analysis in Patients with Schizophrenia	EEG data, schizophrenia, wavelet analysis, statistics	38, 5, 1477-1483	<a href="https://doi.org/10.18280/ts.380523">https://doi.org/10.18280/ts.380523</a>	Yilmaz, M. (2021). Wavelet based and statistical EEG analysis in patients with schizophrenia. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1477-1483. <a href="https://doi.org/10.18280/ts.380523">https://doi.org/10.18280/ts.380523</a>
779	Tadepalli, Y., Kollati, M., Kuraparathi, S., Kora, P.	EfficientNet-B0 Based Monocular Dense-Depth Map Estimation	depth maps, monocular images, efficient net, up-sampling, Jaccard score, validation loss, mean actual error	38, 5, 1485-1493	<a href="https://doi.org/10.18280/ts.380524">https://doi.org/10.18280/ts.380524</a>	Tadepalli, Y., Kollati, M., Kuraparathi, S., Kora, P. (2021). EfficientNet-B0 based monocular dense-depth map estimation. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1485-1493. <a href="https://doi.org/10.18280/ts.380524">https://doi.org/10.18280/ts.380524</a>
780	Huang, H., Li, Z.	FAFNet: A False Alarm Filter Algorithm for License Plate Detection Based on Deep Neural Network	YOLOv5, FAFNet, false alarm filter, model generalization, embedded device	38, 5, 1495-1501	<a href="https://doi.org/10.18280/ts.380525">https://doi.org/10.18280/ts.380525</a>	Huang, H., Li, Z. (2021). FAFNet: A false alarm filter algorithm for license plate detection based on deep neural network. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1495-1501. <a href="https://doi.org/10.18280/ts.380525">https://doi.org/10.18280/ts.380525</a>
781	Rani, B.M.S., Majety, V.D., Pittala, C.S., Vijay, V., Sandeep, K.S., Kiran, S.	Road Identification Through Efficient Edge Segmentation Based on Morphological Operations	road identification, pixel intensity, image enhancement, segmentation, morphological operations, edge segmentation	38, 5, 1503-1508	<a href="https://doi.org/10.18280/ts.380526">https://doi.org/10.18280/ts.380526</a>	Rani, B.M.S., Majety, V.D., Pittala, C.S., Vijay, V., Sandeep, K.S., Kiran, S. (2021). Road identification through efficient edge segmentation based on morphological operations. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1503-1508. <a href="https://doi.org/10.18280/ts.380526">https://doi.org/10.18280/ts.380526</a>
782	Khraisat, M.S., Zaini, H.G., Alqadi, Z.A.	Simple, Flexible Method to Extract Digital Image Features	features vector, classification, speedup, throughput, k means clustering, WPT, composite vector	38, 5, 1509-1514	<a href="https://doi.org/10.18280/ts.380527">https://doi.org/10.18280/ts.380527</a>	Khraisat, M.S., Zaini, H.G., Alqadi, Z.A. (2021). Simple, flexible method to extract digital image features. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1509-1514. <a href="https://doi.org/10.18280/ts.380527">https://doi.org/10.18280/ts.380527</a>
783	Radhakrishnan, M., Ramamurthy, K., Kothandaraman, A., Madaan, G., Machavaram, H.	Investigating EEG Signals of Autistic Individuals Using Detrended Fluctuation Analysis	detrended fluctuation analysis, hurst parameter, self-similarity, typically developing, autism spectrum disorder	38, 5, 1515-1520	<a href="https://doi.org/10.18280/ts.380528">https://doi.org/10.18280/ts.380528</a>	Radhakrishnan, M., Ramamurthy, K., Kothandaraman, A., Madaan, G., Machavaram, H. (2021). Investigating EEG signals of autistic individuals using detrended fluctuation analysis. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1515-1520. <a href="https://doi.org/10.18280/ts.380528">https://doi.org/10.18280/ts.380528</a>
784	Zhao, Y.M., Yang, H., Su, G.A.	Design and Application of a Slow Feature Algorithm Coupling Visual Selectivity and Multiple Long Short-Term Memory Networks	slow features, long short-term memory network (LSTM), Lipshitz condition, visual selectivity, Gabor, visual computing	38, 5, 1521-1530	<a href="https://doi.org/10.18280/ts.380529">https://doi.org/10.18280/ts.380529</a>	Zhao, Y.M., Yang, H., Su, G.A. (2021). Design and application of a slow feature algorithm coupling visual selectivity and multiple long short-term memory networks. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1521-1530. <a href="https://doi.org/10.18280/ts.380529">https://doi.org/10.18280/ts.380529</a>
785	Sridhar, B.	Investigations of Medical Image Segmentation Methods with Inclusion Mathematical Morphological Operations	image segmentation, medical images, watershed transform, fuzzy logic based techniques, MRF and mathematical morphology	38, 5, 1531-1540	<a href="https://doi.org/10.18280/ts.380530">https://doi.org/10.18280/ts.380530</a>	Sridhar, B. (2021). Investigations of medical image segmentation methods with inclusion mathematical morphological operations. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1531-1540. <a href="https://doi.org/10.18280/ts.380530">https://doi.org/10.18280/ts.380530</a>
786	Liu, C., Antypenko, R., Sushko, I., Zakharchenko, O., Wang, J.	Marine Distributed Radar Signal Identification and Classification Based on Deep Learning	distributed radar, deep learning, marine environment monitoring, radar signal identification	38, 5, 1541-1548	<a href="https://doi.org/10.18280/ts.380531">https://doi.org/10.18280/ts.380531</a>	Liu, C., Antypenko, R., Sushko, I., Zakharchenko, O., Wang, J. (2021). Marine distributed radar signal identification and classification based on deep learning. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1541-1548. <a href="https://doi.org/10.18280/ts.380531">https://doi.org/10.18280/ts.380531</a>
787	Vigil, A., Bharathi, S.	Diagnosis of Pulpitis from Dental Panoramic Radiograph Using Histogram of Gradients with Discrete Wavelet Transform and Multilevel Neural Network Techniques	dental panoramic radiograph, modified k-means, pulpitis, discrete wavelet transform, multi-level neural network	38, 5, 1549-1555	<a href="https://doi.org/10.18280/ts.380532">https://doi.org/10.18280/ts.380532</a>	Vigil, A., Bharathi, S. (2021). Diagnosis of pulpitis from dental panoramic radiograph using histogram of gradients with discrete wavelet transform and multilevel neural network techniques. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1549-1555. <a href="https://doi.org/10.18280/ts.380532">https://doi.org/10.18280/ts.380532</a>
788	Chen, Y.	An Alzheimer's Disease Identification and Classification Model Based on the Convolutional Neural Network with Attention Mechanisms	Alzheimer's disease, identification and classification, attention mechanism, convolutional neural network	38, 5, 1557-1564	<a href="https://doi.org/10.18280/ts.380533">https://doi.org/10.18280/ts.380533</a>	Chen, Y. (2021). An Alzheimer's disease identification and classification model based on the convolutional neural network with attention mechanisms. <i>Traitement du Signal</i> , Vol. 38, No. 5, pp. 1557-1564. <a href="https://doi.org/10.18280/ts.380533">https://doi.org/10.18280/ts.380533</a>
789	Benabdallah, H., Kerai, S.	Respiratory and Motion Artefacts Removal from ICG Signal Using Denoising Techniques for Hemodynamic Parameters Monitoring	impedance cardiography, orthogonal wavelet, thresholding technique, linear filter, adaptive filter, biosignal denoising	38, 4, 919-928	<a href="https://doi.org/10.18280/ts.380401">https://doi.org/10.18280/ts.380401</a>	Benabdallah, H., Kerai, S. (2021). Respiratory and motion artefacts removal from ICG signal using denoising techniques for hemodynamic parameters monitoring. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 919-928. <a href="https://doi.org/10.18280/ts.380401">https://doi.org/10.18280/ts.380401</a>
790	Salgado, M.C., Elias, R.P., Salazar, A.M.	Function to Flatten Gesture Data for Specific Feature Selection Methods to Improve Classification	Bayesian networks, chronologically linked data, feature selection methods, gesture classification, Logical Combinatorial to Pattern Recognition, Markov blanket	38, 4, 929-935	<a href="https://doi.org/10.18280/ts.380402">https://doi.org/10.18280/ts.380402</a>	Salgado, M.C., Elias, R.P., Salazar, A.M. (2021). Function to flatten gesture data for specific feature selection methods to improve classification. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 929-935. <a href="https://doi.org/10.18280/ts.380402">https://doi.org/10.18280/ts.380402</a>
791	Tian, W.J., Hu, Y.Z.	Label Importance Ranking with Entropy Variation Complex Networks for Structured Video Captioning	video captioning, label importance, complex networks, entropy variation	38, 4, 937-946	<a href="https://doi.org/10.18280/ts.380403">https://doi.org/10.18280/ts.380403</a>	Tian, W.J., Hu, Y.Z. (2021). Label importance ranking with entropy variation complex networks for structured video captioning. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 937-946. <a href="https://doi.org/10.18280/ts.380403">https://doi.org/10.18280/ts.380403</a>
792	Gedik, O., Demirhan, A.	Comparison of the Effectiveness of Deep Learning Methods for Face Mask Detection	CNN, deep learning, face mask detection, transfer learning	38, 4, 947-953	<a href="https://doi.org/10.18280/ts.380404">https://doi.org/10.18280/ts.380404</a>	Gedik, O., Demirhan, A. (2021). Comparison of the effectiveness of deep learning methods for face mask detection. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 947-953. <a href="https://doi.org/10.18280/ts.380404">https://doi.org/10.18280/ts.380404</a>



793	Slama, A.B., Mbarki, Z., Seddik, H., Marrakchi, J., Boukriba, S., Labidi, S.	Improving Parotid Gland Tumor Segmentation and Classification Using Geometric Active Contour Model and Deep Neural Network Framework	active contours, filtering system, boundary modeling, deep neural networks, classification scheme	38, 4, 955-965	<a href="https://doi.org/10.18280/ts.380405">https://doi.org/10.18280/ts.380405</a>	Slama, A.B., Mbarki, Z., Seddik, H., Marrakchi, J., Boukriba, S., Labidi, S. (2021). Improving parotid gland tumor segmentation and classification using geometric active contour model and deep neural network framework. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 955-965. <a href="https://doi.org/10.18280/ts.380405">https://doi.org/10.18280/ts.380405</a>
794	Mütevellii, M.H., Ergin, S.	The Detection of Brain Tumors Using Chan-Vese Active Contour Without Edges Method in Magnetic Resonance (MR) Images	brain tumor, computer aided detection, skull removal, suspicious region detection	38, 4, 967-978	<a href="https://doi.org/10.18280/ts.380406">https://doi.org/10.18280/ts.380406</a>	Mütevellii, M.H., Ergin, S. (2021). The detection of brain tumors using Chan-Vese active contour without edges method in magnetic resonance (MR) images. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 967-978. <a href="https://doi.org/10.18280/ts.380406">https://doi.org/10.18280/ts.380406</a>
795	Bo, Q.Y., Cheng, W.Q.	Design of a Groundwater Level Monitoring System Based on Internet of Things and Image Recognition	image recognition, internet of things (IoT), groundwater level monitoring, edge detection algorithm	38, 4, 979-984	<a href="https://doi.org/10.18280/ts.380407">https://doi.org/10.18280/ts.380407</a>	Bo, Q.Y., Cheng, W.Q. (2021). Design of a groundwater level monitoring system based on Internet of Things and image recognition. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 979-984. <a href="https://doi.org/10.18280/ts.380407">https://doi.org/10.18280/ts.380407</a>
796	Hadiyoso, S., Zakaria, H., Ong, P.A., Mengko, T.L.E.R.	Hemispheric Coherence Analysis of Wide Band EEG Signals for Characterization of Post-Stroke Patients with Dementia	post-stroke, dementia, EEG, coherence	38, 4, 985-992	<a href="https://doi.org/10.18280/ts.380408">https://doi.org/10.18280/ts.380408</a>	Hadiyoso, S., Zakaria, H., Ong, P.A., Mengko, T.L.E.R. (2021). Hemispheric coherence analysis of wide band EEG signals for characterization of post-stroke patients with dementia. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 985-992. <a href="https://doi.org/10.18280/ts.380408">https://doi.org/10.18280/ts.380408</a>
797	Gollu, V.K., Sravani, G.U., Prakash, M.S., Srikanth, G.	Pipeline of Optimization Techniques for Multi-Level Thresholding in Medical Image Compression Using 2D Histogram	genetic algorithm (GA), image compression, image thresholding, particle swarm optimization (PSO), symbiotic organisms search (SOS), 2-D histogram	38, 4, 993-1006	<a href="https://doi.org/10.18280/ts.380409">https://doi.org/10.18280/ts.380409</a>	Gollu, V.K., Sravani, G.U., Prakash, M.S., Srikanth, G. (2021). Pipeline of optimization techniques for multi-level thresholding in medical image compression using 2D histogram. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 993-1006. <a href="https://doi.org/10.18280/ts.380409">https://doi.org/10.18280/ts.380409</a>
798	Ahmadimehr, S., Moridani, M.K.	Identify Attractive and Unattractive Individuals Based on Geometric Features Using Neural Network	attractive, landmarks, geometric feature, classification, neural network	38, 4, 1007-1012	<a href="https://doi.org/10.18280/ts.380410">https://doi.org/10.18280/ts.380410</a>	Ahmadimehr, S., Moridani, M.K. (2021). Identify attractive and unattractive individuals based on geometric features using neural network. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1007-1012. <a href="https://doi.org/10.18280/ts.380410">https://doi.org/10.18280/ts.380410</a>
799	Zhang, Q., Xiao, L.Y., Shi, Y.F.	Extraction and Classification of Mouth Shape Features in Oral English Teaching Based on Image Processing	oral English teaching, mouth shape feature extraction, mouth shape classification, image processing	38, 4, 1013-121	<a href="https://doi.org/10.18280/ts.380411">https://doi.org/10.18280/ts.380411</a>	Zhang, Q., Xiao, L.Y., Shi, Y.F. (2021). Extraction and classification of mouth shape features in oral English teaching based on image processing. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1013-1021. <a href="https://doi.org/10.18280/ts.380411">https://doi.org/10.18280/ts.380411</a>
800	Aggarwal, S., Bhatia, M., Madaan, R., Pandey, H.M.	SVM Prediction Model Interface for Plant Contaminates	pollution, plants, prediction, classification, air quality index, GUI	38, 4, 1023-1032	<a href="https://doi.org/10.18280/ts.380412">https://doi.org/10.18280/ts.380412</a>	Aggarwal, S., Bhatia, M., Madaan, R., Pandey, H.M. (2021). SVM prediction model interface for plant contaminates. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1023-1032. <a href="https://doi.org/10.18280/ts.380412">https://doi.org/10.18280/ts.380412</a>
801	Singh, A.K., Kim, Y.H.	Classification of Drones Using Edge-Enhanced Micro-Doppler Image Based on CNN	classification, radar signal processing, W-band, micro-Doppler imaging, deep learning	38, 4, 1033-1039	<a href="https://doi.org/10.18280/ts.380413">https://doi.org/10.18280/ts.380413</a>	Singh, A.K., Kim, Y.H. (2021). Classification of drones using edge-enhanced micro-doppler image based on CNN. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1033-1039. <a href="https://doi.org/10.18280/ts.380413">https://doi.org/10.18280/ts.380413</a>
802	Luo, X.J.	Three-Dimensional Image Quality Evaluation and Optimization Based on Convolutional Neural Network	convolutional neural network (CNN), three-dimensional (3D) image, quality evaluation, quality optimization	38, 4, 1041-1049	<a href="https://doi.org/10.18280/ts.380414">https://doi.org/10.18280/ts.380414</a>	Luo, X.J. (2021). Three-dimensional image quality evaluation and optimization based on convolutional neural network. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1041-1049. <a href="https://doi.org/10.18280/ts.380414">https://doi.org/10.18280/ts.380414</a>
803	Lakra, M., Kumar, S.	Disparity Computation Through PDE and Data-Driven CeNN Technique	belief propagation, cellular neural network, distance regularization term, energy minimization	38, 4, 1051-1059	<a href="https://doi.org/10.18280/ts.380415">https://doi.org/10.18280/ts.380415</a>	Lakra, M., Kumar, S. (2021). Disparity computation through PDE and data-driven CeNN technique. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1051-1059. <a href="https://doi.org/10.18280/ts.380415">https://doi.org/10.18280/ts.380415</a>
804	Challab, J.M., Mardukhi, F.	A Hybrid Method Based on LSTM and Optimized SVM for Diagnosis of Novel Coronavirus (COVID-19)	ant colony optimization (ACO), COVID-19, ant lion optimization (ALO), support vector machine (SVM), RNN	38, 4, 1061-1069	<a href="https://doi.org/10.18280/ts.380416">https://doi.org/10.18280/ts.380416</a>	Challab, J.M., Mardukhi, F. (2021). A hybrid method based on LSTM and optimized SVM for diagnosis of novel coronavirus (COVID-19). <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1061-1069. <a href="https://doi.org/10.18280/ts.380416">https://doi.org/10.18280/ts.380416</a>
805	Xue, P., Jiang, C.H., Pang, H.L.	Detection of Various Types of Metal Surface Defects Based on Image Processing	image processing, metal surface, defect detection, EfficientNet	38, 4, 1071-1078	<a href="https://doi.org/10.18280/ts.380417">https://doi.org/10.18280/ts.380417</a>	Xue, P., Jiang, C.H., Pang, H.L. (2021). Detection of various types of metal surface defects based on image processing. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1071-1078. <a href="https://doi.org/10.18280/ts.380417">https://doi.org/10.18280/ts.380417</a>
806	Pardhu, T., Kumar, V.	Novel Implementations of Clutter and Target Discrimination Using Threshold Skewness Method	SVD, TS, clutter, target	38, 4, 1079-1085	<a href="https://doi.org/10.18280/ts.380418">https://doi.org/10.18280/ts.380418</a>	Pardhu, T., Kumar, V. (2021). Novel implementations of clutter and target discrimination using threshold skewness method. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1079-1085. <a href="https://doi.org/10.18280/ts.380418">https://doi.org/10.18280/ts.380418</a>
807	Wu, J.D., Chen, B.Y., Shyr, W.J., Shih, F.Y.	Vehicle Classification and Counting System Using YOLO Object Detection Technology	vehicle classification system, convolution neural network, traffic flow, intelligent transportation system	38, 4, 1087-1093	<a href="https://doi.org/10.18280/ts.380419">https://doi.org/10.18280/ts.380419</a>	Wu, J.D., Chen, B.Y., Shyr, W.J., Shih, F.Y. (2021). Vehicle classification and counting system using YOLO object detection technology. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1087-1093. <a href="https://doi.org/10.18280/ts.380419">https://doi.org/10.18280/ts.380419</a>
808	Lu, M.S., Liu, H.Y., Yuan, X.P.	Thermal Fault Diagnosis of Electrical Equipment in Substations Based on Image Fusion	infrared thermal imaging, electrical equipment, substation, thermal fault diagnosis	38, 4, 1095-1102	<a href="https://doi.org/10.18280/ts.380420">https://doi.org/10.18280/ts.380420</a>	Lu, M.S., Liu, H.Y., Yuan, X.P. (2021). Thermal fault diagnosis of electrical equipment in substations based on image fusion. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1095-1102. <a href="https://doi.org/10.18280/ts.380420">https://doi.org/10.18280/ts.380420</a>
809	Joshua, E.S.N., Bhattacharyya, D., Chakkravarthy, M., Kim, H.J.	Lung Cancer Classification Using Squeeze and Excitation Convolutional Neural Networks with Grad Cam++ Class Activation Function	lung cancer, (SENET) squeeze and excite network, class activation, Grad-Cam++, deep learning, CNN, Luna-16, nodule	38, 4, 1103-1112	<a href="https://doi.org/10.18280/ts.380421">https://doi.org/10.18280/ts.380421</a>	Joshua, E.S.N., Bhattacharyya, D., Chakkravarthy, M., Kim, H.J. (2021). Lung cancer classification using squeeze and excitation convolutional neural networks with Grad Cam++ class activation function. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1103-1112. <a href="https://doi.org/10.18280/ts.380421">https://doi.org/10.18280/ts.380421</a>
810	Chaudhary, S., Hiranwal, S., Gupta, C.P.	Spectral Graph Wavelet Based Image Steganography Using SVD and Arnold Transform	graph signal processing, steganography, spectral graph wavelet, SVD, Arnold transform	38, 4, 1113-1121	<a href="https://doi.org/10.18280/ts.380422">https://doi.org/10.18280/ts.380422</a>	Chaudhary, S., Hiranwal, S., Gupta, C.P. (2021). Spectral graph wavelet based image steganography using SVD and Arnold transform. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1113-1121. <a href="https://doi.org/10.18280/ts.380422">https://doi.org/10.18280/ts.380422</a>

811	Huang, W.	Elderly Depression Recognition Based on Facial Micro-Expression Extraction	micro-expression, expression feature extraction, elderly depression recognition, deep learning (DL)	38, 4, 1123-1130	<a href="https://doi.org/10.18280/ts.380423">https://doi.org/10.18280/ts.380423</a>	Huang, W. (2021). Elderly depression recognition based on facial micro-expression extraction. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1123-1130. <a href="https://doi.org/10.18280/ts.380423">https://doi.org/10.18280/ts.380423</a>
812	Virnodkar, S.S., Pachghare, V.K., Patil, V.C., Jha, S.K.	DenseResUNet: An Architecture to Assess Water-Stressed Sugarcane Crops from Sentinel-2 Satellite Imagery	sugarcane crop, Sentinel-2, deep learning, crop water stress, DenseResUNet	38, 4, 1131-1139	<a href="https://doi.org/10.18280/ts.380424">https://doi.org/10.18280/ts.380424</a>	Virnodkar, S.S., Pachghare, V.K., Patil, V.C., Jha, S.K. (2021). DenseResUNet: An architecture to assess water-stressed sugarcane crops from Sentinel-2 satellite imagery. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1131-1139. <a href="https://doi.org/10.18280/ts.380424">https://doi.org/10.18280/ts.380424</a>
813	Ahmed, M.Z., Mahesh, C.	An Efficient Image Based Feature Extraction and Feature Selection Model for Medical Data Clustering Using Deep Neural Networks	feature extraction, feature selection, medical data clustering, deep neural networks, deep convolution neural network, content based image retrieval	38, 4, 1141-1148	<a href="https://doi.org/10.18280/ts.380425">https://doi.org/10.18280/ts.380425</a>	Ahmed, M.Z., Mahesh, C. (2021). An efficient image based feature extraction and feature selection model for medical data clustering using deep neural networks. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1141-1148. <a href="https://doi.org/10.18280/ts.380425">https://doi.org/10.18280/ts.380425</a>
814	Sun, H.Y., Qi, Y.R., Tian, W.L., Chen, G., Wang, Y.N.	Propagation Features of Channel Wave Signal in Coal Seam with Scouring Zone	channel wave signal propagation, scouring zone, finite-element method	38, 4, 1149-1160	<a href="https://doi.org/10.18280/ts.380426">https://doi.org/10.18280/ts.380426</a>	Sun, H.Y., Qi, Y.R., Tian, W.L., Chen, G., Wang, Y.N. (2021). Propagation features of channel wave signal in coal seam with scouring zone. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1149-1160. <a href="https://doi.org/10.18280/ts.380426">https://doi.org/10.18280/ts.380426</a>
815	Brahmaiah, V.P., Sai, Y.P., Prasad, M.N.G.	Accurate and Efficient Differentiation Between Normal and Epileptic Seizure of Eyes Using 13 Layer Convolution Neural Network	background noise, dynamic time wrapping, hidden Markov model, blink features, optimal feature selection, thirteen layer neural network	38, 4, 1161-1169	<a href="https://doi.org/10.18280/ts.380427">https://doi.org/10.18280/ts.380427</a>	Brahmaiah, V.P., Sai, Y.P., Prasad, M.N.G. (2021). Accurate and efficient differentiation between normal and epileptic seizure of eyes using 13 layer convolution neural network. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1161-1169. <a href="https://doi.org/10.18280/ts.380427">https://doi.org/10.18280/ts.380427</a>
816	Kuraparathi, S., Reddy, M.K., Sujatha, C.N., Valiveti, H., Duggineni, C., Kollati, M., Kora, P., V. S.	Brain Tumor Classification of MRI Images Using Deep Convolutional Neural Network	brain tumor, data augmentation, deep convolutional neural networks, magnetic resonance images, transfer learning, support vector machine	38, 4, 1171-1179	<a href="https://doi.org/10.18280/ts.380428">https://doi.org/10.18280/ts.380428</a>	Kuraparathi, S., Reddy, M.K., Sujatha, C.N., Valiveti, H., Duggineni, C., Kollati, M., Kora, P., V. S. (2021). Brain tumor classification of MRI images using deep convolutional neural network. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1171-1179. <a href="https://doi.org/10.18280/ts.380428">https://doi.org/10.18280/ts.380428</a>
817	Gao, Z.T., Cai, J.X., Shi, Y.N., Hong, L., Yan, F.F., Zhang, M.Y.	Integration of Two-Dimensional Kernel Principal Component Analysis Plus Two-Dimensional Linear Discriminant Analysis with Convolutional Neural Network for Finger Vein Recognition	finger vein recognition, subspace learning, convolutional neural network (CNN)	38, 4, 1181-1187	<a href="https://doi.org/10.18280/ts.380429">https://doi.org/10.18280/ts.380429</a>	Gao, Z.T., Cai, J.X., Shi, Y.N., Hong, L., Yan, F.F., Zhang, M.Y. (2021). Integration of two-dimensional kernel principal component analysis plus two-dimensional linear discriminant analysis with convolutional neural network for finger vein recognition. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1181-1187. <a href="https://doi.org/10.18280/ts.380429">https://doi.org/10.18280/ts.380429</a>
818	Abdulrahman, A., Baykara, M.	A Comprehensive Review for Emotion Detection Based on EEG Signals: Challenges, Applications, and Open Issues	electroencephalogram, classification, emotion recognition, features extraction, EEG, FFT, DWT	38, 4, 1189-1200	<a href="https://doi.org/10.18280/ts.380430">https://doi.org/10.18280/ts.380430</a>	Abdulrahman, A., Baykara, M. (2021). A comprehensive review for emotion detection based on EEG signals: Challenges, applications, and open issues. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1189-1200. <a href="https://doi.org/10.18280/ts.380430">https://doi.org/10.18280/ts.380430</a>
819	Aswini, T.V.N.L., Raju, K.P., Kumari, B.L.	Subsampled Circulant Matrix Based Wideband Spectrum Sensing Using Fusion Based Recovery Algorithm	modulated wideband converter, circulant matrix, deterministic sequence, compressive sensing, orthogonal matching pursuit	38, 4, 1201-1208	<a href="https://doi.org/10.18280/ts.380431">https://doi.org/10.18280/ts.380431</a>	Aswini, T.V.N.L., Raju, K.P., Kumari, B.L. (2021). Subsampled circulant matrix based wideband spectrum sensing using fusion based recovery algorithm. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1201-1208. <a href="https://doi.org/10.18280/ts.380431">https://doi.org/10.18280/ts.380431</a>
820	Han, X., Jiang, S., Yu, J., Zhang, F.	A Visual Tracking Algorithm Based on Estimation of Regression Probability Distribution	target tracking, Siamese network, regression probability distribution, quality assessment	38, 4, 1209-1215	<a href="https://doi.org/10.18280/ts.380432">https://doi.org/10.18280/ts.380432</a>	Han, X., Jiang, S., Yu, J., Zhang, F. (2021). A visual tracking algorithm based on estimation of regression probability distribution. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1209-1215. <a href="https://doi.org/10.18280/ts.380432">https://doi.org/10.18280/ts.380432</a>
821	Choubey, S.B., Choubey, A., Nandan, D., Mahajan, A.	Polycystic Ovarian Syndrome Detection by Using Two-Stage Image Denoising	denoising, Discrete Wavelet Transform (DWT), neural network, Polycystic Ovarian Syndrome (PCOS) detection, PSNR, MSE, SSIM	38, 4, 1217-1227	<a href="https://doi.org/10.18280/ts.380433">https://doi.org/10.18280/ts.380433</a>	Choubey, S.B., Choubey, A., Nandan, D., Mahajan, A. (2021). Polycystic ovarian syndrome detection by using two-stage image denoising. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1217-1227. <a href="https://doi.org/10.18280/ts.380433">https://doi.org/10.18280/ts.380433</a>
822	Avci, D., Sert, E.	An Effective Turkey Marble Classification System: Convolutional Neural Network with Genetic Algorithm -Wavelet Kernel - Extreme Learning Machine	CNN, genetic algorithm, wavelet kernel-extreme learning machine, marble classification	38, 4, 1229-1235	<a href="https://doi.org/10.18280/ts.380434">https://doi.org/10.18280/ts.380434</a>	Avci, D., Sert, E. (2021). An effective turkey marble classification system: Convolutional neural network with genetic algorithm -wavelet kernel - extreme learning machine. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1229-1235. <a href="https://doi.org/10.18280/ts.380434">https://doi.org/10.18280/ts.380434</a>
823	Chen, D., Tang, J.L., Xi, H.X., Zhao, X.R.	Image Recognition of Modern Agricultural Fruit Maturity Based on Internet of Things	internet of things (IoT), image processing, modern agriculture, fruit maturity	38, 4, 1237-1244	<a href="https://doi.org/10.18280/ts.380435">https://doi.org/10.18280/ts.380435</a>	Chen, D., Tang, J.L., Xi, H.X., Zhao, X.R. (2021). Image recognition of modern agricultural fruit maturity based on internet of things. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1237-1244. <a href="https://doi.org/10.18280/ts.380435">https://doi.org/10.18280/ts.380435</a>
824	Alaoui, N., Mashat, A., Adamou-Mitiche, A.B.H., Mitiche, L., Djalab, A., Daoudi, S., Bouhamla, L.	Impulse Noise Removal Based on Hybrid Genetic Algorithm	image denoising, noise removal, impulse noise, salt and pepper noise, genetic algorithm	38, 4, 1245-1251	<a href="https://doi.org/10.18280/ts.380436">https://doi.org/10.18280/ts.380436</a>	Alaoui, N., Mashat, A., Adamou-Mitiche, A.B.H., Mitiche, L., Djalab, A., Daoudi, S., Bouhamla, L. (2021). Impulse noise removal based on hybrid genetic algorithm. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1245-1251. <a href="https://doi.org/10.18280/ts.380436">https://doi.org/10.18280/ts.380436</a>
825	Zhong, L.H., Li, J., Zhou, F.F., Bao, X.A., Xing, W.Y., Han, Z.Y., Luo, J.S.	Integration Between Cascade Region-Based Convolutional Neural Network and Bi-Directional Feature Pyramid Network for Live Object Tracking and Detection	cascade region-based convolutional neural network (R-CNN), bi-directional feature pyramid network (BiFPN), live object tracking and detection	38, 4, 1253-1257	<a href="https://doi.org/10.18280/ts.380437">https://doi.org/10.18280/ts.380437</a>	Zhong, L.H., Li, J., Zhou, F.F., Bao, X.A., Xing, W.Y., Han, Z.Y., Luo, J.S. (2021). Integration between cascade region-based convolutional neural network and bi-directional feature pyramid network for live object tracking and detection. <i>Traitement du Signal</i> , Vol. 38, No. 4, pp. 1253-1257. <a href="https://doi.org/10.18280/ts.380437">https://doi.org/10.18280/ts.380437</a>
826	Telli, H., Sbaa, S., Bekhouche, S.E., Dornaika, F., Taleb-Ahmed, A., López, M.B.	A Novel Multi-Level Pyramid Co-Variance Operators for Estimation of Personality Traits and Job Screening Scores	APA2016 dataset, Big-Five personality traits, job candidate screening, PML-COV descriptor, regression	38, 3, 539-546	<a href="https://doi.org/10.18280/ts.380301">https://doi.org/10.18280/ts.380301</a>	Telli, H., Sbaa, S., Bekhouche, S.E., Dornaika, F., Taleb-Ahmed, A., López, M.B. (2021). A novel multi-level Pyramid Co-Variance operators for estimation of personality traits and job screening scores. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 539-546. <a href="https://doi.org/10.18280/ts.380301">https://doi.org/10.18280/ts.380301</a>
827	Papageorgiou, V.	Brain Tumor Detection Based on Features Extracted and Classified Using a Low-Complexity Neural Network	artificial intelligence, brain MRI, convolutional neural networks, cross-entropy, Jensen-Shannon divergence, loss functions, tumor detection	38, 3, 547-554	<a href="https://doi.org/10.18280/ts.380302">https://doi.org/10.18280/ts.380302</a>	Papageorgiou, V. (2021). Brain tumor detection based on features extracted and classified using a low-complexity neural network. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 547-554. <a href="https://doi.org/10.18280/ts.380302">https://doi.org/10.18280/ts.380302</a>
828	Benaissa, B.E., Lahfa, F., Naima, K., Lorenzini, G., Inc, M., Menni, Y.	Detection and Cooperative Communications for Deployment Sensor Networks	Wireless Sensor Network (WSN), clustering, Received Signal Strength Indicator (RSSI), IoT routing protocol	38, 3, 555-564	<a href="https://doi.org/10.18280/ts.380303">https://doi.org/10.18280/ts.380303</a>	Benaissa, B.E., Lahfa, F., Naima, K., Lorenzini, G., Inc, M., Menni, Y. (2021). Detection and cooperative communications for deployment sensor networks. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 555-564. <a href="https://doi.org/10.18280/ts.380303">https://doi.org/10.18280/ts.380303</a>

829	Jia, Y.K., Ding, R.T., Ren, W., Shu, J.F., Jin, A.X.	Gesture Recognition of Somatosensory Interactive Acupoint Massage Based on Image Feature Deep Learning Model	image feature, deep learning, somatosensory interaction, gesture recognition, acupoint massage	38, 3, 565-572	<a href="https://doi.org/10.18280/ts.380304">https://doi.org/10.18280/ts.380304</a>	Jia, Y.K., Ding, R.T., Ren, W., Shu, J.F., Jin, A.X. (2021). Gesture recognition of somatosensory interactive acupoint massage based on image feature deep learning model. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 565-572. <a href="https://doi.org/10.18280/ts.380304">https://doi.org/10.18280/ts.380304</a>
830	Ouannes, L., Ben Khalifa, A., Essoukri Ben Amara, N.	Comparative Study Based on De-Occlusion and Reconstruction of Face Images in Degraded Conditions	face recognition, degraded conditions, face detection, face de-occlusion, face reconstruction, Laplacian pyramid blending, CycleGANs	38, 3, 573-585	<a href="https://doi.org/10.18280/ts.380305">https://doi.org/10.18280/ts.380305</a>	Ouannes, L., Ben Khalifa, A., Essoukri Ben Amara, N. (2021). Comparative study based on de-occlusion and reconstruction of face images in degraded conditions. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 573-585. <a href="https://doi.org/10.18280/ts.380305">https://doi.org/10.18280/ts.380305</a>
831	Özel, E., Tekin, R., Kaya, Y.	Implementation of Artifact Removal Algorithms in Gait Signals for Diagnosis of Parkinson Disease	filtering and noise reduction, Parkinson disease, feature extraction, signal processing	38, 3, 587-597	<a href="https://doi.org/10.18280/ts.380306">https://doi.org/10.18280/ts.380306</a>	Özel, E., Tekin, R., Kaya, Y. (2021). Implementation of artifact removal algorithms in gait signals for diagnosis of Parkinson disease. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 587-597. <a href="https://doi.org/10.18280/ts.380306">https://doi.org/10.18280/ts.380306</a>
832	Liu, Y.G., Wu, Y.	A Multi-Feature Motion Posture Recognition Model Based on Genetic Algorithm	motion posture recognition, multi-feature, genetic algorithm (GA), visual background extractor (ViBe) algorithm	38, 3, 599-605	<a href="https://doi.org/10.18280/ts.380307">https://doi.org/10.18280/ts.380307</a>	Liu, Y.G., Wu, Y. (2021). A multi-feature motion posture recognition model based on genetic algorithm. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 599-605. <a href="https://doi.org/10.18280/ts.380307">https://doi.org/10.18280/ts.380307</a>
833	Panguluri, S.K., Mohan, L.	A DWT Based Novel Multimodal Image Fusion Method	infrared image, visible image, DWT, IDWT, Filters based mean-weighted fusion rule, Filters based max-weighted fusion rule	38, 3, 607-617	<a href="https://doi.org/10.18280/ts.380308">https://doi.org/10.18280/ts.380308</a>	Panguluri, S.K., Mohan, L. (2021). A DWT based novel multimodal image fusion method. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 607-617. <a href="https://doi.org/10.18280/ts.380308">https://doi.org/10.18280/ts.380308</a>
834	Firildak, K., Talu, M.F.	A Hybrid Capsule Network for Pneumonia Detection Using Image Augmentation Based on Generative Adversarial Network	pneumonia, capsule network, deep convolutional generative adversarial network (DCGAN), chest X-ray, data augmentation, classification	38, 3, 619-627	<a href="https://doi.org/10.18280/ts.380309">https://doi.org/10.18280/ts.380309</a>	Firildak, K., Talu, M.F. (2021). A hybrid capsule network for pneumonia detection using image augmentation based on generative adversarial network. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 619-627. <a href="https://doi.org/10.18280/ts.380309">https://doi.org/10.18280/ts.380309</a>
835	Chen, Y., Wang, Y.Y., Cai, Z.H., Jiang, M.	Predictions for Central Lymph Node Metastasis of Papillary Thyroid Carcinoma via CNN-Based Fusion Modeling of Ultrasound Images	papillary thyroid carcinoma, central lymph node metastasis, ultrasound images, radiomic feature, deep learning, convolutional neural network	38, 3, 629-638	<a href="https://doi.org/10.18280/ts.380310">https://doi.org/10.18280/ts.380310</a>	Chen, Y., Wang, Y.Y., Cai, Z.H., Jiang, M. (2021). Predictions for central lymph node metastasis of papillary thyroid carcinoma via CNN-based fusion modeling of ultrasound images. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 629-638. <a href="https://doi.org/10.18280/ts.380310">https://doi.org/10.18280/ts.380310</a>
836	Ismael, A.A., Baykara, M.	Digital Image Denoising Techniques Based on Multi-Resolution Wavelet Domain with Spatial Filters: A Review	digital image denoising, hybrid denoising, multi-resolution wavelet domain, spatial domain filtering, thresholding techniques	38, 3, 639-651	<a href="https://doi.org/10.18280/ts.380311">https://doi.org/10.18280/ts.380311</a>	Ismael, A.A., Baykara, M. (2021). Digital image denoising techniques based on multi-resolution wavelet domain with spatial filters: A review. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 639-651. <a href="https://doi.org/10.18280/ts.380311">https://doi.org/10.18280/ts.380311</a>
837	Hassan, L., Saleh, A., Abdel-Nasser, M., Omer, O.A., Puig, D.	Efficient Multi-Organ Multi-Center Cell Nuclei Segmentation Method Based on Deep Learnable Aggregation Network	computer-aided diagnosis, deep learning, digital pathology, nuclei segmentation, whole slide imaging	38, 3, 653-661	<a href="https://doi.org/10.18280/ts.380312">https://doi.org/10.18280/ts.380312</a>	Hassan, L., Saleh, A., Abdel-Nasser, M., Omer, O.A., Puig, D. (2021). Efficient multi-organ multi-center cell nuclei segmentation method based on deep learnable aggregation network. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 653-661. <a href="https://doi.org/10.18280/ts.380312">https://doi.org/10.18280/ts.380312</a>
838	Quan, X.Z., Chen, J.	Multi-Source Data Fusion and Target Tracking of Heterogeneous Network Based on Data Mining	data mining, heterogeneous network, multi-source data fusion and target tracking, millimeter wave heterogeneous network	38, 3, 663-671	<a href="https://doi.org/10.18280/ts.380313">https://doi.org/10.18280/ts.380313</a>	Quan, X.Z., Chen, J. (2021). Multi-source data fusion and target tracking of heterogeneous network based on data mining. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 663-671. <a href="https://doi.org/10.18280/ts.380313">https://doi.org/10.18280/ts.380313</a>
839	Tuncer, S.A., Çınar, A., Firat, M.	Hybrid CNN Based Computer-Aided Diagnosis System for Choroidal Neovascularization, Diabetic Macular Edema, Drusen Disease Detection from OCT Images	choroidal neovascularization, drusen, diabetic macular edema, CNN-SVM	38, 3, 673-679	<a href="https://doi.org/10.18280/ts.380314">https://doi.org/10.18280/ts.380314</a>	Tuncer, S.A., Çınar, A., Firat, M. (2021). Hybrid CNN based computer-aided diagnosis system for choroidal neovascularization, diabetic macular edema, drusen disease detection from OCT images. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 673-679. <a href="https://doi.org/10.18280/ts.380314">https://doi.org/10.18280/ts.380314</a>
840	Kathi, M.G., Shaik, J.H.	An Approach of Detecting the Age of a Human by Extracting the Face Parts and Applying the Hierarchical Methods	age prediction, CNN, face parts extraction, Hierarchical method	38, 3, 681-688	<a href="https://doi.org/10.18280/ts.380315">https://doi.org/10.18280/ts.380315</a>	Kathi, M.G., Shaik, J.H. (2021). An approach of detecting the age of a human by extracting the face parts and applying the hierarchical methods. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 681-688. <a href="https://doi.org/10.18280/ts.380315">https://doi.org/10.18280/ts.380315</a>
841	Zhang, C., Zou, J., Ma, Z.J.	Identification and Analysis of Limb Rehabilitation Signal Based on Wavelet Transform	wavelet thresholding, limb rehabilitation, electromyography (EMG) signal, pattern recognition	38, 3, 689-697	<a href="https://doi.org/10.18280/ts.380316">https://doi.org/10.18280/ts.380316</a>	Zhang, C., Zou, J., Ma, Z.J. (2021). Identification and analysis of limb rehabilitation signal based on wavelet transform. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 689-697. <a href="https://doi.org/10.18280/ts.380316">https://doi.org/10.18280/ts.380316</a>
842	Wagle, S.A., R, H.	A Deep Learning-Based Approach in Classification and Validation of Tomato Leaf Disease	AlexNet, classification of plant disease, data augmentation, GoLeNet, MobileNetv2, SqueezeNet, validation, VGG16	38, 3, 699-709	<a href="https://doi.org/10.18280/ts.380317">https://doi.org/10.18280/ts.380317</a>	Wagle, S.A., R, H. (2021). A deep learning-based approach in classification and validation of tomato leaf disease. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 699-709. <a href="https://doi.org/10.18280/ts.380317">https://doi.org/10.18280/ts.380317</a>
843	Khraisat, M.S., Zneit, R.S.A., Zaini, H.G., Alqadi, Z.A.	Analysis Methods Used to Extract Fingerprints Features	fingerprint, histogram, MLBP, K_means, WPT, minutiae, features, rotation	38, 3, 711-717	<a href="https://doi.org/10.18280/ts.380318">https://doi.org/10.18280/ts.380318</a>	Khraisat, M.S., Zneit, R.S.A., Zaini, H.G., Alqadi, Z.A. (2021). Analysis methods used to extract fingerprints features. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 711-717. <a href="https://doi.org/10.18280/ts.380318">https://doi.org/10.18280/ts.380318</a>
844	Guan, Y.R., Aamir, M., Hu, Z.H., Dayo, Z.A., Rahman, Z., Abro, W.A., Soothar, P.	An Object Detection Framework Based on Deep Features and High-Quality Object Locations	object detection, high-quality proposals, convolutional neural network (CNN), deep features	38, 3, 719-730	<a href="https://doi.org/10.18280/ts.380319">https://doi.org/10.18280/ts.380319</a>	Guan, Y.R., Aamir, M., Hu, Z.H., Dayo, Z.A., Rahman, Z., Abro, W.A., Soothar, P. (2021). An object detection framework based on deep features and high-quality object locations. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 719-730. <a href="https://doi.org/10.18280/ts.380319">https://doi.org/10.18280/ts.380319</a>
845	Khan, S.I., Kumar, G.G., Naishadkumar, P.V., Rao, S.P.V.S.	Analysis of Normal and Adventitious Lung Sound Signals Using Empirical Mode Decomposition and Central Tendency Measure	chronic obstructive pulmonary disease (COPD), adventitious lung sounds (ALS), electronic stethoscope, intrinsic mode functions (IMFs)	38, 3, 731-738	<a href="https://doi.org/10.18280/ts.380320">https://doi.org/10.18280/ts.380320</a>	Khan, S.I., Kumar, G.G., Naishadkumar, P.V., Rao, S.P.V.S. (2021). Analysis of normal and adventitious lung sound signals using empirical mode decomposition and central tendency measure. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 731-738. <a href="https://doi.org/10.18280/ts.380320">https://doi.org/10.18280/ts.380320</a>
846	Bujunuru, A., Tadisetty, S.	Throughput Optimization of Parallel Sensing and Energy Harvesting Cognitive Radio Network	cognitive radio, energy harvesting cognitive radio network (EHCNRN), PEHCNRN, spectrum sensing, throughput optimization	38, 3, 739-745	<a href="https://doi.org/10.18280/ts.380321">https://doi.org/10.18280/ts.380321</a>	Bujunuru, A., Tadisetty, S. (2021). Throughput optimization of parallel sensing and energy harvesting cognitive radio network. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 739-745. <a href="https://doi.org/10.18280/ts.380321">https://doi.org/10.18280/ts.380321</a>

847	Tan, C., Yang, S.Y.	Automatic Extraction of Color Features from Landscape Images Based on Image Processing	image processing, landscape colors, color feature extraction, color constancy	38, 3, 747-755	<a href="https://doi.org/10.18280/ts.380322">https://doi.org/10.18280/ts.380322</a>	Tan, C., Yang, S.Y. (2021). Automatic extraction of color features from landscape images based on image processing. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 747-755. <a href="https://doi.org/10.18280/ts.380322">https://doi.org/10.18280/ts.380322</a>
848	Yildirim, S., Kocer, H.E., Ekmekci, A.H.	Quantitative Analysis of EEG Slow Wave Activity Based on MinPeakProminence Method	electroencephalogram, slow wave, peak, minpeakprominence, epilepsy, neurologic disorder	38, 3, 757-773	<a href="https://doi.org/10.18280/ts.380323">https://doi.org/10.18280/ts.380323</a>	Yildirim, S., Kocer, H.E., Ekmekci, A.H. (2021). Quantitative analysis of EEG slow wave activity based on minpeakprominence method. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 757-773. <a href="https://doi.org/10.18280/ts.380323">https://doi.org/10.18280/ts.380323</a>
849	Wu, D., Zhang, C.J., Ji, L., Ran, R., Wu, H.Y., Xu, Y.M.	Forest Fire Recognition Based on Feature Extraction from Multi-View Images	forest fire recognition, multi-view images, graph neural network (GNN), convolutional neural network (CNN), feature extraction	38, 3, 775-783	<a href="https://doi.org/10.18280/ts.380324">https://doi.org/10.18280/ts.380324</a>	Wu, D., Zhang, C.J., Ji, L., Ran, R., Wu, H.Y., Xu, Y.M. (2021). Forest fire recognition based on feature extraction from multi-view images. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 775-783. <a href="https://doi.org/10.18280/ts.380324">https://doi.org/10.18280/ts.380324</a>
850	S, S.P., T, K.K.	Signed Convex Combination of Fast Convergence Algorithm to Generalized Sidelobe Canceller Beamformer for Multi-Channel Speech Enhancement	multi-channel speech enhancement, generalized sidelobe canceller (GSC) beamforming, adaptive filters, fast convergence normalized least mean square (FCNLMS), signed convex combination of fast convergence (SCFC)	38, 3, 785-795	<a href="https://doi.org/10.18280/ts.380325">https://doi.org/10.18280/ts.380325</a>	S, S.P., T, K.K. (2021). Signed convex combination of fast convergence algorithm to generalized sidelobe canceller beamformer for multi-channel speech enhancement. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 785-795. <a href="https://doi.org/10.18280/ts.380325">https://doi.org/10.18280/ts.380325</a>
851	Yu, J.H., Miao, W.J., Zhang, G.B., Li, K., Shi, Y.G., Liu, L.	Target Positioning and Sorting Strategy of Fruit Sorting Robot Based on Image Processing	three-dimensional (3D) scene object recognition, fruit sorting, industrial robot, recognition of fruit maturity	38, 3, 797-805	<a href="https://doi.org/10.18280/ts.380326">https://doi.org/10.18280/ts.380326</a>	Yu, J.H., Miao, W.J., Zhang, G.B., Li, K., Shi, Y.G., Liu, L. (2021). Target positioning and sorting strategy of fruit sorting robot based on image processing. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 797-805. <a href="https://doi.org/10.18280/ts.380326">https://doi.org/10.18280/ts.380326</a>
852	Özcan, F., Alkan, A.	Frontal Cortex Neuron Type Classification with Deep Learning and Recurrence Plot	classification, deep learning, excitator, inhibitor, neuroscience, point processing, recurrence plot, spike, excitatory units	38, 3, 807-819	<a href="https://doi.org/10.18280/ts.380327">https://doi.org/10.18280/ts.380327</a>	Özcan, F., Alkan, A. (2021). Frontal cortex neuron type classification with deep learning and recurrence plot. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 807-819. <a href="https://doi.org/10.18280/ts.380327">https://doi.org/10.18280/ts.380327</a>
853	Rao, G.S., Srikrishna, A.	Contrast Enhancement of Poor-Quality Satellite Images Through Morphological Operations	morphological operations, satellite images, image segmentation, contrast enhancement, pixel-by-pixel identification, dull pixels, bright pixels	38, 3, 821-827	<a href="https://doi.org/10.18280/ts.380328">https://doi.org/10.18280/ts.380328</a>	Rao, G.S., Srikrishna, A. (2021). Contrast enhancement of poor-quality satellite images through morphological operations. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 821-827. <a href="https://doi.org/10.18280/ts.380328">https://doi.org/10.18280/ts.380328</a>
854	Ma, W.Y.	Single Sample Discriminant Analysis Based on Gabor Transform	Gabor transform, KPCA-RBF (kernel principal component analysis-radial basis function), classifier, pixel-level fusion, single-sample discriminant analysis	38, 3, 829-835	<a href="https://doi.org/10.18280/ts.380329">https://doi.org/10.18280/ts.380329</a>	Ma, W.Y. (2021). Single sample discriminant analysis based on Gabor transform. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 829-835. <a href="https://doi.org/10.18280/ts.380329">https://doi.org/10.18280/ts.380329</a>
855	Alapati, Y.K., Ravichandran, S.	An Efficient Signal Processing Model for Malicious Signal Identification and Energy Consumption Reduction for Improving Data Transmission Rate	malicious signal, data transfer, routing, data loss, congestion control, signal behavior, data delivery rate, energy consumption	38, 3, 837-843	<a href="https://doi.org/10.18280/ts.380330">https://doi.org/10.18280/ts.380330</a>	Alapati, Y.K., Ravichandran, S. (2021). An efficient signal processing model for malicious signal identification and energy consumption reduction for improving data transmission rate. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 837-843. <a href="https://doi.org/10.18280/ts.380330">https://doi.org/10.18280/ts.380330</a>
856	Yu, J.Y., Bai, X.J.	Analysis of Classroom Learning Behaviors Based on Internet of Things and Image Processing	bimodal emotion identification, Internet of things (IoT), countenances, electroencephalogram (EEG)	38, 3, 845-851	<a href="https://doi.org/10.18280/ts.380331">https://doi.org/10.18280/ts.380331</a>	Yu, J.Y., Bai, X.J. (2021). Analysis of classroom learning behaviors based on internet of things and image processing. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 845-851. <a href="https://doi.org/10.18280/ts.380331">https://doi.org/10.18280/ts.380331</a>
857	Radhakrishnan, M., Ramamurthy, K., Choudhury, K.K., Won, D., Manoharan, T.A.	Performance Analysis of Deep Learning Models for Detection of Autism Spectrum Disorder from EEG Signals	ASD, EEG, spectrogram, deep learning, CNN, accuracy	38, 3, 853-863	<a href="https://doi.org/10.18280/ts.380332">https://doi.org/10.18280/ts.380332</a>	Radhakrishnan, M., Ramamurthy, K., Choudhury, K.K., Won, D., Manoharan, T.A. (2021). Performance analysis of deep learning models for detection of autism spectrum disorder from EEG signals. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 853-863. <a href="https://doi.org/10.18280/ts.380332">https://doi.org/10.18280/ts.380332</a>
858	Wang, S.Y.	Online Learning Behavior Analysis Based on Image Emotion Recognition	image emotion recognition, online learning, learning behavior analysis, learning emotion recognition	38, 3, 865-873	<a href="https://doi.org/10.18280/ts.380333">https://doi.org/10.18280/ts.380333</a>	Wang, S.Y. (2021). Online learning behavior analysis based on image emotion recognition. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 865-873. <a href="https://doi.org/10.18280/ts.380333">https://doi.org/10.18280/ts.380333</a>
859	Bodile, R.M., Talari, V.K.H.R.	Removal of Power-Line Interference from ECG Using Decomposition Methodologies and Kalman Filter Framework: A Comparative Study	electrocardiogram, discrete wavelet transform, power-line interference, empirical mode decomposition, Kalman filter framework	38, 3, 875-881	<a href="https://doi.org/10.18280/ts.380334">https://doi.org/10.18280/ts.380334</a>	Bodile, R.M., Talari, V.K.H.R. (2021). Removal of power-line interference from ECG using decomposition methodologies and Kalman filter framework: A comparative study. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 875-881. <a href="https://doi.org/10.18280/ts.380334">https://doi.org/10.18280/ts.380334</a>
860	Janga, V., Edara, S.R.	Epilepsy and Seizure Detection Using JLTm Based ICFFA and Multiclass SVM Classifier	MSVM, firefly optimization, seizure prediction, EEG, discrete wavelet transform (DWT), chaotic maps, JLTm	38, 3, 883-893	<a href="https://doi.org/10.18280/ts.380335">https://doi.org/10.18280/ts.380335</a>	Janga, V., Edara, S.R. (2021). Epilepsy and seizure detection using JLTm based ICFFA and multiclass SVM classifier. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 883-893. <a href="https://doi.org/10.18280/ts.380335">https://doi.org/10.18280/ts.380335</a>
861	Qi, R.Q., Liu, Z.Q.	Extraction and Classification of Image Features for Fire Recognition Based on Convolutional Neural Network	fire recognition, convolutional neural network (CNN), flame feature extraction, smoke feature extraction	38, 3, 895-902	<a href="https://doi.org/10.18280/ts.380336">https://doi.org/10.18280/ts.380336</a>	Qi, R.Q., Liu, Z.Q. (2021). Extraction and classification of image features for fire recognition based on convolutional neural network. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 895-902. <a href="https://doi.org/10.18280/ts.380336">https://doi.org/10.18280/ts.380336</a>
862	Naralasetti, V., Shaik, R.K., Katepalli, G., Bodapati, J.D.	Deep Learning Models for Pneumonia Identification and Classification Based on X-Ray Images	Convolutional Neural Network, Pneumonia Prediction, RELU, Sigmoid, Softmax, Deep Neural Network	38, 3, 903-909	<a href="https://doi.org/10.18280/ts.380337">https://doi.org/10.18280/ts.380337</a>	Naralasetti, V., Shaik, R.K., Katepalli, G., Bodapati, J.D. (2021). Deep learning models for pneumonia identification and classification based on X-ray images. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 903-909. <a href="https://doi.org/10.18280/ts.380337">https://doi.org/10.18280/ts.380337</a>
863	Zhao, N.Y., Jiang, Y., Song, Y.	Recognition and Classification of Concrete Cracks under Strong Interference Based on Convolutional Neural Network	concrete cracks, image classification, convolutional neural network (CNN), block attention module	38, 3, 911-917	<a href="https://doi.org/10.18280/ts.380338">https://doi.org/10.18280/ts.380338</a>	Zhao, N.Y., Jiang, Y., Song, Y. (2021). Recognition and classification of concrete cracks under strong interference based on convolutional neural network. <i>Traitement du Signal</i> , Vol. 38, No. 3, pp. 911-917. <a href="https://doi.org/10.18280/ts.380338">https://doi.org/10.18280/ts.380338</a>
864	Abas, A.I., Baykan, N.A.	Multi-Focus Image Fusion with Multi-Scale Transform Optimized by Metaheuristic Algorithms	particle swarm optimization, bat algorithm, Laplacian pyramid, curvelet transform, image fusion	38, 2, 247-259	<a href="https://doi.org/10.18280/ts.380201">https://doi.org/10.18280/ts.380201</a>	Abas, A.I., Baykan, N.A. (2021). Multi-focus image fusion with multi-scale transform optimized by metaheuristic algorithms. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 247-259. <a href="https://doi.org/10.18280/ts.380201">https://doi.org/10.18280/ts.380201</a>

865	Hrisca-Eva, O.D., Lazar, A.M.	Multi-Sessions Outcome for EEG Feature Extraction and Classification Methods in a Motor Imagery Task	electroencephalogram, motor imagery, features extraction, autoregressive process, amplitude modulation, phase synchronization, classification algorithms	38, 2, 261-268	<a href="https://doi.org/10.18280/ts.380202">https://doi.org/10.18280/ts.380202</a>	Hrisca-Eva, O.D., Lazar, A.M. (2021). Multi-sessions outcome for EEG feature extraction and classification methods in a motor imagery task. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 261-268. <a href="https://doi.org/10.18280/ts.380202">https://doi.org/10.18280/ts.380202</a>
866	Özbay, E., Çınar, A., Özbay, F.A.	3D Human Activity Classification with 3D Zernike Moment Based Convolutional, LSTM-Deep Neural Networks	classification, CNN, DNN, LSTM, 3D human activity, 3D Zernike moment	38, 2, 269-280	<a href="https://doi.org/10.18280/ts.380203">https://doi.org/10.18280/ts.380203</a>	Özbay, E., Çınar, A., Özbay, F.A. (2021). 3D human activity classification with 3D Zernike Moment based convolutional, LSTM-deep neural networks. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 269-280. <a href="https://doi.org/10.18280/ts.380203">https://doi.org/10.18280/ts.380203</a>
867	Bouida, A., Khelifi, M., Beladgham, M., Hamlili, F.Z.	Monte Carlo Optimization of a Combined Image Quality Assessment for Compressed Images Evaluation	image quality assessment, combined FR-IQA, texture analysis, edge evaluation, image wavelet compression	38, 2, 281-289	<a href="https://doi.org/10.18280/ts.380204">https://doi.org/10.18280/ts.380204</a>	Bouida, A., Khelifi, M., Beladgham, M., Hamlili, F.Z. (2021). Monte Carlo optimization of a combined image quality assessment for compressed images evaluation. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 281-289. <a href="https://doi.org/10.18280/ts.380204">https://doi.org/10.18280/ts.380204</a>
868	Zhang, H.Y., Xu, D.Y., Qin, Y.B.	A Logarithmic Function-Based Novel Representation Algorithm for Image Classification	image classification, sparse representation, image representation, fusion method	38, 2, 291-297	<a href="https://doi.org/10.18280/ts.380205">https://doi.org/10.18280/ts.380205</a>	Zhang, H.Y., Xu, D.Y., Qin, Y.B. (2021). A logarithmic function-based novel representation algorithm for image classification. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 291-297. <a href="https://doi.org/10.18280/ts.380205">https://doi.org/10.18280/ts.380205</a>
869	Verma, A., Gupta, V.K., Goel, S., Akbar, Yadav, A.K., Yadav, D.	Modeling Fingerprint Presentation Attack Detection Through Transient Liveness Factor-A Person Specific Approach	transient liveness factor (TLF), presentation attack detection (PAD), open-set approach	38, 2, 299-307	<a href="https://doi.org/10.18280/ts.380206">https://doi.org/10.18280/ts.380206</a>	Verma, A., Gupta, V.K., Goel, S., Akbar, Yadav, A.K., Yadav, D. (2021). Modeling fingerprint presentation attack detection through Transient Liveness Factor-A person specific approach. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 299-307. <a href="https://doi.org/10.18280/ts.380206">https://doi.org/10.18280/ts.380206</a>
870	Elaraby, A., Elansary, I.	A Framework for Multi-Threshold Image Segmentation of Low Contrast Medical Images	medical image, segmentation, fuzzy hill entropy, differential evolution	38, 2, 309-314	<a href="https://doi.org/10.18280/ts.380207">https://doi.org/10.18280/ts.380207</a>	Elaraby, A., Elansary, I. (2021). A framework for multi-threshold image segmentation of low contrast medical images. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 309-314. <a href="https://doi.org/10.18280/ts.380207">https://doi.org/10.18280/ts.380207</a>
871	Jiang, F.C., Zhang, H.Y., Zhu, C.	Three-Dimensional Target Detection Based on RGB-D Data	indoor RGB-D data, target detection, detection accuracy, frustum PointNet (F-PointNet)	38, 2, 315-320	<a href="https://doi.org/10.18280/ts.380208">https://doi.org/10.18280/ts.380208</a>	Jiang, F.C., Zhang, H.Y., Zhu, C. (2021). Three-dimensional target detection based on RGB-D data. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 315-320. <a href="https://doi.org/10.18280/ts.380208">https://doi.org/10.18280/ts.380208</a>
872	Trimech, I.H., Maalej, A., Amara, N.E.B.	Facial Expression Recognition Using 3D Points Aware Deep Neural Network	3D facial expression recognition (3D FER), facial expression synthesis, facial surface representation, 3D point-based deep neural network (DNN)	38, 2, 321-330	<a href="https://doi.org/10.18280/ts.380209">https://doi.org/10.18280/ts.380209</a>	Trimech, I.H., Maalej, A., Amara, N.E.B. (2021). Facial expression recognition using 3D points aware deep neural network. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 321-330. <a href="https://doi.org/10.18280/ts.380209">https://doi.org/10.18280/ts.380209</a>
873	Baykara, M., Abdulrahman, A.	Seizure Detection Based on Adaptive Feature Extraction by Applying Extreme Learning Machines	adaptive feature, EEG, extreme learning machines, pattern recognition, seizure detection	38, 2, 331-340	<a href="https://doi.org/10.18280/ts.380210">https://doi.org/10.18280/ts.380210</a>	Baykara, M., Abdulrahman, A. (2021). Seizure detection based on adaptive feature extraction by applying extreme learning machines. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 331-340. <a href="https://doi.org/10.18280/ts.380210">https://doi.org/10.18280/ts.380210</a>
874	Ying, B.Y., Xu, Y.C., Zhang, S., Shi, Y.G., Liu, L.	Weed Detection in Images of Carrot Fields Based on Improved YOLO v4	YOLO v4, weed detection, carrot seedlings, attention mechanism	38, 2, 341-348	<a href="https://doi.org/10.18280/ts.380211">https://doi.org/10.18280/ts.380211</a>	Ying, B.Y., Xu, Y.C., Zhang, S., Shi, Y.G., Liu, L. (2021). Weed detection in images of carrot fields based on improved YOLO v4. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 341-348. <a href="https://doi.org/10.18280/ts.380211">https://doi.org/10.18280/ts.380211</a>
875	Dendani, B., Bahi, H., Sari, T.	Self-Supervised Speech Enhancement for Arabic Speech Recognition in Real-World Environments	Arabic language, deep autoencoder, deep learning, self-supervised speech enhancement, speech recognition, ubiquitous systems	38, 2, 349-358	<a href="https://doi.org/10.18280/ts.380212">https://doi.org/10.18280/ts.380212</a>	Dendani, B., Bahi, H., Sari, T. (2021). Self-supervised speech enhancement for Arabic speech recognition in real-world environments. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 349-358. <a href="https://doi.org/10.18280/ts.380212">https://doi.org/10.18280/ts.380212</a>
876	Li, P., Zhou, Z.J., Liu, Q.J., Sun, X.Y., Chen, F.M., Xue, W.	Machine Learning-Based Emotional Recognition in Surveillance Video Images in the Context of Smart City Safety	machine learning (ML), convolutional neural network (CNN), face expression identification, emotional identification, smart city safety	38, 2, 359-368	<a href="https://doi.org/10.18280/ts.380213">https://doi.org/10.18280/ts.380213</a>	Li, P., Zhou, Z.J., Liu, Q.J., Sun, X.Y., Chen, F.M., Xue, W. (2021). Machine learning-based emotional recognition in surveillance video images in the context of smart city safety. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 359-368. <a href="https://doi.org/10.18280/ts.380213">https://doi.org/10.18280/ts.380213</a>
877	Ekim, G., Atasoy, A., İkizler, N.	A New Approach for Eye-Blink to Speech Conversion by Dynamic Time Warping	amyotrophic lateral sclerosis, dynamic time warping, eye-blink detection, eye-blink to speech	38, 2, 369-377	<a href="https://doi.org/10.18280/ts.380214">https://doi.org/10.18280/ts.380214</a>	Ekim, G., Atasoy, A., İkizler, N. (2021). A new approach for eye-blink to speech conversion by dynamic time warping. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 369-377. <a href="https://doi.org/10.18280/ts.380214">https://doi.org/10.18280/ts.380214</a>
878	Darapureddy, N., Karatapu, N., Battula, T.K.	Comparative Analysis of Texture Patterns on Mammograms for Classification	texture patterns, classification, machine learning algorithms, accuracy, local binary pattern variants, mammograms, local directional order pattern, local wavelet pattern	38, 2, 379-386	<a href="https://doi.org/10.18280/ts.380215">https://doi.org/10.18280/ts.380215</a>	Darapureddy, N., Karatapu, N., Battula, T.K. (2021). Comparative analysis of texture patterns on mammograms for classification. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 379-386. <a href="https://doi.org/10.18280/ts.380215">https://doi.org/10.18280/ts.380215</a>
879	Hua, J., Xiao, Q.K., Wang, L., Liu, Y.X., Ning, X.H.	Recognition of Electromyographic Signal Time Series on Daily Hand Motions Based on Long Short-Term Memory Network	surface electromyographic (sEMG) signals, EMG signal analysis, long short-term memory (LSTM), action recognition	38, 2, 387-394	<a href="https://doi.org/10.18280/ts.380216">https://doi.org/10.18280/ts.380216</a>	Hua, J., Xiao, Q.K., Wang, L., Liu, Y.X., Ning, X.H. (2021). Recognition of electromyographic signal time series on daily hand motions based on long short-term memory network. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 387-394. <a href="https://doi.org/10.18280/ts.380216">https://doi.org/10.18280/ts.380216</a>
880	Wang, H.L., Wu, F., Zhang, L.	Fault Diagnosis of Rolling Bearings Based on Improved Empirical Mode Decomposition and Fuzzy C-Means Algorithm	rolling bearings, variational modal decomposition (VMD), fuzzy C-means (FCM) algorithm, fault identification	38, 2, 395-400	<a href="https://doi.org/10.18280/ts.380217">https://doi.org/10.18280/ts.380217</a>	Wang, H.L., Wu, F., Zhang, L. (2021). Fault diagnosis of rolling bearings based on improved empirical mode decomposition and fuzzy C-means algorithm. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 395-400. <a href="https://doi.org/10.18280/ts.380217">https://doi.org/10.18280/ts.380217</a>
881	Ekmen, Ş., Karadoğan, C., Şeker, Ş.S.	Investigation of Timbral Qualities of Guitar Using Wavelet Analysis	wavelet analysis, digital signal processing, continuous wavelet transform, wavelet packet transform, guitar analysis, timbre, piezo-film sensors	38, 2, 401-411	<a href="https://doi.org/10.18280/ts.380218">https://doi.org/10.18280/ts.380218</a>	Ekmen, Ş., Karadoğan, C., Şeker, Ş.S. (2021). Investigation of timbral qualities of guitar using wavelet analysis. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 401-411. <a href="https://doi.org/10.18280/ts.380218">https://doi.org/10.18280/ts.380218</a>
882	Patchala, S., Maruvada, S.	Filter Bank Multi Carrier Signal System for Frequency Selective Channels	FBMC, MIMO, OFDM, multicarrier regulation frameworks, noise aggravations, spectrum	38, 2, 413-420	<a href="https://doi.org/10.18280/ts.380219">https://doi.org/10.18280/ts.380219</a>	Patchala, S., Maruvada, S. (2021). Filter bank multi carrier signal system for frequency selective channels. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 413-420. <a href="https://doi.org/10.18280/ts.380219">https://doi.org/10.18280/ts.380219</a>

883	He, Y.J.	Fast Job Recognition and Sorting Based on Image Processing	image processing, fast job recognition, job sorting, echo state network (ESN)	38, 2, 421-429	<a href="https://doi.org/10.18280/ts.380220">https://doi.org/10.18280/ts.380220</a>	He, Y.J. (2021). Fast job recognition and sorting based on image processing. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 421-429. <a href="https://doi.org/10.18280/ts.380220">https://doi.org/10.18280/ts.380220</a>
884	Gurralla, V., Yarlagadda, P., Koppireddi, P.	Detection of Sleep Apnea Based on the Analysis of Sleep Stages Data Using Single Channel EEG	electroencephalogram (EEG), sleep stages, sleep disorders, sleep apnea, machine learning classifiers	38, 2, 431-436	<a href="https://doi.org/10.18280/ts.380221">https://doi.org/10.18280/ts.380221</a>	Gurralla, V., Yarlagadda, P., Koppireddi, P. (2021). Detection of sleep apnea based on the analysis of sleep stages data using single channel EEG. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 431-436. <a href="https://doi.org/10.18280/ts.380221">https://doi.org/10.18280/ts.380221</a>
885	Ervural, S., Ceylan, M.	Convolutional Neural Networks-Based Approach to Detect Neonatal Respiratory System Anomalies with Limited Thermal Image	convolutional neural networks, data augmentation, infrared thermography, neonatal disease classification, pre-diagnosis system, respiratory system anomalies	38, 2, 437-442	<a href="https://doi.org/10.18280/ts.380222">https://doi.org/10.18280/ts.380222</a>	Ervural, S., Ceylan, M. (2021). Convolutional neural networks-based approach to detect neonatal respiratory system anomalies with limited thermal image. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 437-442. <a href="https://doi.org/10.18280/ts.380222">https://doi.org/10.18280/ts.380222</a>
886	Raju, M.N., Natarajan, K., Vasamsetty, C.S.	Object Recognition in Remote Sensing Images Based on Modified Backpropagation Neural Network	remote sensing, object detection, neural network, deep learning, image data	38, 2, 451-459	<a href="https://doi.org/10.18280/ts.380224">https://doi.org/10.18280/ts.380224</a>	Raju, M.N., Natarajan, K., Vasamsetty, C.S. (2021). Object recognition in remote sensing images based on modified backpropagation neural network. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 451-459. <a href="https://doi.org/10.18280/ts.380224">https://doi.org/10.18280/ts.380224</a>
887	Padhee, S., Nandan, D.	Design of Automated Visual Inspection System for Beverage Industry Production Line	automated visual inspection system, coverage industry production line, visual inspection, image processing	38, 2, 461-466	<a href="https://doi.org/10.18280/ts.380225">https://doi.org/10.18280/ts.380225</a>	Padhee, S., Nandan, D. (2021). Design of automated visual inspection system for beverage industry production line. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 461-466. <a href="https://doi.org/10.18280/ts.380225">https://doi.org/10.18280/ts.380225</a>
888	Wang, X.	Recognition and Positioning of Container Lock Holes for Intelligent Handling Terminal Based on Convolutional Neural Network	convolutional neural network (CNN), feature extraction, target detection, sliding window, automated terminal	38, 2, 467-472	<a href="https://doi.org/10.18280/ts.380226">https://doi.org/10.18280/ts.380226</a>	Wang, X. (2021). Recognition and positioning of container lock holes for intelligent handling terminal based on convolutional neural network. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 467-472. <a href="https://doi.org/10.18280/ts.380226">https://doi.org/10.18280/ts.380226</a>
889	Gupta, A.K., Chakraborty, C., Gupta, B.	Secure Transmission of EEG Data Using Watermarking Algorithm for the Detection of Epileptical Seizures	DWT-DCT-BFO, EEG, healthcare, Internet of Things, patients monitoring, short time Fourier transform, watermarking	38, 2, 473-479	<a href="https://doi.org/10.18280/ts.380227">https://doi.org/10.18280/ts.380227</a>	Gupta, A.K., Chakraborty, C., Gupta, B. (2021). Secure transmission of EEG data using watermarking algorithm for the detection of epileptical seizures. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 473-479. <a href="https://doi.org/10.18280/ts.380227">https://doi.org/10.18280/ts.380227</a>
890	Guan, Y.R., Aamir, M., Hu, Z.H., Abro, W.A., Rahman, Z., Dayo, Z.A., Akram, S.	A Region-Based Efficient Network for Accurate Object Detection	object detection, object classification, proposal generation, proposal refinement, proposal classification	38, 2, 481-494	<a href="https://doi.org/10.18280/ts.380228">https://doi.org/10.18280/ts.380228</a>	Guan, Y.R., Aamir, M., Hu, Z.H., Abro, W.A., Rahman, Z., Dayo, Z.A., Akram, S. (2021). A region-based efficient network for accurate object detection. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 481-494. <a href="https://doi.org/10.18280/ts.380228">https://doi.org/10.18280/ts.380228</a>
891	Kumar, I., Mishra, R.K.	An Investigation of Spectral Efficiency in Linear MRC and MMSE Detectors with Perfect and Imperfect CSI for Massive MIMO Systems	channel capacity, maximum-ratio combining, minimum mean square error, MU multiple input multiple output, spectral efficiency, massive multiple input multiple output	38, 2, 495-501	<a href="https://doi.org/10.18280/ts.380229">https://doi.org/10.18280/ts.380229</a>	Kumar, I., Mishra, R.K. (2021). An investigation of spectral efficiency in linear MRC and MMSE detectors with perfect and imperfect CSI for massive MIMO systems. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 495-501. <a href="https://doi.org/10.18280/ts.380229">https://doi.org/10.18280/ts.380229</a>
892	Zou, J., Zhang, C., Ma, Z.J.	An Image Classification Algorithm for Plantar Pressure Based on Convolutional Neural Network	plantar pressure (PP) analysis, convolutional neural network (CNN), feature selection, feature extraction	38, 2, 503-511	<a href="https://doi.org/10.18280/ts.380230">https://doi.org/10.18280/ts.380230</a>	Zou, J., Zhang, C., Ma, Z.J. (2021). An image classification algorithm for plantar pressure based on convolutional neural network. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 503-511. <a href="https://doi.org/10.18280/ts.380230">https://doi.org/10.18280/ts.380230</a>
893	Huang, Q.H.	An Image Sharpness Enhancement Algorithm Based on Green Function	image enhancement, green function, Poisson equation, gradient domain	38, 2, 513-519	<a href="https://doi.org/10.18280/ts.380231">https://doi.org/10.18280/ts.380231</a>	Huang, Q.H. (2021). An image sharpness enhancement algorithm based on green function. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 513-519. <a href="https://doi.org/10.18280/ts.380231">https://doi.org/10.18280/ts.380231</a>
894	Sadanandam, M.	HMM Based Language Identification from Speech Utterances of Popular Indic Languages Using Spectral and Prosodic Features	Language Identification System (LID), acoustic features, prosodic features, HMM, Indian spoken languages, pitch and MFCC	38, 2, 521-528	<a href="https://doi.org/10.18280/ts.380232">https://doi.org/10.18280/ts.380232</a>	Sadanandam, M. (2021). HMM based language identification from speech utterances of popular Indic languages using spectral and prosodic features. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 521-528. <a href="https://doi.org/10.18280/ts.380232">https://doi.org/10.18280/ts.380232</a>
895	Zhu, F.L., Zhu, R.C.	Dance Action Recognition and Pose Estimation Based on Deep Convolutional Neural Network	Language Identification System (LID), acoustic features, prosodic features, HMM, Indian spoken languages, pitch and MFCC	38, 2, 529-538	<a href="https://doi.org/10.18280/ts.380233">https://doi.org/10.18280/ts.380233</a>	Zhu, F.L., Zhu, R.C. (2021). Dance action recognition and pose estimation based on deep convolutional neural network. <i>Traitement du Signal</i> , Vol. 38, No. 2, pp. 529-538. <a href="https://doi.org/10.18280/ts.380233">https://doi.org/10.18280/ts.380233</a>
896	İş, H., Tuncer, T.	A Profile Analysis of User Interaction in Social Media Using Deep Learning	social media analysis, interaction evaluation, deep learning, profile analysis	38, 1, 1-11	<a href="https://doi.org/10.18280/ts.380101">https://doi.org/10.18280/ts.380101</a>	İş, H., Tuncer, T. (2021). A profile analysis of user interaction in social media using deep learning. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 1-11. <a href="https://doi.org/10.18280/ts.380101">https://doi.org/10.18280/ts.380101</a>
897	Akbari, H., Sadiq, M.T., Payan, M., Esmaili, S.S., Baghri, H., Bagheri, H.	Depression Detection Based on Geometrical Features Extracted from SODP Shape of EEG Signals and Binary PSO	electroencephalogram signal, depression, second-order differential plot, geometrical features, EEG classification	38, 1, 13-26	<a href="https://doi.org/10.18280/ts.380102">https://doi.org/10.18280/ts.380102</a>	Akbari, H., Sadiq, M.T., Payan, M., Esmaili, S.S., Baghri, H., Bagheri, H. (2021). Depression detection based on geometrical features extracted from SODP shape of EEG signals and binary PSO. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 13-26. <a href="https://doi.org/10.18280/ts.380102">https://doi.org/10.18280/ts.380102</a>
898	Zhu, J.C., Zhao, S.J., Wu, D.	Classification of Remote Sensing Images Through Reweighted Sparse Subspace Representation Using Compressed Data	coherence-based coded aperture, reweighted sparse subspace clustering (RSSC), spectral image clustering	38, 1, 27-37	<a href="https://doi.org/10.18280/ts.380103">https://doi.org/10.18280/ts.380103</a>	Zhu, J.C., Zhao, S.J., Wu, D. (2021). Classification of remote sensing images through reweighted sparse subspace representation using compressed data. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 27-37. <a href="https://doi.org/10.18280/ts.380103">https://doi.org/10.18280/ts.380103</a>
899	Al-Ameen, Z.	Contrast Enhancement of Digital Images Using an Improved Type-II Fuzzy Set-Based Algorithm	contrast enhancement, type-II fuzzy, color image, image enhancement, grayscale image, image processing	38, 1, 39-50	<a href="https://doi.org/10.18280/ts.380104">https://doi.org/10.18280/ts.380104</a>	Al-Ameen, Z. (2021). Contrast enhancement of digital images using an improved type-II fuzzy set-based algorithm. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 39-50. <a href="https://doi.org/10.18280/ts.380104">https://doi.org/10.18280/ts.380104</a>
900	Ergin, S., Isik, S., Gulmezoglu, M.B.	Face Recognition by Using 2D Orthogonal Subspace Projections	face recognition, common matrix approach, support vector machine, convolutional neural networks, 2D feature extraction	38, 1, 51-60	<a href="https://doi.org/10.18280/ts.380105">https://doi.org/10.18280/ts.380105</a>	Ergin, S., Isik, S., Gulmezoglu, M.B. (2021). Face recognition by using 2D orthogonal subspace projections. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 51-60. <a href="https://doi.org/10.18280/ts.380105">https://doi.org/10.18280/ts.380105</a>



901	Zhang, X.R., Chen, G.	Detection of Dense Small Rigid Targets Based on Convolutional Neural Network and Synthetic Images	target recognition, artificial data, rice planthoppers, deep learning (DL), convolutional neural network (CNN), faster region-based CNN (Faster-RCNN)	38, 1, 61-71	<a href="https://doi.org/10.18280/ts.380106">https://doi.org/10.18280/ts.380106</a>	Zhang, X.R., Chen, G. (2021). Detection of dense small rigid targets based on convolutional neural network and synthetic images. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 61-71. <a href="https://doi.org/10.18280/ts.380106">https://doi.org/10.18280/ts.380106</a>
902	Hadiyoso, S., Wijayanto, I., Humairani, A.	Signal Dynamics Analysis for Epileptic Seizure Classification on EEG Signals	epilepsy, EEG, dynamics, entropy, fractal, Naïve Bayes	38, 1, 73-78	<a href="https://doi.org/10.18280/ts.380107">https://doi.org/10.18280/ts.380107</a>	Hadiyoso, S., Wijayanto, I., Humairani, A. (2021). Signal dynamics analysis for epileptic seizure classification on EEG signals. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 73-78. <a href="https://doi.org/10.18280/ts.380107">https://doi.org/10.18280/ts.380107</a>
903	Wagle, S.A., R, H.	Comparison of Plant Leaf Classification Using Modified AlexNet and Support Vector Machine	AlexNet, convolutional neural network, support vector machine	38, 1, 79-87	<a href="https://doi.org/10.18280/ts.380108">https://doi.org/10.18280/ts.380108</a>	Wagle, S.A., R, H. (2021). Comparison of plant leaf classification using modified AlexNet and support vector machine. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 79-87. <a href="https://doi.org/10.18280/ts.380108">https://doi.org/10.18280/ts.380108</a>
904	Xie, Y.F., Zhang, S., Liu, Y.D.	Abnormal Behavior Recognition in Classroom Pose Estimation of College Students Based on Spatiotemporal Representation Learning	artificial intelligence, college students, pose estimation, spatiotemporal representation learning, k-means clustering (KMC), convolutional neural network (CNN)	38, 1, 89-95	<a href="https://doi.org/10.18280/ts.380109">https://doi.org/10.18280/ts.380109</a>	Xie, Y.F., Zhang, S., Liu, Y.D. (2021). Abnormal behavior recognition in classroom pose estimation of college students based on spatiotemporal representation learning. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 89-95. <a href="https://doi.org/10.18280/ts.380109">https://doi.org/10.18280/ts.380109</a>
905	Amrane, R., Brik, Y., Zeghlache, S., Ladjal, M., Chicouche, D.	Sampling Rate Optimization for Improving the Cascaded Integrator Comb Filter Characteristics	CIC filter, FIR, frequency response, optimization, sampling rate, filter sharpening	38, 1, 97-103	<a href="https://doi.org/10.18280/ts.380110">https://doi.org/10.18280/ts.380110</a>	Amrane, R., Brik, Y., Zeghlache, S., Ladjal, M., Chicouche, D. (2021). Sampling rate optimization for improving the cascaded integrator comb filter characteristics. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 97-103. <a href="https://doi.org/10.18280/ts.380110">https://doi.org/10.18280/ts.380110</a>
906	Xiao, L.Q.	Design and Optimization of a Finite Element Model for Electrical Resistance Tomography of Human Lungs	human lungs, electrical resistance tomography (ERT), finite element model, forward problem, sensitivity matrix, image reconstruction	38, 1, 105-113	<a href="https://doi.org/10.18280/ts.380111">https://doi.org/10.18280/ts.380111</a>	Xiao, L.Q. (2021). Design and optimization of a finite element model for electrical resistance tomography of human lungs. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 105-113. <a href="https://doi.org/10.18280/ts.380111">https://doi.org/10.18280/ts.380111</a>
907	Dikmen, O., Kulaç, S.	Investigation of Ideal Number User Terminals with Spectrum Efficiency in Next Generation Wireless Communication Systems	massive MIMO, spectrum efficiency, multicellular system, user equipment, pilot reuse factor, 6G	38, 1, 115-126	<a href="https://doi.org/10.18280/ts.380112">https://doi.org/10.18280/ts.380112</a>	Dikmen, O., Kulaç, S. (2021). Investigation of ideal number user terminals with spectrum efficiency in next generation wireless communication systems. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 115-126. <a href="https://doi.org/10.18280/ts.380112">https://doi.org/10.18280/ts.380112</a>
908	Lin, C., Xu, X.P.	An Electronic Bill Encryption Algorithm Based on Multiple Watermark Encryption	digital image watermarking, multiple watermark encryption, electronic bill	38, 1, 127-133	<a href="https://doi.org/10.18280/ts.380113">https://doi.org/10.18280/ts.380113</a>	Lin, C., Xu, X.P. (2021). An electronic bill encryption algorithm based on multiple watermark encryption. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 127-133. <a href="https://doi.org/10.18280/ts.380113">https://doi.org/10.18280/ts.380113</a>
909	Thazeen, S., Mallikarjunaswamy, S., Siddesh, G.K., Sharmila, N.	Conventional and Subspace Algorithms for Mobile Source Detection and Radiation Formation	the direction of arrival, beamforming, mobile source detection, radiation formation	38, 1, 135-145	<a href="https://doi.org/10.18280/ts.380114">https://doi.org/10.18280/ts.380114</a>	Thazeen, S., Mallikarjunaswamy, S., Siddesh, G.K., Sharmila, N. (2021). Conventional and subspace algorithms for mobile source detection and radiation formation. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 135-145. <a href="https://doi.org/10.18280/ts.380114">https://doi.org/10.18280/ts.380114</a>
910	Özyurt, F.	Automatic Detection of COVID-19 Disease by Using Transfer Learning of Light Weight Deep Learning Model	COVID-19, deep learning, Shufflenet, transfer learning, feature reduction	38, 1, 147-153	<a href="https://doi.org/10.18280/ts.380115">https://doi.org/10.18280/ts.380115</a>	Özyurt, F. (2021). Automatic detection of COVID-19 disease by using transfer learning of light weight deep learning model. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 147-153. <a href="https://doi.org/10.18280/ts.380115">https://doi.org/10.18280/ts.380115</a>
911	Li, S.L., Chai, H.Q.	Recognition of Teaching Features and Behaviors in Online Open Courses Based on Image Processing	image processing, online open courses, teaching features, teaching behavior recognition	38, 1, 155-164	<a href="https://doi.org/10.18280/ts.380116">https://doi.org/10.18280/ts.380116</a>	Li, S.L., Chai, H.Q. (2021). Recognition of teaching features and behaviors in online open courses based on image processing. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 155-164. <a href="https://doi.org/10.18280/ts.380116">https://doi.org/10.18280/ts.380116</a>
912	Çınar, A., Yıldırım, M., Eroğlu, Y.	Classification of Pneumonia Cell Images Using Improved ResNet50 Model	CNN, deep learning, machine learning, Pneumonia, transfer learning	38, 1, 165-173	<a href="https://doi.org/10.18280/ts.380117">https://doi.org/10.18280/ts.380117</a>	Çınar, A., Yıldırım, M., Eroğlu, Y. (2021). Classification of pneumonia cell images using improved ResNet50 model. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 165-173. <a href="https://doi.org/10.18280/ts.380117">https://doi.org/10.18280/ts.380117</a>
913	Hadiyoso, S., Rizal, A.	Empirical Mode Decomposition and Grey Level Difference for Lung Sound Classification	lung sound, EMD, GLD, MLP	38, 1, 175-179	<a href="https://doi.org/10.18280/ts.380118">https://doi.org/10.18280/ts.380118</a>	Hadiyoso, S., Rizal, A. (2021). Empirical mode decomposition and grey level difference for lung sound classification. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 175-179. <a href="https://doi.org/10.18280/ts.380118">https://doi.org/10.18280/ts.380118</a>
914	Wei, Z.F., Zhang, X.H.	Feature Extraction and Retrieval of Ecommerce Product Images Based on Image Processing	image processing, ecommerce, image feature extraction, image retrieval	38, 1, 181-190	<a href="https://doi.org/10.18280/ts.380119">https://doi.org/10.18280/ts.380119</a>	Wei, Z.F., Zhang, X.H. (2021). Feature extraction and retrieval of ecommerce product images based on image processing. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 181-190. <a href="https://doi.org/10.18280/ts.380119">https://doi.org/10.18280/ts.380119</a>
915	Pendyala, G.K.V., Kalluri, H.K., Rao, V.C.	An Efficient Multi-stage Object-Based Classification to Extract Urban Building Footprints from HR Satellite Images	nDSM, NDVI, object-based classification, thresholding, urban building classification	38, 1, 191-196	<a href="https://doi.org/10.18280/ts.380120">https://doi.org/10.18280/ts.380120</a>	Pendyala, G.K.V., Kalluri, H.K., Rao, V.C. (2021). An efficient multi-stage object-based classification to extract urban building footprints from HR satellite images. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 191-196. <a href="https://doi.org/10.18280/ts.380120">https://doi.org/10.18280/ts.380120</a>
916	Zhang, Q., Liu, Y., Liu, L., Lu, S., Feng, Y.X., Yu, X.	Location Identification and Personalized Recommendation of Tourist Attractions Based on Image Processing	image processing, tourist attractions, location identification, personalized recommendation	38, 1, 197-205	<a href="https://doi.org/10.18280/ts.380121">https://doi.org/10.18280/ts.380121</a>	Zhang, Q., Liu, Y., Liu, L., Lu, S., Feng, Y.X., Yu, X. (2021). Location identification and personalized recommendation of tourist attractions based on image processing. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 197-205. <a href="https://doi.org/10.18280/ts.380121">https://doi.org/10.18280/ts.380121</a>
917	Şüyun, S.B., Taşdemir, Ş., Biliş, S., Milca, A.	Using a Deep Learning System That Classifies Hypertensive Retinopathy Based on the Fundus Images of Patients of Wide Age	hypertensive retinopathy, convolutional neural networks, deep learning, fundus images, eye diseases, macular degeneration	38, 1, 207-213	<a href="https://doi.org/10.18280/ts.380122">https://doi.org/10.18280/ts.380122</a>	Şüyun, S.B., Taşdemir, Ş., Biliş, S., Milca, A. (2021). Using a deep learning system that classifies hypertensive retinopathy based on the fundus images of patients of wide age. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 207-213. <a href="https://doi.org/10.18280/ts.380122">https://doi.org/10.18280/ts.380122</a>
918	Wu, B., Wang, C.M., Huang, W., Huang, D., Peng, H.	Recognition of Student Classroom Behaviors Based on Moving Target Detection	image processing, behavior recognition, moving target detection, image segmentation, student classroom behaviors	38, 1, 215-220	<a href="https://doi.org/10.18280/ts.380123">https://doi.org/10.18280/ts.380123</a>	Wu, B., Wang, C.M., Huang, W., Huang, D., Peng, H. (2021). Recognition of student classroom behaviors based on moving target detection. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 215-220. <a href="https://doi.org/10.18280/ts.380123">https://doi.org/10.18280/ts.380123</a>

919	Nair, A.M.S.U., Savithri, S.P.	Classification of Pitch and Gender of Speakers for Forensic Speaker Recognition from Disguised Voices Using Novel Features Learned by Deep Convolutional Neural Networks	deep convolutional neural network, FASR, Mel-spectrogram, MFCC, pitch disguise	38, 1, 221-230	<a href="https://doi.org/10.18280/ts.380124">https://doi.org/10.18280/ts.380124</a>	Nair, A.M.S.U., Savithri, S.P. (2021). Classification of pitch and gender of speakers for forensic speaker recognition from disguised voices using novel features learned by deep convolutional neural networks. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 221-230. <a href="https://doi.org/10.18280/ts.380124">https://doi.org/10.18280/ts.380124</a>
920	Chen, L., Ding, J.F.	Analysis on Food Crispness Based on Time and Frequency Domain Features of Acoustic Signal	food crispness, acoustic signal, wavelet denoising, backpropagation (BP) neural network	38, 1, 231-238	<a href="https://doi.org/10.18280/ts.380125">https://doi.org/10.18280/ts.380125</a>	Chen, L., Ding, J.F. (2021). Analysis on food crispness based on time and frequency domain features of acoustic signal. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 231-238. <a href="https://doi.org/10.18280/ts.380125">https://doi.org/10.18280/ts.380125</a>
921	Krishna, K.V.S.S.R., Chaitanya, K., Subhashini, P.P.S., Yampara, R., Kanumalli, S.S.	Classification of Glaucoma Optical Coherence Tomography (OCT) Images Based on Blood Vessel Identification Using CNN and Firefly Optimization	convolutional neural network (CNN), firefly optimization, glaucoma, blood vessel	38, 1, 239-245	<a href="https://doi.org/10.18280/ts.380126">https://doi.org/10.18280/ts.380126</a>	Krishna, K.V.S.S.R., Chaitanya, K., Subhashini, P.P.S., Yampara, R., Kanumalli, S.S. (2021). Classification of glaucoma Optical Coherence Tomography (OCT) images based on blood vessel identification using CNN and firefly optimization. <i>Traitement du Signal</i> , Vol. 38, No. 1, pp. 239-245. <a href="https://doi.org/10.18280/ts.380126">https://doi.org/10.18280/ts.380126</a>
922	Rabah, C.B., Coatrieux, G., Abdelfattah, R.	Boosting up source scanner identification using wavelets and convolutional neural networks	conventional neural networks, digital content forensics, image wavelet analysis, source scanner identification	37, 6, 881-888	<a href="https://doi.org/10.18280/ts.370601">https://doi.org/10.18280/ts.370601</a>	Rabah, C.B., Coatrieux, G., Abdelfattah, R. (2020). Boosting up source scanner identification using wavelets and convolutional neural networks. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 881-888. <a href="https://doi.org/10.18280/ts.370601">https://doi.org/10.18280/ts.370601</a>
923	Herbadji, A., Guermat, N., Ziet, L., Akhtar, Z., Cheniti, M., Herbadji, D.	Contactless multi-biometric system using fingerprint and palmprint selfies	COVID-19, multi-biometrics, score fusion, contactless fingerprint, contactless palmprint, BSIF, person authentication	37, 6, 889-897	<a href="https://doi.org/10.18280/ts.370602">https://doi.org/10.18280/ts.370602</a>	Herbadji, A., Guermat, N., Ziet, L., Akhtar, Z., Cheniti, M., Herbadji, D. (2020). Contactless multi-biometric system using fingerprint and palmprint selfies. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 889-897. <a href="https://doi.org/10.18280/ts.370602">https://doi.org/10.18280/ts.370602</a>
924	Vrtagić, S., Softić, E., Ponjavić, M., Stević, Ž., Subotić, M., Gmanjunath, A., Kevric, J.	Video data extraction and processing for investigation of vehicles' impact on the asphalt deformation through the prism of computational algorithms	Histogram of Oriented Gradients (HOG), machine learning, Support Vector Machines (SVM), video processing, asphalt deformation	37, 6, 899-906	<a href="https://doi.org/10.18280/ts.370603">https://doi.org/10.18280/ts.370603</a>	Vrtagić, S., Softić, E., Ponjavić, M., Stević, Ž., Subotić, M., Gmanjunath, A., Kevric, J. (2020). Video data extraction and processing for investigation of vehicles' impact on the asphalt deformation through the prism of computational algorithms. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 899-906. <a href="https://doi.org/10.18280/ts.370603">https://doi.org/10.18280/ts.370603</a>
925	Aydin, I., Kaner, S.	A new hybrid diagnosis of bearing faults based on time-frequency images and sparse representation	bearing faults, classification, extreme learning machine with sparse classifier, fault diagnosis, feature extraction, time-frequency images	37, 6, 907-918	<a href="https://doi.org/10.18280/ts.370604">https://doi.org/10.18280/ts.370604</a>	Aydin, I., Kaner, S. (2020). A new hybrid diagnosis of bearing faults based on time-frequency images and sparse representation. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 907-918. <a href="https://doi.org/10.18280/ts.370604">https://doi.org/10.18280/ts.370604</a>
926	Liu, S.H., Shi, L.L., Xu, W.Y.	Projected Wirtinger gradient descent for digital waves reconstruction	signal recovery, Hankel Matrix Completion (HMC), feasible-point algorithm, fast iterative shrinkage-thresholding (FIST) algorithm	37, 6, 919-927	<a href="https://doi.org/10.18280/ts.370605">https://doi.org/10.18280/ts.370605</a>	Liu, S.H., Shi, L.L., Xu, W.Y. (2020). Projected Wirtinger gradient descent for digital waves reconstruction. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 919-927. <a href="https://doi.org/10.18280/ts.370605">https://doi.org/10.18280/ts.370605</a>
927	Yang, X.Y., Liang, N.N., Zhou, W., Lu, H.M.	A face detection method based on skin color model and improved AdaBoost algorithm	face detection, image processing, skin color model, AdaBoost algorithm	37, 6, 929-937	<a href="https://doi.org/10.18280/ts.370606">https://doi.org/10.18280/ts.370606</a>	Yang, X.Y., Liang, N.N., Zhou, W., Lu, H.M. (2020). A face detection method based on skin color model and improved AdaBoost algorithm. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 929-937. <a href="https://doi.org/10.18280/ts.370606">https://doi.org/10.18280/ts.370606</a>
928	Sahin, M.E., Guler, H., Hamamci, S.E.	Design and realization of a hyperchaotic memristive system for communication system on FPGA	chaos, circuit implementation, communication systems, FPGA, memristor, optimization	37, 6, 939-953	<a href="https://doi.org/10.18280/ts.370607">https://doi.org/10.18280/ts.370607</a>	Sahin, M.E., Guler, H., Hamamci, S.E. (2020). Design and realization of a hyperchaotic memristive system for communication system on FPGA. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 939-953. <a href="https://doi.org/10.18280/ts.370607">https://doi.org/10.18280/ts.370607</a>
929	Nouioua, N., Seddiki, A., Ghaz, A.	Blind digital watermarking framework based on DTCWT and NSCT for telemedicine application	blind watermarking, DTCWT, NSCT, quantization, robust, telemedicine	37, 6, 955-964	<a href="https://doi.org/10.18280/ts.370608">https://doi.org/10.18280/ts.370608</a>	Nouioua, N., Seddiki, A., Ghaz, A. (2020). Blind digital watermarking framework based on DTCWT and NSCT for telemedicine application. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 955-964. <a href="https://doi.org/10.18280/ts.370608">https://doi.org/10.18280/ts.370608</a>
930	Chen, D.	Multiple linear regression of multi-class images in devices of internet of things	internet of things (IoT), multiple classes, image recognition, multiple linear regression (MLR), convolutional neural network (CNN)	37, 6, 965-973	<a href="https://doi.org/10.18280/ts.370609">https://doi.org/10.18280/ts.370609</a>	Chen, D. (2020). Multiple linear regression of multi-class images in devices of internet of things. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 965-973. <a href="https://doi.org/10.18280/ts.370609">https://doi.org/10.18280/ts.370609</a>
931	Mousavi, S., Kara, D.B., Seker, S.S.	Integrated fault evaluation through fusion algorithm supported by Kalman filter	Kalman filter, vibration signal, aging process, sensor validation, data fusion, fault detection, health information	37, 6, 975-987	<a href="https://doi.org/10.18280/ts.370610">https://doi.org/10.18280/ts.370610</a>	Mousavi, S., Kara, D.B., Seker, S.S. (2020). Integrated fault evaluation through fusion algorithm supported by Kalman filter. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 975-987. <a href="https://doi.org/10.18280/ts.370610">https://doi.org/10.18280/ts.370610</a>
932	Bhatele, K.R., Bhadauria, S.S.	Glioma segmentation and classification system based on proposed texture features extraction method and hybrid ensemble learning	Thresholding, High Grade Glioma (HGG), Low Grade Glioma (LGG), DWT (Discrete wavelet transform), LBP (Local Binary pattern), GLRLM (Gray level run length Matrix) Enhanced wavelet binary pattern run length matrix method (EWBPRL), XGBoost with Random forest (XBGRF)	37, 6, 989-1001	<a href="https://doi.org/10.18280/ts.370611">https://doi.org/10.18280/ts.370611</a>	Bhatele, K.R., Bhadauria, S.S. (2020). Glioma segmentation and classification system based on proposed texture features extraction method and hybrid ensemble learning. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 989-1001. <a href="https://doi.org/10.18280/ts.370611">https://doi.org/10.18280/ts.370611</a>
933	Yu, L., Zhang, B.L., Li, R.	Detection of unusual targets in traffic images based on one-class extreme machine learning	traffic images, multiple levels, extreme learning machine (ELM), semi-supervised learning	37, 6, 1003-1008	<a href="https://doi.org/10.18280/ts.370612">https://doi.org/10.18280/ts.370612</a>	Yu, L., Zhang, B.L., Li, R. (2020). Detection of unusual targets in traffic images based on one-class extreme machine learning. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1003-1008. <a href="https://doi.org/10.18280/ts.370612">https://doi.org/10.18280/ts.370612</a>
934	Li, Z., Han, X., Wang, L.Y., Zhu, T.Y., Yuan, F.T.	Feature extraction and image retrieval of landscape images based on image processing	landscape image, color feature extraction, image retrieval, image processing	37, 6, 1009-1018	<a href="https://doi.org/10.18280/ts.370613">https://doi.org/10.18280/ts.370613</a>	Li, Z., Han, X., Wang, L.Y., Zhu, T.Y., Yuan, F.T. (2020). Feature extraction and image retrieval of landscape images based on image processing. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1009-1018. <a href="https://doi.org/10.18280/ts.370613">https://doi.org/10.18280/ts.370613</a>
935	Saglam, A., Makineci, H.B., Baykan, Ö.K., Baykan, N.A.	Clustering-based plane refitting of non-planar patches for voxel-based 3D point cloud segmentation using k-means clustering	plane fitting, plane refitting, point cloud segmentation, plane clustering, k-means clustering, standard deviation thresholding	37, 6, 1019-1027	<a href="https://doi.org/10.18280/ts.370614">https://doi.org/10.18280/ts.370614</a>	Saglam, A., Makineci, H.B., Baykan, Ö.K., Baykan, N.A. (2020). Clustering-based plane refitting of non-planar patches for voxel-based 3D point cloud segmentation using k-means clustering. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1019-1027. <a href="https://doi.org/10.18280/ts.370614">https://doi.org/10.18280/ts.370614</a>
936	Shafiei, F., Fekri-Ershad, S.	Detection of lung cancer tumor in CT scan images using novel combination of super pixel and active contour algorithms	lung cancer tumor, CT scan images, super pixel algorithm, morphological operations, active contour	37, 6, 1029-1035	<a href="https://doi.org/10.18280/ts.370615">https://doi.org/10.18280/ts.370615</a>	Shafiei, F., Fekri-Ershad, S. (2020). Detection of lung cancer tumor in CT scan images using novel combination of super pixel and active contour algorithms. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1029-1035. <a href="https://doi.org/10.18280/ts.370615">https://doi.org/10.18280/ts.370615</a>

937	Zhang, J., Feng, M.Q., Wang, Y.	Automatic segmentation of remote sensing images on water bodies based on image enhancement	image enhancement, remote sensing image, water bodies, image segmentation, adaptive morphology	37, 6, 1037-143	<a href="https://doi.org/10.18280/ts.370616">https://doi.org/10.18280/ts.370616</a>	Zhang, J., Feng, M.Q., Wang, Y. (2020). Automatic segmentation of remote sensing images on water bodies based on image enhancement. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1037-1043. <a href="https://doi.org/10.18280/ts.370616">https://doi.org/10.18280/ts.370616</a>
938	Toraman, S.	Precital and interictal recognition for epileptic seizure prediction using pre-trained 2D-CNN models	biomedical image processing, EEG, epilepsy, precital, convolutional neural network, deep learning	37, 6, 1045-1054	<a href="https://doi.org/10.18280/ts.370617">https://doi.org/10.18280/ts.370617</a>	Toraman, S. (2020). Precital and interictal recognition for epileptic seizure prediction using pre-trained 2D-CNN models. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1045-1054. <a href="https://doi.org/10.18280/ts.370617">https://doi.org/10.18280/ts.370617</a>
939	Dong, J.F., Li, X.	An image classification algorithm of financial instruments based on convolutional neural network	financial instruments, convolutional neural network (CNN), image classification, momentum weight update, weight attenuation	37, 6, 1055-1060	<a href="https://doi.org/10.18280/ts.370618">https://doi.org/10.18280/ts.370618</a>	Dong, J.F., Li, X. (2020). An image classification algorithm of financial instruments based on convolutional neural network. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1055-1060. <a href="https://doi.org/10.18280/ts.370618">https://doi.org/10.18280/ts.370618</a>
940	Bhardwaj, L., Mishra, R.K.	Mitigating the interference caused by pilot contamination in multi-cell massive multiple input multiple output systems using low density parity check codes in uplink scenario	massive MIMO, Multi Cell MIMO, low density parity check codes (LDPC), pilot contamination, channel estimation, channel vector	37, 6, 1061-1074	<a href="https://doi.org/10.18280/ts.370619">https://doi.org/10.18280/ts.370619</a>	Bhardwaj, L., Mishra, R.K. (2020). Mitigating the interference caused by pilot contamination in multi-cell massive multiple input multiple output systems using low density parity check codes in uplink scenario. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1061-1074. <a href="https://doi.org/10.18280/ts.370619">https://doi.org/10.18280/ts.370619</a>
941	Msonda, P., Uymaz, S.A., Karaağaç, S.S.	Spatial pyramid pooling in deep convolutional networks for automatic tuberculosis diagnosis	automated diagnosis, deep convolutional neural networks, image classification, spatial pyramid pooling, tuberculosis	37, 6, 1075-1084	<a href="https://doi.org/10.18280/ts.370620">https://doi.org/10.18280/ts.370620</a>	Msonda, P., Uymaz, S.A., Karaağaç, S.S. (2020). Spatial pyramid pooling in deep convolutional networks for automatic tuberculosis diagnosis. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1075-1084. <a href="https://doi.org/10.18280/ts.370620">https://doi.org/10.18280/ts.370620</a>
942	Wang, Y.N., Yang, Y.M., Li, Y.	Recognition and difference analysis of human walking gaits based on intelligent processing of video images	gait recognition, lower limb motions, residual network, gait difference	37, 6, 1085-1091	<a href="https://doi.org/10.18280/ts.370621">https://doi.org/10.18280/ts.370621</a>	Wang, Y.N., Yang, Y.M., Li, Y. (2020). Recognition and difference analysis of human walking gaits based on intelligent processing of video images. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1085-1091. <a href="https://doi.org/10.18280/ts.370621">https://doi.org/10.18280/ts.370621</a>
943	Yadav, D., Akanksha, Yadav, A.K.	A novel convolutional neural network based model for recognition and classification of apple leaf diseases	plants, apple, contrast stretching, fuzzy c-means, CNN, disease diagnosis	37, 6, 1093-1101	<a href="https://doi.org/10.18280/ts.370622">https://doi.org/10.18280/ts.370622</a>	Yadav, D., Akanksha, Yadav, A.K. (2020). A novel convolutional neural network based model for recognition and classification of apple leaf diseases. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1093-1101. <a href="https://doi.org/10.18280/ts.370622">https://doi.org/10.18280/ts.370622</a>
944	Wang, S.W., Yuan, B., Wu, D.	A hybrid classifier for handwriting recognition on multi-domain financial bills based on DCNN and SVM	financial bill, handwriting recognition, deep convolutional neural network (DCNN), support vector machine (SVM)	37, 6, 1103-1110	<a href="https://doi.org/10.18280/ts.370623">https://doi.org/10.18280/ts.370623</a>	Wang, S.W., Yuan, B., Wu, D. (2020). A hybrid classifier for handwriting recognition on multi-domain financial bills based on DCNN and SVM. <i>Traitement du Signal</i> , Vol. 37, No. 6, pp. 1103-1110. <a href="https://doi.org/10.18280/ts.370623">https://doi.org/10.18280/ts.370623</a>
945	Lejmi, W., Khalifa, A.B., Mahjoub, M.A.	A novel spatio-temporal violence classification framework based on material derivative and LSTM neural network	challenges, classification, derivative, LSTM, motion, recognition, material, violence	37, 5, 687-701	<a href="https://doi.org/10.18280/ts.370501">https://doi.org/10.18280/ts.370501</a>	Lejmi, W., Khalifa, A.B., Mahjoub, M.A. (2020). A novel spatio-temporal violence classification framework based on material derivative and LSTM neural network. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 687-701. <a href="https://doi.org/10.18280/ts.370501">https://doi.org/10.18280/ts.370501</a>
946	Rahmani, A.I., Almasi, M., Saleh, N., Katouli, M.	Image fusion of noisy images based on simultaneous empirical wavelet transform	simultaneous empirical wavelet transform, merge rules, coefficients, layers	37, 5, 703-710	<a href="https://doi.org/10.18280/ts.370502">https://doi.org/10.18280/ts.370502</a>	Rahmani, A.I., Almasi, M., Saleh, N., Katouli, M. (2020). Image fusion of noisy images based on simultaneous empirical wavelet transform. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 703-710. <a href="https://doi.org/10.18280/ts.370502">https://doi.org/10.18280/ts.370502</a>
947	Mohammedhasan, M., Uğuz, H.	A new early stage diabetic retinopathy diagnosis model using deep convolutional neural networks and principal component analysis	diabetic retinopathy, deep learning, convolutional neural network, principal component analysis, edge-preserving guided image filtering, U-network, data augmentation	37, 5, 711-722	<a href="https://doi.org/10.18280/ts.370503">https://doi.org/10.18280/ts.370503</a>	Mohammedhasan, M., Uğuz, H. (2020). A new early stage diabetic retinopathy diagnosis model using deep convolutional neural networks and principal component analysis. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 711-722. <a href="https://doi.org/10.18280/ts.370503">https://doi.org/10.18280/ts.370503</a>
948	Zhao, S.J., Zhu, J.C., Wu, D.	Design and application of a greedy pursuit algorithm adapted to overcomplete dictionary for sparse signal recovery	overcomplete dictionary, hard thresholding pursuit, projections	37, 5, 723-732	<a href="https://doi.org/10.18280/ts.370504">https://doi.org/10.18280/ts.370504</a>	Zhao, S.J., Zhu, J.C., Wu, D. (2020). Design and application of a greedy pursuit algorithm adapted to overcomplete dictionary for sparse signal recovery. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 723-732. <a href="https://doi.org/10.18280/ts.370504">https://doi.org/10.18280/ts.370504</a>
949	Al-Hashim, M.A., Al-Ameen, Z.	Retinex-based multiphase algorithm for low-light image enhancement	image enhancement, image processing, low-light images, retinex-based multiphase algorithm	37, 5, 733-743	<a href="https://doi.org/10.18280/ts.370505">https://doi.org/10.18280/ts.370505</a>	Al-Hashim, M.A., Al-Ameen, Z. (2020). Retinex-based multiphase algorithm for low-light image enhancement. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 733-743. <a href="https://doi.org/10.18280/ts.370505">https://doi.org/10.18280/ts.370505</a>
950	Fang, Q.Z., Liu, Y.X., Zhang, L.L.	Design and implementation of a lossless compression system for hyperspectral images	field programmable gate array (FPGA), hyperspectral image, lossless compression, forward prediction, full-pipeline construction	37, 5, 745-752	<a href="https://doi.org/10.18280/ts.370506">https://doi.org/10.18280/ts.370506</a>	Fang, Q.Z., Liu, Y.X., Zhang, L.L. (2020). Design and implementation of a lossless compression system for hyperspectral images. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 745-752. <a href="https://doi.org/10.18280/ts.370506">https://doi.org/10.18280/ts.370506</a>
951	Bouida, A., Beladgham, M., Bassou, A., Benyahia, I., Ahmed-Taleb, A., Haouam, I., Kamline, M.	Evaluation of textural degradation in compressed medical and biometric images by analyzing image texture features and edges	image quality assessment, image texture analysis, image edge detection, wavelet-based compression, medical and biometric images	37, 5, 753-762	<a href="https://doi.org/10.18280/ts.370507">https://doi.org/10.18280/ts.370507</a>	Bouida, A., Beladgham, M., Bassou, A., Benyahia, I., Ahmed-Taleb, A., Haouam, I., Kamline, M. (2020). Evaluation of textural degradation in compressed medical and biometric images by analyzing image texture features and edges. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 753-762. <a href="https://doi.org/10.18280/ts.370507">https://doi.org/10.18280/ts.370507</a>
952	Sun, H.Y., Wang, L., Song, Z., Chen, G.	Three-dimensional mirror surface measurement based on local blur analysis of phase measuring deflectometry system	three-dimensional (3D) imaging, phase measuring deflectometry (PMD), local blur, integral reconstruction	37, 5, 763-771	<a href="https://doi.org/10.18280/ts.370508">https://doi.org/10.18280/ts.370508</a>	Sun, H.Y., Wang, L., Song, Z., Chen, G. (2020). Three-dimensional mirror surface measurement based on local blur analysis of phase measuring deflectometry system. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 763-771. <a href="https://doi.org/10.18280/ts.370508">https://doi.org/10.18280/ts.370508</a>
953	Kalakoti, G., G. P.	Key-frame detection and video retrieval based on DC coefficient-based cosine orthogonality and multivariate statistical tests	key-frame, background scenes, forefront objects, DC-coefficients, cosine orthogonality test, multivariate statistical parametric test	37, 5, 773-784	<a href="https://doi.org/10.18280/ts.370509">https://doi.org/10.18280/ts.370509</a>	Kalakoti, G., G. P. (2020). Key-frame detection and video retrieval based on DC coefficient-based cosine orthogonality and multivariate statistical tests. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 773-784. <a href="https://doi.org/10.18280/ts.370509">https://doi.org/10.18280/ts.370509</a>
954	Ghorbanian, A., Maghsoudi, Y., Mohammadzadeh, A.	Clustering-based band selection using structural similarity index and entropy for hyperspectral image classification	band selection, dimension reduction, hyperspectral image, entropy, structural similarity, support vector machine (SVM)	37, 5, 785-791	<a href="https://doi.org/10.18280/ts.370510">https://doi.org/10.18280/ts.370510</a>	Ghorbanian, A., Maghsoudi, Y., Mohammadzadeh, A. (2020). Clustering-based band selection using structural similarity index and entropy for hyperspectral image classification. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 785-791. <a href="https://doi.org/10.18280/ts.370510">https://doi.org/10.18280/ts.370510</a>

955	Zhang, X.R., Chen, G.	An automatic insect recognition algorithm in complex background based on convolution neural network	convolutional neural network (CNN), edgeless active contour, insect image recognition, complex background, narrow-band fast method	37, 5, 793-798	<a href="https://doi.org/10.18280/ts.370511">https://doi.org/10.18280/ts.370511</a>	Zhang, X.R., Chen, G. (2020). An automatic insect recognition algorithm in complex background based on convolution neural network. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 793-798. <a href="https://doi.org/10.18280/ts.370511">https://doi.org/10.18280/ts.370511</a>
956	Aydemir, O.	Odor and subject identification using electroencephalography reaction to olfactory	electroencephalogram, brain response, odor, subject identification, multi-class classification, feature extraction	37, 5, 799-805	<a href="https://doi.org/10.18280/ts.370512">https://doi.org/10.18280/ts.370512</a>	Aydemir, O. (2020). Odor and subject identification using electroencephalography reaction to olfactory. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 799-805. <a href="https://doi.org/10.18280/ts.370512">https://doi.org/10.18280/ts.370512</a>
957	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M.	End image defect detection of float glass based on faster region-based convolutional neural network	float glass, defect detection, faster region-based convolutional neural network (Faster RCNN), target detection, end image	37, 5, 807-813	<a href="https://doi.org/10.18280/ts.370513">https://doi.org/10.18280/ts.370513</a>	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M. (2020). End image defect detection of float glass based on faster region-based convolutional neural network. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 807-813. <a href="https://doi.org/10.18280/ts.370513">https://doi.org/10.18280/ts.370513</a>
958	Beirami, B.A., Mokhtarzade, M.	Superpixel-based minimum noise fraction feature extraction for classification of hyperspectral images	minimum noise fraction, superpixel, feature extraction, hyperspectral classification, SuperMNF	37, 5, 815-822	<a href="https://doi.org/10.18280/ts.370514">https://doi.org/10.18280/ts.370514</a>	Beirami, B.A., Mokhtarzade, M. (2020). Superpixel-based minimum noise fraction feature extraction for classification of hyperspectral images. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 815-822. <a href="https://doi.org/10.18280/ts.370514">https://doi.org/10.18280/ts.370514</a>
959	Guo, Q.	Detection of head raising rate of students in classroom based on head posture recognition	head posture recognition, head raising rate (HRR), convolutional neural network (CNN), human organ model	37, 5, 823-830	<a href="https://doi.org/10.18280/ts.370515">https://doi.org/10.18280/ts.370515</a>	Guo, Q. (2020). Detection of head raising rate of students in classroom based on head posture recognition. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 823-830. <a href="https://doi.org/10.18280/ts.370515">https://doi.org/10.18280/ts.370515</a>
960	Melek, M., Manshouri, N., Kayikcioglu, T.	Low-cost brain-computer interface using the Emotiv Epoc headset based on rotating vanes	EEG, Emotiv Epoc headset, brain-computer interface, rotating vanes, information transfer rate	37, 5, 831-837	<a href="https://doi.org/10.18280/ts.370516">https://doi.org/10.18280/ts.370516</a>	Melek, M., Manshouri, N., Kayikcioglu, T. (2020). Low-cost brain-computer interface using the Emotiv Epoc headset based on rotating vanes. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 831-837. <a href="https://doi.org/10.18280/ts.370516">https://doi.org/10.18280/ts.370516</a>
961	Keivani, M., Sazdar, A.M., Mazloum, J., Rahmani, A.E.	Application of empirical wavelet transform in digital image watermarking	digital watermarking, empirical wavelet transform, copyright, alpha blending	37, 5, 839-845	<a href="https://doi.org/10.18280/ts.370517">https://doi.org/10.18280/ts.370517</a>	Keivani, M., Sazdar, A.M., Mazloum, J., Rahmani, A.E. (2020). Application of empirical wavelet transform in digital image watermarking. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 839-845. <a href="https://doi.org/10.18280/ts.370517">https://doi.org/10.18280/ts.370517</a>
962	Lu, S., Zhang, Q., Liu, Y., Liu, L., Zhu, Q., Jing, K.	Retrieval of multiple spatiotemporally correlated images on tourist attractions based on image processing	image processing, tourist attractions, multiple spatiotemporally correlated images (MSCIs), image retrieval	37, 5, 847-854	<a href="https://doi.org/10.18280/ts.370518">https://doi.org/10.18280/ts.370518</a>	Lu, S., Zhang, Q., Liu, Y., Liu, L., Zhu, Q., Jing, K. (2020). Retrieval of multiple spatiotemporally correlated images on tourist attractions based on image processing. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 847-854. <a href="https://doi.org/10.18280/ts.370518">https://doi.org/10.18280/ts.370518</a>
963	Singh, N.P., Singh, V.P.	Efficient segmentation and registration of retinal image using gumble probability distribution and brisk feature	retinal image, feature descriptor, segmentation, registration, probability distribution functions	37, 5, 855-864	<a href="https://doi.org/10.18280/ts.370519">https://doi.org/10.18280/ts.370519</a>	Singh, N.P., Singh, V.P. (2020). Efficient segmentation and registration of retinal image using gumble probability distribution and brisk feature. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 855-864. <a href="https://doi.org/10.18280/ts.370519">https://doi.org/10.18280/ts.370519</a>
964	Krishnaveni, P.R., Kishore, G.N.	Image based group classifier for brain tumor detection using machine learning technique	malignant tumor, feature extraction, classification, segmentation	37, 5, 865-871	<a href="https://doi.org/10.18280/ts.370520">https://doi.org/10.18280/ts.370520</a>	Krishnaveni, P.R., Kishore, G.N. (2020). Image based group classifier for brain tumor detection using machine learning technique. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 865-871. <a href="https://doi.org/10.18280/ts.370520">https://doi.org/10.18280/ts.370520</a>
965	Wang, Y.N., Yang, Y.M., Zhang, P.Y.	Gesture feature extraction and recognition based on image processing	image processing, gesture feature extraction, gesture recognition, convolutional neural network (CNN)	37, 5, 873-880	<a href="https://doi.org/10.18280/ts.370521">https://doi.org/10.18280/ts.370521</a>	Wang, Y.N., Yang, Y.M., Zhang, P.Y. (2020). Gesture feature extraction and recognition based on image processing. <i>Traitement du Signal</i> , Vol. 37, No. 5, pp. 873-880. <a href="https://doi.org/10.18280/ts.370521">https://doi.org/10.18280/ts.370521</a>
966	Ouali, M.A., Ghanai, M., Chafaa, K.	TLBO optimization algorithm based-type2 fuzzy adaptive filter for ECG signals denoising	ECG signal, ECG denoising, type-2 fuzzy logic, optimization algorithm, TLBO	37, 4, 541-553	<a href="https://doi.org/10.18280/ts.370401">https://doi.org/10.18280/ts.370401</a>	Ouali, M.A., Ghanai, M., Chafaa, K. (2020). TLBO optimization algorithm based-type2 fuzzy adaptive filter for ECG signals denoising. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 541-553. <a href="https://doi.org/10.18280/ts.370401">https://doi.org/10.18280/ts.370401</a>
967	Al-Qaisi, A., AlTarawneh, M.S., ElSaid, A., Alqadi, Z.	A hybrid method of face feature extraction, classification based on MLBP and layered-recurrent network	feature extraction, MLBP, classification, L-RNN, Quasi-Newton Back propagation	37, 4, 555-561	<a href="https://doi.org/10.18280/ts.370402">https://doi.org/10.18280/ts.370402</a>	Al-Qaisi, A., AlTarawneh, M.S., ElSaid, A., Alqadi, Z. (2020). A hybrid method of face feature extraction, classification based on MLBP and layered-recurrent network. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 555-561. <a href="https://doi.org/10.18280/ts.370402">https://doi.org/10.18280/ts.370402</a>
968	Mehanović, D., Kevrić, J.	Phishing website detection using machine learning classifiers optimized by feature selection	classification, Decision Tree, feature selection, K-Nearest Neighbors, phishing website detection, Random Forest	37, 4, 563-569	<a href="https://doi.org/10.18280/ts.370403">https://doi.org/10.18280/ts.370403</a>	Mehanović, D., Kevrić, J. (2020). Phishing website detection using machine learning classifiers optimized by feature selection. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 563-569. <a href="https://doi.org/10.18280/ts.370403">https://doi.org/10.18280/ts.370403</a>
969	Akgun, O.	Determination of the appropriate kernel structure in electroencephalography analysis of alcoholic subjects	alcoholic, EEG, ambiguity function, Wigner Ville distribution, nonseparable kernel, separable kernel, Doppler independent kernel, lag independent kernel	37, 4, 571-577	<a href="https://doi.org/10.18280/ts.370404">https://doi.org/10.18280/ts.370404</a>	Akgun, O. (2020). Determination of the appropriate kernel structure in electroencephalography analysis of alcoholic subjects. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 571-577. <a href="https://doi.org/10.18280/ts.370404">https://doi.org/10.18280/ts.370404</a>
970	Wang, H.D.	A synchronous transmission method for array signals of sensor network under resonance technology	resonance technology, wavelet transform, sensor network, array signals, three-node collaboration	37, 4, 579-584	<a href="https://doi.org/10.18280/ts.370405">https://doi.org/10.18280/ts.370405</a>	Wang, H.D. (2020). A synchronous transmission method for array signals of sensor network under resonance technology. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 579-584. <a href="https://doi.org/10.18280/ts.370405">https://doi.org/10.18280/ts.370405</a>
971	Benziane, M., Bouamar, M., Makdir, M.	Simple and efficient double-talk-detector for acoustic echo cancellation	AEC, DTD, RLS, Geigel algorithm, NCC, recursive estimation	37, 4, 585-592	<a href="https://doi.org/10.18280/ts.370406">https://doi.org/10.18280/ts.370406</a>	Benziane, M., Bouamar, M., Makdir, M. (2020). Simple and efficient double-talk-detector for acoustic echo cancellation. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 585-592. <a href="https://doi.org/10.18280/ts.370406">https://doi.org/10.18280/ts.370406</a>
972	Bulla, P., Anantha, L., Peram, S.	Deep neural networks with transfer learning model for brain tumors classification	brain tumor, deep learning, inceptionV3, MR imaging, multi-class classification, transfer learning	37, 4, 593-601	<a href="https://doi.org/10.18280/ts.370407">https://doi.org/10.18280/ts.370407</a>	Bulla, P., Anantha, L., Peram, S. (2020). Deep neural networks with transfer learning model for brain tumors classification. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 593-601. <a href="https://doi.org/10.18280/ts.370407">https://doi.org/10.18280/ts.370407</a>

973	Wang, Z.	Recognition and analysis of behavior features of school-age children based on video image processing	video image processing, school-age children, behavior features, behavior recognition	37, 4, 603-610	<a href="https://doi.org/10.18280/ts.370408">https://doi.org/10.18280/ts.370408</a>	Wang, Z. (2020). Recognition and analysis of behavior features of school-age children based on video image processing. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 603-610. <a href="https://doi.org/10.18280/ts.370408">https://doi.org/10.18280/ts.370408</a>
974	Ornek, A.H., Ervural, S., Ceylan, M., Konak, M., Soyulu, H., Savasci, D.	Classification of medical thermograms belonging neonates by using segmentation, feature engineering and machine learning algorithms	fast correlation-based filter, local binary pattern, machine learning, neonate, thermography	37, 4, 611-617	<a href="https://doi.org/10.18280/ts.370409">https://doi.org/10.18280/ts.370409</a>	Ornek, A.H., Ervural, S., Ceylan, M., Konak, M., Soyulu, H., Savasci, D. (2020). Classification of medical thermograms belonging neonates by using segmentation, feature engineering and machine learning algorithms. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 611-617. <a href="https://doi.org/10.18280/ts.370409">https://doi.org/10.18280/ts.370409</a>
975	Bai, S.Z., Han, F.L.	Tourist behavior recognition through scenic spot image retrieval based on image processing	image processing, scenic spot image retrieval, tourist behavior recognition, scale invariant feature transform (SIFT)	37, 4, 619-626	<a href="https://doi.org/10.18280/ts.370410">https://doi.org/10.18280/ts.370410</a>	Bai, S.Z., Han, F.L. (2020). Tourist behavior recognition through scenic spot image retrieval based on image processing. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 619-626. <a href="https://doi.org/10.18280/ts.370410">https://doi.org/10.18280/ts.370410</a>
976	Li, A.H., An, L., Che, Z.H.	A Facial expression recognition model based on texture and shape features	Facial expression recognition, texture features, shape features, Gaussian Markov random field (GMRF) model, support vector machine (SVM) classifier	37, 4, 627-632	<a href="https://doi.org/10.18280/ts.370411">https://doi.org/10.18280/ts.370411</a>	Li, A.H., An, L., Che, Z.H. (2020). A Facial expression recognition model based on texture and shape features. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 627-632. <a href="https://doi.org/10.18280/ts.370411">https://doi.org/10.18280/ts.370411</a>
977	El Yassini, A., Jallal, M.A., Ibnyach, S., Zeroual, A., Chabaa, S.	A miniaturized CPW-fed reconfigurable antenna with a single-dual band and an asymmetric ground plane for switchable band wireless applications	reconfigurable antenna, CPW-fed antenna, compact antenna, pin diode, hexagonal slot, WLAN/WiMAX applications	37, 4, 633-638	<a href="https://doi.org/10.18280/ts.370412">https://doi.org/10.18280/ts.370412</a>	El Yassini, A., Jallal, M.A., Ibnyach, S., Zeroual, A., Chabaa, S. (2020). A miniaturized CPW-fed reconfigurable antenna with a single-dual band and an asymmetric ground plane for switchable band wireless applications. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 633-638. <a href="https://doi.org/10.18280/ts.370412">https://doi.org/10.18280/ts.370412</a>
978	Bulut, G.G., Çatalbaş, M.C., Güler, H.	Chaotic systems based real-time implementation of visual cryptography using LabVIEW	chaotic circuit, chaotic system, real-time application, image encryption	37, 4, 639-645	<a href="https://doi.org/10.18280/ts.370413">https://doi.org/10.18280/ts.370413</a>	Bulut, G.G., Çatalbaş, M.C., Güler, H. (2020). Chaotic systems based real-time implementation of visual cryptography using LabVIEW. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 639-645. <a href="https://doi.org/10.18280/ts.370413">https://doi.org/10.18280/ts.370413</a>
979	Yang, Y.	A vehicle recognition algorithm based on deep convolution neural network	Convolution Neural Network (CNN), deep learning (DL), vehicle recognition algorithm, image classification	37, 4, 647-653	<a href="https://doi.org/10.18280/ts.370414">https://doi.org/10.18280/ts.370414</a>	Yang, Y. (2020). A vehicle recognition algorithm based on deep convolution neural network. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 647-653. <a href="https://doi.org/10.18280/ts.370414">https://doi.org/10.18280/ts.370414</a>
980	Zhang, H., Lu, X.X., Yin, X.Y.	Reverse synchronous transmission of electrical signals based on parallel injection and series pickup	parallel injection, series pickup, electrical signal, reverse synchronous transmission (RST), alternative current (AC) impedance	37, 4, 655-660	<a href="https://doi.org/10.18280/ts.370415">https://doi.org/10.18280/ts.370415</a>	Zhang, H., Lu, X.X., Yin, X.Y. (2020). Reverse synchronous transmission of electrical signals based on parallel injection and series pickup. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 655-660. <a href="https://doi.org/10.18280/ts.370415">https://doi.org/10.18280/ts.370415</a>
981	Singh, G., Agrawal, S., Sohi, B.S.	Handwritten Gurmukhi digit recognition system for small datasets	DCT, DWT, support vector machine, deep convolutional neural networks, Gurmukhi handwritten digit recognition	37, 4, 661-669	<a href="https://doi.org/10.18280/ts.370416">https://doi.org/10.18280/ts.370416</a>	Singh, G., Agrawal, S., Sohi, B.S. (2020). Handwritten Gurmukhi digit recognition system for small datasets. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 661-669. <a href="https://doi.org/10.18280/ts.370416">https://doi.org/10.18280/ts.370416</a>
982	Rashid, A., Salamat, N., Surya Prasath, V.B.	Dynamic increased capacity approach steganography in spatial domain	Gray Level Modification (GLM), information security, Least Significant Bit (LSB), spatial domain, steganography	37, 4, 671-678	<a href="https://doi.org/10.18280/ts.370417">https://doi.org/10.18280/ts.370417</a>	Rashid, A., Salamat, N., Surya Prasath, V.B. (2020). Dynamic increased capacity approach steganography in spatial domain. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 671-678. <a href="https://doi.org/10.18280/ts.370417">https://doi.org/10.18280/ts.370417</a>
983	Yan, X.D., Song, X.G.	An image recognition algorithm of bolt loss in underground pipelines based on local binary pattern operator	image recognition, local binary pattern (LBP) operator, feature extraction, support vector machine (SVM), underground pipelines	37, 4, 679-685	<a href="https://doi.org/10.18280/ts.370418">https://doi.org/10.18280/ts.370418</a>	Yan, X.D., Song, X.G. (2020). An image recognition algorithm of bolt loss in underground pipelines based on local binary pattern operator. <i>Traitement du Signal</i> , Vol. 37, No. 4, pp. 679-685. <a href="https://doi.org/10.18280/ts.370418">https://doi.org/10.18280/ts.370418</a>
984	Özyurt, F., Avci, E., Sert, E.	UC-Merced image classification with CNN feature reduction using wavelet entropy optimized with genetic algorithm	CNN, feature reduction, entropy, genetic algorithm, UC Merced dataset	37, 3, 347-353	<a href="https://doi.org/10.18280/ts.370301">https://doi.org/10.18280/ts.370301</a>	Özyurt, F., Avci, E., Sert, E. (2020). UC-Merced image classification with CNN feature reduction using wavelet entropy optimized with genetic algorithm. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 347-353. <a href="https://doi.org/10.18280/ts.370301">https://doi.org/10.18280/ts.370301</a>
985	Shah, S.A.A., Habib, N., Nadeem, M.S.A., Alshdadi, A.A., Alqarni, M., Aziz, W.	Extraction of dynamical information and classification of heart rate variability signals using scale based permutation entropy measures	classification, complexity analysis, heart rate variability, improved multiscale permutation entropy, multiscale permutation entropy	37, 3, 355-365	<a href="https://doi.org/10.18280/ts.370302">https://doi.org/10.18280/ts.370302</a>	Shah, S.A.A., Habib, N., Nadeem, M.S.A., Alshdadi, A.A., Alqarni, M., Aziz, W. (2020). Extraction of dynamical information and classification of heart rate variability signals using scale based permutation entropy measures. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 355-365. <a href="https://doi.org/10.18280/ts.370302">https://doi.org/10.18280/ts.370302</a>
986	Zhang, L.Q., Li, M., Qiu, X.H., Zhu, Y.	Infrared small target detection based on four-direction overlapping group sparse total variation	infrared small target detection, robust principal component analysis (RPCA), total variation (TV), four-direction overlapping group	37, 3, 367-377	<a href="https://doi.org/10.18280/ts.370303">https://doi.org/10.18280/ts.370303</a>	Zhang, L.Q., Li, M., Qiu, X.H., Zhu, Y. (2020). Infrared small target detection based on four-direction overlapping group sparse total variation. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 367-377. <a href="https://doi.org/10.18280/ts.370303">https://doi.org/10.18280/ts.370303</a>
987	Said, Z., El Hassouani, Y.	A new approach for extracting and characterizing fetal electrocardiogram	wavelet transform, source separation time-scale, electrocardiogram characterization	37, 3, 379-386	<a href="https://doi.org/10.18280/ts.370304">https://doi.org/10.18280/ts.370304</a>	Said, Z., El Hassouani, Y. (2020). A new approach for extracting and characterizing fetal electrocardiogram. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 379-386. <a href="https://doi.org/10.18280/ts.370304">https://doi.org/10.18280/ts.370304</a>
988	Maddumala, V.R., Arunkumar, R.	Big data-driven feature extraction and clustering based on statistical methods	big data-driven, feature extraction, video retrieval, background scenes, foreground objects	37, 3, 387-394	<a href="https://doi.org/10.18280/ts.370305">https://doi.org/10.18280/ts.370305</a>	Maddumala, V.R., Arunkumar, R. (2020). Big data-driven feature extraction and clustering based on statistical methods. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 387-394. <a href="https://doi.org/10.18280/ts.370305">https://doi.org/10.18280/ts.370305</a>
989	Zhang, W.L., Li, X.W., Song, Q.X., Lu, W.	A face detection method based on image processing and improved adaptive boosting algorithm	face detection, image processing, adaptive boosting (AdaBoost) algorithm, weak classifier	37, 3, 395-403	<a href="https://doi.org/10.18280/ts.370306">https://doi.org/10.18280/ts.370306</a>	Zhang, W.L., Li, X.W., Song, Q.X., Lu, W. (2020). A face detection method based on image processing and improved adaptive boosting algorithm. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 395-403. <a href="https://doi.org/10.18280/ts.370306">https://doi.org/10.18280/ts.370306</a>
990	Moussa, M., Guedri, W., Douik, A.	A novel metaheuristic algorithm for edge detection based on artificial bee colony technique	edge detection, meta-heuristic methods, artificial bee colony (ABC) optimization, Otsu's method, multilevel thresholds, color space	37, 3, 405-412	<a href="https://doi.org/10.18280/ts.370307">https://doi.org/10.18280/ts.370307</a>	Moussa, M., Guedri, W., Douik, A. (2020). A novel metaheuristic algorithm for edge detection based on artificial bee colony technique. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 405-412. <a href="https://doi.org/10.18280/ts.370307">https://doi.org/10.18280/ts.370307</a>

991	Houari, H., Guerti, M.	Study the influence of gender and age in recognition of emotions from algerian dialect speech	ADED, emotion, HNR, KNN, LDA, recognition, speech, SVM	37, 3, 413-423	<a href="https://doi.org/10.18280/ts.370308">https://doi.org/10.18280/ts.370308</a>	Houari, H., Guerti, M. (2020). Study the influence of gender and age in recognition of emotions from algerian dialect speech. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 413-423. <a href="https://doi.org/10.18280/ts.370308">https://doi.org/10.18280/ts.370308</a>
992	Song, X.R., Gao, S., Chen, C.B., Wang, S.L.	A novel face recognition algorithm for imbalanced small samples	feature extraction, face recognition, convolutional neural network (CNN), imbalanced small samples	37, 3, 425-432	<a href="https://doi.org/10.18280/ts.370309">https://doi.org/10.18280/ts.370309</a>	Song, X.R., Gao, S., Chen, C.B., Wang, S.L. (2020). A novel face recognition algorithm for imbalanced small samples. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 425-432. <a href="https://doi.org/10.18280/ts.370309">https://doi.org/10.18280/ts.370309</a>
993	Titrek, F., Baykan, Ö.K.	Finger vein recognition by combining anisotropic diffusion and a new feature extraction method	anisotropic diffusion, biometrics, feature extraction, finger vein recognition, HVTP features	37, 3, 433-441	<a href="https://doi.org/10.18280/ts.370310">https://doi.org/10.18280/ts.370310</a>	Titrek, F., Baykan, Ö.K. (2020). Finger vein recognition by combining anisotropic diffusion and a new feature extraction method. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 433-441. <a href="https://doi.org/10.18280/ts.370310">https://doi.org/10.18280/ts.370310</a>
994	Yu, G.C.	A computationally efficient estimation algorithm for direction of arrival in double parallel linear array	direction of arrival (DOA), double parallel linear array (DPLA), joint cross-covariance matrix (JCCM), root-multiple signal classification (MUSIC) algorithm	37, 3, 443-449	<a href="https://doi.org/10.18280/ts.370311">https://doi.org/10.18280/ts.370311</a>	Yu, G.C. (2020). A computationally efficient estimation algorithm for direction of arrival in double parallel linear array. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 443-449. <a href="https://doi.org/10.18280/ts.370311">https://doi.org/10.18280/ts.370311</a>
995	Bala, A., Rani, A., Kumar, S.	An illumination insensitive normalization approach to face recognition using locality sensitive discriminant analysis	face recognition, image gradients, illumination normalization, reflectance model, LSDA	37, 3, 451-460	<a href="https://doi.org/10.18280/ts.370312">https://doi.org/10.18280/ts.370312</a>	Bala, A., Rani, A., Kumar, S. (2020). An illumination insensitive normalization approach to face recognition using locality sensitive discriminant analysis. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 451-460. <a href="https://doi.org/10.18280/ts.370312">https://doi.org/10.18280/ts.370312</a>
996	Yildirim, M., Cinar, A.	A deep learning based hybrid approach for COVID-19 disease detections	Covid-19, deep learning, image processing, Resnet50, hybrid model	37, 3, 461-468	<a href="https://doi.org/10.18280/ts.370313">https://doi.org/10.18280/ts.370313</a>	Yildirim, M., Cinar, A. (2020). A deep learning based hybrid approach for COVID-19 disease detections. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 461-468. <a href="https://doi.org/10.18280/ts.370313">https://doi.org/10.18280/ts.370313</a>
997	Xiao, N., Zhang, X.Y.	A target positioning method for industrial robot based on multiple visual sensors	industrial robot, multiple visual sensors (MVSs), target positioning, feature point matching	37, 3, 469-475	<a href="https://doi.org/10.18280/ts.370314">https://doi.org/10.18280/ts.370314</a>	Xiao, N., Zhang, X.Y. (2020). A target positioning method for industrial robot based on multiple visual sensors. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 469-475. <a href="https://doi.org/10.18280/ts.370314">https://doi.org/10.18280/ts.370314</a>
998	Bhatt, T.D.	Sequences with perfect periodic auto and cross correlation properties	periodic autocorrelation, cross-correlation, periodic ambiguity function, zero-correlation zone (ZCZ), synthesized sequences	37, 3, 477-484	<a href="https://doi.org/10.18280/ts.370315">https://doi.org/10.18280/ts.370315</a>	Bhatt, T.D. (2020). Sequences with perfect periodic auto and cross correlation properties. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 477-484. <a href="https://doi.org/10.18280/ts.370315">https://doi.org/10.18280/ts.370315</a>
999	Wang, H.D.	A novel detection method for weak harmonic signal with chaotic noise	chaotic noise, wireless network, weak signal, harmonic signals, signal detection, bit error rate (BER)	37, 3, 485-491	<a href="https://doi.org/10.18280/ts.370316">https://doi.org/10.18280/ts.370316</a>	Wang, H.D. (2020). A novel detection method for weak harmonic signal with chaotic noise. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 485-491. <a href="https://doi.org/10.18280/ts.370316">https://doi.org/10.18280/ts.370316</a>
1000	Brahmaiah, V.P., Sai, Y.P., Giriprasad, M.N.	A new framework for recognizing normal and epileptic seizure from eye movement signals using genetic based convolutional neural network	epileptic seizure, feature extraction, genetic algorithm, wiener filter	37, 3, 493-501	<a href="https://doi.org/10.18280/ts.370317">https://doi.org/10.18280/ts.370317</a>	Brahmaiah, V.P., Sai, Y.P., Giriprasad, M.N. (2020). A new framework for recognizing normal and epileptic seizure from eye movement signals using genetic based convolutional neural network. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 493-501. <a href="https://doi.org/10.18280/ts.370317">https://doi.org/10.18280/ts.370317</a>
1001	Huang, W., Li, N., Qiu, Z.J., Jiang, N., Wu, B., Liu, B.	An automatic recognition method for students' classroom behaviors based on image processing	classroom behavior analysis, head pose, facial expression, image processing	37, 3, 503-509	<a href="https://doi.org/10.18280/ts.370318">https://doi.org/10.18280/ts.370318</a>	Huang, W., Li, N., Qiu, Z.J., Jiang, N., Wu, B., Liu, B. (2020). An automatic recognition method for students' classroom behaviors based on image processing. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 503-509. <a href="https://doi.org/10.18280/ts.370318">https://doi.org/10.18280/ts.370318</a>
1002	Ponnam, H., Shaik, J.H.	An improved R-peaks marking method using Fourier decomposition and Teager Energy Operator	Fourier decomposition method, Hilbert Transform, Teager Energy Operator, Zero Cross Detector, R-peaks	37, 3, 511-518	<a href="https://doi.org/10.18280/ts.370319">https://doi.org/10.18280/ts.370319</a>	Ponnam, H., Shaik, J.H. (2020). An improved R-peaks marking method using Fourier decomposition and Teager Energy Operator. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 511-518. <a href="https://doi.org/10.18280/ts.370319">https://doi.org/10.18280/ts.370319</a>
1003	Cao, X.P., Li, T., Bai, J.W., Wei, Z.K.	Identification and classification of surface cracks on concrete members based on image processing	surface cracks on concrete members, image processing, image segmentation, crack identification and classification	37, 3, 519-525	<a href="https://doi.org/10.18280/ts.370320">https://doi.org/10.18280/ts.370320</a>	Cao, X.P., Li, T., Bai, J.W., Wei, Z.K. (2020). Identification and classification of surface cracks on concrete members based on image processing. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 519-525. <a href="https://doi.org/10.18280/ts.370320">https://doi.org/10.18280/ts.370320</a>
1004	Satish, P., Srikantaswamy, M., Ramaswamy, N.K.	A comprehensive review of blind deconvolution techniques for image deblurring	blind deconvolution, Maximum A Posteriori Estimation (MAP)	37, 3, 527-539	<a href="https://doi.org/10.18280/ts.370321">https://doi.org/10.18280/ts.370321</a>	Satish, P., Srikantaswamy, M., Ramaswamy, N.K. (2020). A comprehensive review of blind deconvolution techniques for image deblurring. <i>Traitement du Signal</i> , Vol. 37, No. 3, pp. 527-539. <a href="https://doi.org/10.18280/ts.370321">https://doi.org/10.18280/ts.370321</a>
1005	Göğüş, F.Z., Tezel, G., Özsen, S., Küçüktürk, S., Vatansev, H., Koca, Y.	Identification of apnea-hypopnea index subgroups based on multifractal detrended fluctuation analysis and nasal cannula airflow signals	obstructive sleep apnea hypopnea syndrome (OSAHS), positive airway pressure (pap), apnea-hypopnea index (AHI), multifractal detrended fluctuation analysis, nasal cannula airflow signals, feature extraction, feature selection, random forest	37, 2, 145-156	<a href="https://doi.org/10.18280/ts.370201">https://doi.org/10.18280/ts.370201</a>	Göğüş, F.Z., Tezel, G., Özsen, S., Küçüktürk, S., Vatansev, H., Koca, Y. (2020). Identification of apnea-hypopnea index subgroups based on multifractal detrended fluctuation analysis and nasal cannula airflow signals. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 145-156. <a href="https://doi.org/10.18280/ts.370201">https://doi.org/10.18280/ts.370201</a>
1006	Li, N.N., Yue, S.Y., Jiang, B.	Adaptive and feature-preserving bilateral filters for three-dimensional models	bilateral filtering, mesh denoising, scale parameters, feature preservation	37, 2, 157-168	<a href="https://doi.org/10.18280/ts.370202">https://doi.org/10.18280/ts.370202</a>	Li, N.N., Yue, S.Y., Jiang, B. (2020). Adaptive and feature-preserving bilateral filters for three-dimensional models. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 157-168. <a href="https://doi.org/10.18280/ts.370202">https://doi.org/10.18280/ts.370202</a>
1007	Khezzar, Z.A., Benzid, R., Saidi, L.	New thresholding technique in DCT domain for interference mitigation in GNSS receivers	GNSS interference mitigation, DSSS, Discrete cosine transform, Universal threshold, statistical sampling theory, Tukey window, narrow band interference (NBI)	37, 2, 169-180	<a href="https://doi.org/10.18280/ts.370203">https://doi.org/10.18280/ts.370203</a>	Khezzar, Z.A., Benzid, R., Saidi, L. (2020). New thresholding technique in DCT domain for interference mitigation in GNSS receivers. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 169-180. <a href="https://doi.org/10.18280/ts.370203">https://doi.org/10.18280/ts.370203</a>
1008	Arshaghi, A., Ashourian, M., Ghabeli, L.	Detection of skin cancer image by feature selection methods using new buzzard optimization (BUZO) algorithm	skin cancer, skin lesion, Dermoscopy images, shape and color features, Buzzard Optimization (BUZO) algorithm, feature selection	37, 2, 181-194	<a href="https://doi.org/10.18280/ts.370204">https://doi.org/10.18280/ts.370204</a>	Arshaghi, A., Ashourian, M., Ghabeli, L. (2020). Detection of skin cancer image by feature selection methods using new buzzard optimization (BUZO) algorithm. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 181-194. <a href="https://doi.org/10.18280/ts.370204">https://doi.org/10.18280/ts.370204</a>



1009	Xiao, X.H., Xie, J.G., Niu, J.P., Cao, W.	A novel image fusion method for water body extraction based on optimal band combination	water body extraction, Enhanced Thematic Mapper Plus (ETM+), Phased Array type L-band Synthetic Aperture Radar (PALSAR), optimal band combination (OBC)	37, 2, 195-207	<a href="https://doi.org/10.18280/ts.370205">https://doi.org/10.18280/ts.370205</a>	Xiao, X.H., Xie, J.G., Niu, J.P., Cao, W. (2020). A novel image fusion method for water body extraction based on optimal band combination. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 195-207. <a href="https://doi.org/10.18280/ts.370205">https://doi.org/10.18280/ts.370205</a>
1010	Tarchoun, B., Khalifa, A.B., Dhifallah, S., Jegham, I., Mahjoub, M.A.	Hand-crafted features vs deep learning for pedestrian detection in moving camera	deep learning, handcrafted features, intelligent transport systems, moving camera, pedestrian detection	37, 2, 209-216	<a href="https://doi.org/10.18280/ts.370206">https://doi.org/10.18280/ts.370206</a>	Tarchoun, B., Khalifa, A.B., Dhifallah, S., Jegham, I., Mahjoub, M.A. (2020). Hand-crafted features vs deep learning for pedestrian detection in moving camera. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 209-216. <a href="https://doi.org/10.18280/ts.370206">https://doi.org/10.18280/ts.370206</a>
1011	Kishore, D., Rao, C.S.	A multi-class SVM based content based image retrieval system using hybrid optimization techniques	CBIT, CS-SCHT, exact Legendre moments, HSV color quantization, differential evolution, multi-class SVM, firefly algorithm	37, 2, 217-225	<a href="https://doi.org/10.18280/ts.370207">https://doi.org/10.18280/ts.370207</a>	Kishore, D., Rao, C.S. (2020). A multi-class SVM based content based image retrieval system using hybrid optimization techniques. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 217-226. <a href="https://doi.org/10.18280/ts.370207">https://doi.org/10.18280/ts.370207</a>
1012	Liu, Z.H., Lyu, J., Zhao, H.L., Liu, J.	Prediction of graphic interaction time of virtual reality system based on improved Fitts' law	virtual reality (VR), human computer interaction (HCI), Fitts' law, arbitrary shape	37, 2, 227-234	<a href="https://doi.org/10.18280/ts.370208">https://doi.org/10.18280/ts.370208</a>	Liu, Z.H., Lyu, J., Zhao, H.L., Liu, J. (2020). Prediction of graphic interaction time of virtual reality system based on improved Fitts' law. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 227-234. <a href="https://doi.org/10.18280/ts.370208">https://doi.org/10.18280/ts.370208</a>
1013	Aslan, Z., Akin, M.	Automatic detection of schizophrenia by applying deep learning over spectrogram images of EEG signals	schizophrenia, CNN, deep learning, spectrogram	37, 2, 235-244	<a href="https://doi.org/10.18280/ts.370209">https://doi.org/10.18280/ts.370209</a>	Aslan, Z., Akin, M. (2020). Automatic detection of schizophrenia by applying deep learning over spectrogram images of EEG signals. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 235-244. <a href="https://doi.org/10.18280/ts.370209">https://doi.org/10.18280/ts.370209</a>
1014	Al-Ameen, Z.	Satellite image enhancement using an ameliorated balance contrast enhancement technique	ABCETP, contrast enhancement, image enhancement, satellite imaging	37, 2, 245-254	<a href="https://doi.org/10.18280/ts.370210">https://doi.org/10.18280/ts.370210</a>	Al-Ameen, Z. (2020). Satellite image enhancement using an ameliorated balance contrast enhancement technique. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 245-254. <a href="https://doi.org/10.18280/ts.370210">https://doi.org/10.18280/ts.370210</a>
1015	Wu, H., Sun, X.Y., Liu, Y.N., Wang, D.G., Wei, B.	Fusion between shape prior and graph cut for vehicle image segmentation	shape prior, graph cut, image segmentation, vehicle images	37, 2, 255-262	<a href="https://doi.org/10.18280/ts.370211">https://doi.org/10.18280/ts.370211</a>	Wu, H., Sun, X.Y., Liu, Y.N., Wang, D.G., Wei, B. (2020). Fusion between shape prior and graph cut for vehicle image segmentation. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 255-262. <a href="https://doi.org/10.18280/ts.370211">https://doi.org/10.18280/ts.370211</a>
1016	Khiter, A., Mitiche, A.B.H.A., Mitiche, L.	Muscle noise cancellation from ECG signal using self correcting leaky normalized least mean square adaptive filter under varied step size and leakage coefficient	ECG signal, EMG noise, noise canceller, step size, leakage coefficient, normalized least square, self correcting filter	37, 2, 263-269	<a href="https://doi.org/10.18280/ts.370212">https://doi.org/10.18280/ts.370212</a>	Khiter, A., Mitiche, A.B.H.A., Mitiche, L. (2020). Muscle noise cancellation from ECG signal using self correcting leaky normalized least mean square adaptive filter under varied step size and leakage coefficient. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 263-269. <a href="https://doi.org/10.18280/ts.370212">https://doi.org/10.18280/ts.370212</a>
1017	Jiang, N., Li, J.Y.	An improved semantic segmentation method for remote sensing images based on neural network	remote sensing images, pixel-level method, residual network (ResNet), dilated spatial pyramid pooling (SPP), sub-pixel up-sampling, semantic segmentation	37, 2, 271-278	<a href="https://doi.org/10.18280/ts.370213">https://doi.org/10.18280/ts.370213</a>	Jiang, N., Li, J.Y. (2020). An improved semantic segmentation method for remote sensing images based on neural network. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 271-278. <a href="https://doi.org/10.18280/ts.370213">https://doi.org/10.18280/ts.370213</a>
1018	Kaur, A., Verma, K., Bhonekar, A.P., Shashvat, K.	Comparison of classification models using entropy based features from sub-bands of EEG	EEG classification, approximate entropy, sample entropy, fuzzy approximate entropy, random forest, AdaBoost, gradient boosting, naïve Bayes, linear discriminant analysis, quadratic discriminant analysis	37, 2, 279-289	<a href="https://doi.org/10.18280/ts.370214">https://doi.org/10.18280/ts.370214</a>	Kaur, A., Verma, K., Bhonekar, A.P., Shashvat, K. (2020). Comparison of classification models using entropy based features from sub-bands of EEG. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 279-289. <a href="https://doi.org/10.18280/ts.370214">https://doi.org/10.18280/ts.370214</a>
1019	Katouli, M., Rahmani, A.E.	Brain tumor diagnosis in MRI images using image processing techniques and pixel-based clustering	brain tumor, super pixel, spectral clustering, filter Gabor	37, 2, 291-300	<a href="https://doi.org/10.18280/ts.370215">https://doi.org/10.18280/ts.370215</a>	Katouli, M., Rahmani, A.E. (2020). Brain tumor diagnosis in MRI images using image processing techniques and pixel-based clustering. <i>Treatment du Signal</i> , Vol. 37, No. 2, pp. 291-300. <a href="https://doi.org/10.18280/ts.370215">https://doi.org/10.18280/ts.370215</a>
1020	Li, Y.B.	Key technologies for dynamic imaging of disaster-causing concealed water bodies in underground coalmines based on transient electromagnetic method	underground coal mine, high power, transient electromagnetic method (TEM), dynamic imaging	37, 2, 301-306	<a href="https://doi.org/10.18280/ts.370216">https://doi.org/10.18280/ts.370216</a>	Li, Y.B. (2020). Key technologies for dynamic imaging of disaster-causing concealed water bodies in underground coalmines based on transient electromagnetic method. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 301-306. <a href="https://doi.org/10.18280/ts.370216">https://doi.org/10.18280/ts.370216</a>
1021	Dahmani, M., Guerti, M.	Cross-recurrence plots and quantification of glottal signal for pathological voice assessment	assessment, cross recurrence quantification analysis, glottal signal, vocal folds	37, 2, 307-317	<a href="https://doi.org/10.18280/ts.370217">https://doi.org/10.18280/ts.370217</a>	Dahmani, M., Guerti, M. (2020). Cross-recurrence plots and quantification of glottal signal for pathological voice assessment. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 307-317. <a href="https://doi.org/10.18280/ts.370217">https://doi.org/10.18280/ts.370217</a>
1022	Beirami, B.A., Mokhtarzade, M.	An automatic method for unsupervised feature selection of hyperspectral images based on fuzzy clustering of bands	hyperspectral classification, band selection; statistical attributes, fuzzy c-means clustering, virtual dimensionality, principal component analysis	37, 2, 319-324	<a href="https://doi.org/10.18280/ts.370218">https://doi.org/10.18280/ts.370218</a>	Beirami, B.A., Mokhtarzade, M. (2020). An automatic method for unsupervised feature selection of hyperspectral images based on fuzzy clustering of bands. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 319-324. <a href="https://doi.org/10.18280/ts.370218">https://doi.org/10.18280/ts.370218</a>
1023	Wang, Y.	Moving vehicle detection and tracking based on video sequences	video sequence, vehicle tracking algorithm, vehicle detection algorithm, intelligent transportation	37, 2, 325-331	<a href="https://doi.org/10.18280/ts.370219">https://doi.org/10.18280/ts.370219</a>	Wang, Y. (2020). Moving vehicle detection and tracking based on video sequences. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 325-331. <a href="https://doi.org/10.18280/ts.370219">https://doi.org/10.18280/ts.370219</a>
1024	Alphonse, P.J.A., Sriharsha, K.V.	Depth perception in a single RGB camera using body dimensions and centroid property	stereo imaging, anthropometric, perspective errors, body dimensions, centroid, surveillance, vision	37, 2, 333-340	<a href="https://doi.org/10.18280/ts.370220">https://doi.org/10.18280/ts.370220</a>	Alphonse, P.J.A., Sriharsha, K.V. (2020). Depth perception in a single RGB camera using body dimensions and centroid property. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 333-340. <a href="https://doi.org/10.18280/ts.370220">https://doi.org/10.18280/ts.370220</a>
1025	Mao, C.Z., Meng, W.L., Shi, C.Y., Wu, C.C., Zhang, J.	A crop disease image recognition algorithm based on feature extraction and image segmentation	image recognition, image segmentation, feature extraction, crop diseases	37, 2, 341-346	<a href="https://doi.org/10.18280/ts.370221">https://doi.org/10.18280/ts.370221</a>	Mao, C.Z., Meng, W.L., Shi, C.Y., Wu, C.C., Zhang, J. (2020). A crop disease image recognition algorithm based on feature extraction and image segmentation. <i>Traitement du Signal</i> , Vol. 37, No. 2, pp. 341-346. <a href="https://doi.org/10.18280/ts.370221">https://doi.org/10.18280/ts.370221</a>
1026	Chergui, A., Ouchtati, S., Mavromatis, S., Bekhouche, S.E., Lashab, M., Sequeira, J.	Kinship verification through facial images using CNN-based features	kinship verification, deep learning, VGG-Face, fisher score, SVM	37, 1, 1-8	<a href="https://doi.org/10.18280/ts.370101">https://doi.org/10.18280/ts.370101</a>	Chergui, A., Ouchtati, S., Mavromatis, S., Bekhouche, S.E., Lashab, M., Sequeira, J. (2020). Kinship verification through facial images using CNN-based features. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 1-8. <a href="https://doi.org/10.18280/ts.370101">https://doi.org/10.18280/ts.370101</a>

1027	Akgun, O.	Spectral and statistical analysis for damage detection in ceramic materials	ceramic materials, crack analysis, impulse noise method, Wigner Ville distribution, bispectrum, trispectrum, mean value, Peak to RMS	37, 1, 9-16	<a href="https://doi.org/10.18280/ts.370102">https://doi.org/10.18280/ts.370102</a>	Akgun, O. (2020). Spectral and statistical analysis for damage detection in ceramic materials. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 9-16. <a href="https://doi.org/10.18280/ts.370102">https://doi.org/10.18280/ts.370102</a>
1028	Keivani, M., Mazloum, J., Sedaghatfar, E., Tavakoli, M.B.	Automated analysis of leaf shape, texture, and color features for plant classification	plants, GIST, best-guide binary particle swarm optimization, geometries, machine learning	37, 1, 17-28	<a href="https://doi.org/10.18280/ts.370103">https://doi.org/10.18280/ts.370103</a>	Keivani, M., Mazloum, J., Sedaghatfar, E., Tavakoli, M.B. (2020). Automated analysis of leaf shape, texture, and color features for plant classification. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 17-28. <a href="https://doi.org/10.18280/ts.370103">https://doi.org/10.18280/ts.370103</a>
1029	Tang, X., Zeng, T., Ding, B.X., Tan, Y.	A salient object detection algorithm based on hierarchical cognitive mechanism	cognitive mechanism, salient object detection, RGB-D image, saliency map	37, 1, 29-35	<a href="https://doi.org/10.18280/ts.370104">https://doi.org/10.18280/ts.370104</a>	Tang, X., Zeng, T., Ding, B.X., Tan, Y. (2020). A salient object detection algorithm based on hierarchical cognitive mechanism. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 29-35. <a href="https://doi.org/10.18280/ts.370104">https://doi.org/10.18280/ts.370104</a>
1030	Abdellaoui, M., Douik, A.	Human action recognition in video sequences using deep belief networks	human action recognition, deep belief network, restricted Boltzmann machine, deep learning	37, 1, 37-44	<a href="https://doi.org/10.18280/ts.370105">https://doi.org/10.18280/ts.370105</a>	Abdellaoui, M., Douik, A. (2020). Human action recognition in video sequences using deep belief networks. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 37-44. <a href="https://doi.org/10.18280/ts.370105">https://doi.org/10.18280/ts.370105</a>
1031	Yan, X.D., Song, X.G.	An image recognition algorithm for defect detection of underground pipelines based on convolutional neural network	image recognition, convolution neural network (CNN), cost function, recursive neural network (RNN), underground pipelines	37, 1, 45-50	<a href="https://doi.org/10.18280/ts.370106">https://doi.org/10.18280/ts.370106</a>	Yan, X.D., Song, X.G. (2020). An image recognition algorithm for defect detection of underground pipelines based on convolutional neural network. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 45-50. <a href="https://doi.org/10.18280/ts.370106">https://doi.org/10.18280/ts.370106</a>
1032	Demircan, S., Örnek, H.K.	Comparison of the effects of Mel coefficients and spectrogram images via deep learning in emotion classification	speech emotion recognition, Deep Neural Network (DNN), Convolutional Neural Network (CNN), deep learning algorithm, Mel-Frequency Cepstrum Coefficients (MFCC)	37, 1, 51-57	<a href="https://doi.org/10.18280/ts.370107">https://doi.org/10.18280/ts.370107</a>	Demircan, S., Örnek, H.K. (2020). Comparison of the effects of Mel coefficients and spectrogram images via deep learning in emotion classification. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 51-57. <a href="https://doi.org/10.18280/ts.370107">https://doi.org/10.18280/ts.370107</a>
1033	Akbari, H., Esmaili, S.S.	A novel geometrical method for discrimination of normal, interictal and ictal EEG signals	ictal EEG signal, geometrical features, computer-aided diagnosis, SVM, KNN	37, 1, 59-68	<a href="https://doi.org/10.18280/ts.370108">https://doi.org/10.18280/ts.370108</a>	Akbari, H., Esmaili, S.S. (2020). A novel geometrical method for discrimination of normal, interictal and ictal EEG signals. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 59-68. <a href="https://doi.org/10.18280/ts.370108">https://doi.org/10.18280/ts.370108</a>
1034	Yang, B.H.	An adaptive filtering algorithm for non-Gaussian signals in alpha-stable distribution	Alpha ( $\alpha$ )-stable distribution, non-Gaussian distribution, fractional lower-order statistics (FLOS), adaptive filtering algorithm, least mean square (LMS), subspace minimum norm (SMN) algorithm	37, 1, 69-75	<a href="https://doi.org/10.18280/ts.370109">https://doi.org/10.18280/ts.370109</a>	Yang, B.H. (2020). An adaptive filtering algorithm for non-Gaussian signals in alpha-stable distribution. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 69-75. <a href="https://doi.org/10.18280/ts.370109">https://doi.org/10.18280/ts.370109</a>
1035	Nandan, D.	An efficient antilogarithmic converter by using correction scheme for DSP processor	antilogarithmic converter, computer arithmetic, DSP processor, error analysis, FIR filter, logarithmic converter, logarithmic multiplication	37, 1, 77-83	<a href="https://doi.org/10.18280/ts.370110">https://doi.org/10.18280/ts.370110</a>	Nandan, D. (2020). An efficient antilogarithmic converter by using correction scheme for DSP processor. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 77-83. <a href="https://doi.org/10.18280/ts.370110">https://doi.org/10.18280/ts.370110</a>
1036	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M.	A deep learning model for striae identification in end images of float glass	striae identification, end image, float glass, deep learning (DL), liquid layers, U-Net	37, 1, 85-93	<a href="https://doi.org/10.18280/ts.370111">https://doi.org/10.18280/ts.370111</a>	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M. (2020). A deep learning model for striae identification in end images of float glass. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 85-93. <a href="https://doi.org/10.18280/ts.370111">https://doi.org/10.18280/ts.370111</a>
1037	Mokhnache, A., Ziet, L.	Cryptanalysis of a pixel permutation based image encryption technique using chaotic map	chaos, chosen-plaintext attack, brute-force attack, image encryption	37, 1, 95-100	<a href="https://doi.org/10.18280/ts.370112">https://doi.org/10.18280/ts.370112</a>	Mokhnache, A., Ziet, L. (2020). Cryptanalysis of a pixel permutation based image encryption technique using chaotic map. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 95-100. <a href="https://doi.org/10.18280/ts.370112">https://doi.org/10.18280/ts.370112</a>
1038	Jia, B.X., Meng, B., Zhang, W.N., Liu, J.	Query rewriting and semantic annotation in semantic-based image retrieval under heterogeneous ontologies of big data	semantic web, ontology mapping, query rewriting, big data, semantic annotation	37, 1, 101-105	<a href="https://doi.org/10.18280/ts.370113">https://doi.org/10.18280/ts.370113</a>	Jia, B.X., Meng, B., Zhang, W.N., Liu, J. (2020). Query rewriting and semantic annotation in semantic-based image retrieval under heterogeneous ontologies of big data. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 101-105. <a href="https://doi.org/10.18280/ts.370113">https://doi.org/10.18280/ts.370113</a>
1039	Bhange, D., Dethé, C.	Performance optimization of LS/LMMSE using swarm intelligence in 3D MIMO-OFDM systems	bit error rate, 3D-PACE, multi input multi output, orthogonal frequency division multiplexing, particle swarm optimization	37, 1, 107-112	<a href="https://doi.org/10.18280/ts.370114">https://doi.org/10.18280/ts.370114</a>	Bhange, D., Dethé, C. (2020). Performance optimization of LS/LMMSE using swarm intelligence in 3D MIMO-OFDM systems. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 107-112. <a href="https://doi.org/10.18280/ts.370114">https://doi.org/10.18280/ts.370114</a>
1040	Li, X.J., Li, S.F., Liu, S.N., Liu, L.F., He, D.J.	A malicious webpage detection algorithm based on image semantics	deep learning, malicious attack, image semantics, backpropagation neural network (BPNN)	37, 1, 113-118	<a href="https://doi.org/10.18280/ts.370115">https://doi.org/10.18280/ts.370115</a>	Li, X.J., Li, S.F., Liu, S.N., Liu, L.F., He, D.J. (2020). A malicious webpage detection algorithm based on image semantics. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 113-118. <a href="https://doi.org/10.18280/ts.370115">https://doi.org/10.18280/ts.370115</a>
1041	Das, M., Kumar, R., Sahana, B.C.	Implementation of effective hybrid window function for E.C.G signal denoising	additive white gaussian noise, electrocardiogram denoising, finite impulse response low pass filter, window functions	37, 1, 119-128	<a href="https://doi.org/10.18280/ts.370116">https://doi.org/10.18280/ts.370116</a>	Das, M., Kumar, R., Sahana, B.C. (2020). Implementation of effective hybrid window function for E.C.G signal denoising. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 119-128. <a href="https://doi.org/10.18280/ts.370116">https://doi.org/10.18280/ts.370116</a>
1042	Aslam, L., Saeed, A., Qureshi, I.M., Amir, M., Khan, W.	Novel image steganography based on preprocessing of secret messages to attain enhanced data security and improved payload capacity	data security, hidden communication, Steganography	37, 1, 129-136	<a href="https://doi.org/10.18280/ts.370117">https://doi.org/10.18280/ts.370117</a>	Aslam, L., Saeed, A., Qureshi, I.M., Amir, M., Khan, W. (2020). Novel image steganography based on preprocessing of secret messages to attain enhanced data security and improved payload capacity. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 129-136. <a href="https://doi.org/10.18280/ts.370117">https://doi.org/10.18280/ts.370117</a>
1043	Chen, X.B., Zhao, L., Hao, Y., Yu, L.H., Lv, C.C.	An evaluation algorithm for the interoperability of global navigation satellite systems	global navigation satellite systems (GNSSs), Compass/BeiDou Navigation Satellite System (Compass), interoperability, evaluation, service performance	37, 1, 137-144	<a href="https://doi.org/10.18280/ts.370118">https://doi.org/10.18280/ts.370118</a>	Chen, X.B., Zhao, L., Hao, Y., Yu, L.H., Lv, C.C. (2020). An evaluation algorithm for the interoperability of global navigation satellite systems. <i>Traitement du Signal</i> , Vol. 37, No. 1, pp. 137-144. <a href="https://doi.org/10.18280/ts.370118">https://doi.org/10.18280/ts.370118</a>
1044	Hamdini, R., Difiellah, N., Namane, A.	Robust local descriptor for color object recognition	color object recognition, hue, oriented descriptor, SVM, visual information	36, 6, 471-482	<a href="https://doi.org/10.18280/ts.360601">https://doi.org/10.18280/ts.360601</a>	Hamdini, R., Difiellah, N., Namane, A. (2019). Robust local descriptor for color object recognition. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 471-482. <a href="https://doi.org/10.18280/ts.360601">https://doi.org/10.18280/ts.360601</a>

1045	Ouchtati, S., Chergui, A., Mavromatis, S., Aissa, B., Rafik, D., Sequeira J.	Novel method for brain tumor classification based on use of image entropy and seven Hu's invariant moments	artificial neural networks, medical images processing, images classification, brain tumor	36, 6, 483-491	<a href="https://doi.org/10.18280/ts.360602">https://doi.org/10.18280/ts.360602</a>	Ouchtati, S., Chergui, A., Mavromatis, S., Aissa, B., Rafik, D., Sequeira J. (2019). Novel method for brain tumor classification based on use of image entropy and seven Hu's invariant moments. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 483-491. <a href="https://doi.org/10.18280/ts.360602">https://doi.org/10.18280/ts.360602</a>
1046	Gündoğdu, S., Doğan, E.A., Gülbetkin, E., Çolak, Ö.H., Polat, Ö.	Evaluation of the EEG signals and eye tracker data for working different N-back modes	electroencephalography, eye tracking, wavelet transforms, n-back test	36, 6, 493-500	<a href="https://doi.org/10.18280/ts.360603">https://doi.org/10.18280/ts.360603</a>	Gündoğdu, S., Doğan, E.A., Gülbetkin, E., Çolak, Ö.H., Polat, Ö. (2019). Evaluation of the EEG signals and eye tracker data for working different N-back modes. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 493-500. <a href="https://doi.org/10.18280/ts.360603">https://doi.org/10.18280/ts.360603</a>
1047	Ye, Z.X., Chen, Q., Zhang, Y., Zou, J.F., Zheng, Y.	Identification of vortex structures in flow field images based on convolutional neural network and dynamic mode decomposition	image processing, vortex identification, Convolutional Neural Network (CNN), Dynamic Mode Decomposition (DMD)	36, 6, 501-506	<a href="https://doi.org/10.18280/ts.360604">https://doi.org/10.18280/ts.360604</a>	Ye, Z.X., Chen, Q., Zhang, Y., Zou, J.F., Zheng, Y. (2019). Identification of vortex structures in flow field images based on convolutional neural network and dynamic mode decomposition. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 501-506. <a href="https://doi.org/10.18280/ts.360604">https://doi.org/10.18280/ts.360604</a>
1048	Fekri-Ershad, S.	Gender classification in human face images for smart phone applications based on local texture information and evaluated Kullback-Leibler divergence	gender classification, human recognition, improved local binary patterns, facial images, kullback-leibler divergence ratio, smart phone applications	36, 6, 507-514	<a href="https://doi.org/10.18280/ts.360605">https://doi.org/10.18280/ts.360605</a>	Fekri-Ershad, S. (2019). Gender classification in human face images for smart phone applications based on local texture information and evaluated Kullback-Leibler divergence. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 507-514. <a href="https://doi.org/10.18280/ts.360605">https://doi.org/10.18280/ts.360605</a>
1049	Xiu, G.Y., Yuan, C.Y., Chen, X.H., Li, X.S.	An innovative beam hardening correction method for computed tomography systems	Computed Tomography (CT), equivalent tissue length, trinomial fitting, water, bone	36, 6, 515-520	<a href="https://doi.org/10.18280/ts.360606">https://doi.org/10.18280/ts.360606</a>	Xiu, G.Y., Yuan, C.Y., Chen, X.H., Li, X.S. (2019). An innovative beam hardening correction method for computed tomography systems. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 515-520. <a href="https://doi.org/10.18280/ts.360606">https://doi.org/10.18280/ts.360606</a>
1050	Tuncer, S.A., Alkan, A.	Spinal cord based kidney segmentation using connected component labeling and K-means clustering algorithm	biomedical imaging, clustering algorithms, image processing, image segmentation	36, 6, 521-527	<a href="https://doi.org/10.18280/ts.360607">https://doi.org/10.18280/ts.360607</a>	Tuncer, S.A., Alkan, A. (2019). Spinal cord based kidney segmentation using connected component labeling and K-means clustering algorithm. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 521-527. <a href="https://doi.org/10.18280/ts.360607">https://doi.org/10.18280/ts.360607</a>
1051	Ganguly, S., Ghosh, J., Srinivas, K., Kumar, P.K., Mukhopadhyay, M.	Compressive sensing based two-dimensional DOA estimation using L-shaped array in a hostile environment	compressive sensing, L-shaped array antenna, orthogonal matching pursuit algorithm, sparse sampling, two-dimensional DOA estimation	36, 6, 529-538	<a href="https://doi.org/10.18280/ts.360608">https://doi.org/10.18280/ts.360608</a>	Ganguly, S., Ghosh, J., Srinivas, K., Kumar, P.K., Mukhopadhyay, M. (2019). Compressive sensing based two-dimensional DOA estimation using L-shaped array in a hostile environment. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 529-538. <a href="https://doi.org/10.18280/ts.360608">https://doi.org/10.18280/ts.360608</a>
1052	Zhang, J.H., Zhu, Q., Song, L.	A wavelet-based self-adaptive hierarchical thresholding algorithm and its application in image denoising	wavelet analysis, image denoising, parametric construction of biorthogonal wavelet, self-adaptive hierarchical thresholding	36, 6, 539-547	<a href="https://doi.org/10.18280/ts.360609">https://doi.org/10.18280/ts.360609</a>	Zhang, J.H., Zhu, Q., Song, L. (2019). A wavelet-based self-adaptive hierarchical thresholding algorithm and its application in image denoising. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 539-547. <a href="https://doi.org/10.18280/ts.360609">https://doi.org/10.18280/ts.360609</a>
1053	Özbay, E., Çınar, A.	A comparative study of object classification methods using 3D Zernike moment on 3D point clouds	3D, classification, machine learning, point cloud, pointnet, zernike moment	36, 6, 549-555	<a href="https://doi.org/10.18280/ts.360610">https://doi.org/10.18280/ts.360610</a>	Özbay, E., Çınar, A. (2019). A comparative study of object classification methods using 3D Zernike moment on 3D point clouds. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 549-555. <a href="https://doi.org/10.18280/ts.360610">https://doi.org/10.18280/ts.360610</a>
1054	Pei, J.Y., Shan, P.	A micro-expression recognition algorithm for students in classroom learning based on convolutional neural network	convolutional neural network (CNN), micro-expression recognition, deep learning, face detection, classroom learning	36, 6, 557-563	<a href="https://doi.org/10.18280/ts.360611">https://doi.org/10.18280/ts.360611</a>	Pei, J.Y., Shan, P. (2019). A micro-expression recognition algorithm for students in classroom learning based on convolutional neural network. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 557-563. <a href="https://doi.org/10.18280/ts.360611">https://doi.org/10.18280/ts.360611</a>
1055	Kuraparathi, S., Kollati, M., Kora, P.	Robust optimized discrete wavelet transform-singular value decomposition based video watermarking	ABC, DWT, imperceptibility, robustness, SVD transform	36, 6, 565-573	<a href="https://doi.org/10.18280/ts.360612">https://doi.org/10.18280/ts.360612</a>	Kuraparathi, S., Kollati, M., Kora, P. (2019). Robust optimized discrete wavelet transform-singular value decomposition based video watermarking. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 565-573. <a href="https://doi.org/10.18280/ts.360612">https://doi.org/10.18280/ts.360612</a>
1056	Meng, W.L., Mao, C.Z., Zhang, J., Wen, J., Wu, D.H.	A fast recognition algorithm of online social network images based on deep learning	online social network (OSN), image recognition, deep learning, image classification, support vector machine (SVM)	36, 6, 575-580	<a href="https://doi.org/10.18280/ts.360613">https://doi.org/10.18280/ts.360613</a>	Meng, W.L., Mao, C.Z., Zhang, J., Wen, J., Wu, D.H. (2019). A fast recognition algorithm of online social network images based on deep learning. <i>Traitement du Signal</i> , Vol. 36, No. 6, pp. 575-580. <a href="https://doi.org/10.18280/ts.360613">https://doi.org/10.18280/ts.360613</a>
1057	Özdemir, H., Sever, R., Polat, Ö.	GA-based optimization of SURF algorithm and realization based on Vivado-HLS	speeded-up robust features, high-level synthesis, genetic algorithm, optimization, character recognition	36, 5, 377-382	<a href="https://doi.org/10.18280/ts.360501">https://doi.org/10.18280/ts.360501</a>	Özdemir, H., Sever, R., Polat, Ö. (2019). GA-based optimization of SURF algorithm and realization based on Vivado-HLS. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 377-382. <a href="https://doi.org/10.18280/ts.360501">https://doi.org/10.18280/ts.360501</a>
1058	Sbgoud, F., Djeha, M., Guiatni, M., Ababou, N.	WPT-ANN and belief theory based EEG/EMG data fusion for movement identification	wavelet packet transform, artificial neural networks, belief theory, data fusion, hand movement identification, electro-physiological signals, electromyography, electroencephalography	36, 5, 383-391	<a href="https://doi.org/10.18280/ts.360502">https://doi.org/10.18280/ts.360502</a>	Sbgoud, F., Djeha, M., Guiatni, M., Ababou, N. (2019). WPT-ANN and belief theory based EEG/EMG data fusion for movement identification. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 383-391. <a href="https://doi.org/10.18280/ts.360502">https://doi.org/10.18280/ts.360502</a>
1059	Zhang, F., Zhang, C., Yang, H.M., Zhao, L.	Point cloud denoising with principal component analysis and a novel bilateral filter	point cloud, 3D scanner, principal component analysis (PCA), bilateral filter	36, 5, 393-398	<a href="https://doi.org/10.18280/ts.360503">https://doi.org/10.18280/ts.360503</a>	Zhang, F., Zhang, C., Yang, H.M., Zhao, L. (2019). Point cloud denoising with principal component analysis and a novel bilateral filter. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 393-398. <a href="https://doi.org/10.18280/ts.360503">https://doi.org/10.18280/ts.360503</a>
1060	Beirami, B.A., Mokhtarzade, M.	Spatial-spectral random patches network for classification of hyperspectral images	hyperspectral classification, random patches network, Gabor filter, support vector machine	36, 5, 399-406	<a href="https://doi.org/10.18280/ts.360504">https://doi.org/10.18280/ts.360504</a>	Beirami, B.A., Mokhtarzade, M. (2019). Spatial-spectral random patches network for classification of hyperspectral images. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 399-406. <a href="https://doi.org/10.18280/ts.360504">https://doi.org/10.18280/ts.360504</a>
1061	Herbadji, D., Derouiche, N., Belmeguenai, A., Herbadji, A., Boumerdassi, S.	A tweakable image encryption algorithm using an improved logistic chaotic map	image encryption, chaos, logistic map, tweakable	36, 5, 407-417	<a href="https://doi.org/10.18280/ts.360505">https://doi.org/10.18280/ts.360505</a>	Herbadji, D., Derouiche, N., Belmeguenai, A., Herbadji, A., Boumerdassi, S. (2019). A tweakable image encryption algorithm using an improved logistic chaotic map. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 407-417. <a href="https://doi.org/10.18280/ts.360505">https://doi.org/10.18280/ts.360505</a>
1062	Zhang, C., Pan, S., Qi, Y.W., Yang, Y.D.	A footprint extraction and recognition algorithm based on plantar pressure	footprint recognition, plantar pressure, clustering, image segmentation	36, 5, 419-424	<a href="https://doi.org/10.18280/ts.360506">https://doi.org/10.18280/ts.360506</a>	Zhang, C., Pan, S., Qi, Y.W., Yang, Y.D. (2019). A footprint extraction and recognition algorithm based on plantar pressure. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 419-424. <a href="https://doi.org/10.18280/ts.360506">https://doi.org/10.18280/ts.360506</a>

1063	Gupta, A.K., Chakraborty, C., Gupta, B.	Monitoring of epileptical patients using cloud-enabled health-IoT system	DWT-SVD, EEG monitoring, epilepsy, health-IOT, STFT, watermarking	36, 5, 425-431	<a href="https://doi.org/10.18280/ts.360507">https://doi.org/10.18280/ts.360507</a>	Gupta, A.K., Chakraborty, C., Gupta, B. (2019). Monitoring of epileptical patients using cloud-enabled health-IoT system. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 425-431. <a href="https://doi.org/10.18280/ts.360507">https://doi.org/10.18280/ts.360507</a>
1064	Farooq, U., Rather, G.M.	Design and analysis of rectangular microstrip antenna (RMSA) for millimeter wave communication applications	millimeter wave, microstrip antenna, equivalent circuit, VSWR, next generation networks, 5G	36, 5, 433-438	<a href="https://doi.org/10.18280/ts.360508">https://doi.org/10.18280/ts.360508</a>	Farooq, U., Rather, G.M. (2019). Design and analysis of rectangular microstrip antenna (RMSA) for millimeter wave communication applications. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 433-438. <a href="https://doi.org/10.18280/ts.360508">https://doi.org/10.18280/ts.360508</a>
1065	Li, H., Ge, X.	Design and application of an image classification algorithm based on semantic discrimination	image classification, distance metric learning (DML), maximum-margin criterion (mmc), semantic discrimination	36, 5, 439-444	<a href="https://doi.org/10.18280/ts.360509">https://doi.org/10.18280/ts.360509</a>	Li, H., Ge, X. (2019). Design and application of an image classification algorithm based on semantic discrimination. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 439-444. <a href="https://doi.org/10.18280/ts.360509">https://doi.org/10.18280/ts.360509</a>
1066	Wajeed, M.A., Sreenivasulu, V.	Image based tumor cells identification using convolutional neural network and auto encoders	convolutional neural network, region-convolutional neural network, tumor cells, pre processing, clustering, classification, tumor prediction	36, 5, 445-453	<a href="https://doi.org/10.18280/ts.360510">https://doi.org/10.18280/ts.360510</a>	Wajeed, M.A., Sreenivasulu, V. (2019). Image based tumor cells identification using convolutional neural network and auto encoders. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 445-453. <a href="https://doi.org/10.18280/ts.360510">https://doi.org/10.18280/ts.360510</a>
1067	Singh, M.K., Nandan, D., Kumar, S.	Statistical analysis of lower and raised pitch voice signal and its efficiency calculation	acoustic feature, statistical analysis, feature extraction, SVM classifier, speaker identification	36, 5, 455-461	<a href="https://doi.org/10.18280/ts.360511">https://doi.org/10.18280/ts.360511</a>	Singh, M.K., Nandan, D., Kumar, S. (2019). Statistical analysis of lower and raised pitch voice signal and its efficiency calculation. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 455-461. <a href="https://doi.org/10.18280/ts.360511">https://doi.org/10.18280/ts.360511</a>
1068	Li, Y., Shi, D.L., Bu, F.J.	Automatic recognition of rock images based on convolutional neural network and discrete cosine transform	deep learning, image classification, convolutional neural network (CNN), discrete cosine transform (DCT)	36, 5, 463-469	<a href="https://doi.org/10.18280/ts.360512">https://doi.org/10.18280/ts.360512</a>	Li, Y., Shi, D.L., Bu, F.J. (2019). Automatic recognition of rock images based on convolutional neural network and discrete cosine transform. <i>Traitement du Signal</i> , Vol. 36, No. 5, pp. 463-469. <a href="https://doi.org/10.18280/ts.360512">https://doi.org/10.18280/ts.360512</a>
1069	Moezzi R., Hlava J., Vu T.M.	Implementation of X-parameters principle for non-linear vibroacoustic membrane using two-port measurement	x-parameters, poly-harmonic distortion (PHD), s-parameters, lumped model, nonlinear acoustics, scattering matrix	36, 4, 297-301	<a href="https://doi.org/10.18280/ts.360401">https://doi.org/10.18280/ts.360401</a>	Moezzi, R., Hlava, J., Vu, T.M. (2019). Implementation of X-parameters principle for non-linear vibroacoustic membrane using two-port measurement. <i>Traitement du Signal</i> , Vol. 36, No. 4, pp. 297-301. <a href="https://doi.org/10.18280/ts.360401">https://doi.org/10.18280/ts.360401</a>
1070	Kaya, D., Tuncer, S.A.	Generating random numbers from biological signals in labVIEW environment and statistical analysis	True Random Number Generator (TRNG), Biological Signal, Electromyographic (EMG) Signal, LabVIEW, statistical test	36, 4, 303-310	<a href="https://doi.org/10.18280/ts.360402">https://doi.org/10.18280/ts.360402</a>	Kaya, D., Tuncer, S.A. (2019). Generating random numbers from biological signals in LabVIEW environment and statistical analysis. <i>Traitement du Signal</i> , Vol. 36, No. 4, pp. 303-310. <a href="https://doi.org/10.18280/ts.360402">https://doi.org/10.18280/ts.360402</a>
1071	Liu, Q., He, X., Guan, F.W., Zhao, Y.C., Jiang, F., Tian, F.X., Wang, S.X.	Method and implementation of improving the pointing accuracy of an optical remote sensor using a star sensor	Star Sensor, Spatial Optical Remote Sensor, External Orientation Element, Pointing Accuracy	36, 4, 311-317	<a href="https://doi.org/10.18280/ts.360403">https://doi.org/10.18280/ts.360403</a>	Liu, Q., He, X., Guan, F.W., Zhao, Y.C., Jiang, F., Tian, F.X., Wang, S.X. (2019). Method and implementation of improving the pointing accuracy of an optical remote sensor using a star sensor. <i>Traitement du Signal</i> , Vol. 36, No. 4, pp. 311-317. <a href="https://doi.org/10.18280/ts.360403">https://doi.org/10.18280/ts.360403</a>
1072	Gorur, K., Bozkurt, M.R., Bascil, M.S., Temurtas, F.	GKP signal processing using deep CNN and svm for tongue-machine interface	Glossokinetic Potential Signals (GKPs), Tongue-Machine Interface (TMI), Convolutional Neural Network (CNN), Support Vector Machine (SVM), Brain-Computer Interface (BCI)	36, 4, 319-329	<a href="https://doi.org/10.18280/ts.360404">https://doi.org/10.18280/ts.360404</a>	Gorur, K., Bozkurt, M.R., Bascil, M.S., Temurtas, F. (2019). GKP signal processing using deep CNN and SVM for tongue-machine interface. <i>Traitement du Signal</i> , Vol. 36, No. 4, pp. 319-329. <a href="https://doi.org/10.18280/ts.360404">https://doi.org/10.18280/ts.360404</a>
1073	Yang, K., Yang, Z.T., Yan, W.N., Zhao, J.K., Du, Y., Liu, S., Liu, K.	Reconstruction algorithm for polychromatic computed tomography images based on equivalent tissue length	Beam Hardening, Computed Tomography (CT), equivalent tissue length, proportional guidance	36, 4, 331-338	<a href="https://doi.org/10.18280/ts.360405">https://doi.org/10.18280/ts.360405</a>	Yang, K., Yang, Z.T., Yan, W.N., Zhao, J.K., Du, Y., Liu, S., Liu, K. (2019). Reconstruction algorithm for polychromatic computed tomography images based on equivalent tissue length. <i>Traitement du Signal</i> , Vol. 36, No. 4, pp. 331-338. <a href="https://doi.org/10.18280/ts.360405">https://doi.org/10.18280/ts.360405</a>
1074	Sajja, T.K., Devarapalli, R.M., Kalluri, H.K.	Lung cancer detection based on ct scan images by using deep transfer learning	Convolutional Neural Network (CNN), lung cancer, transfer learning, alexnet, googlenet, resnet50	36, 4, 339-344	<a href="https://doi.org/10.18280/ts.360406">https://doi.org/10.18280/ts.360406</a>	Sajja, T.K., Devarapalli, R.M., Kalluri, H.K. (2019). Lung cancer detection based on CT scan images by using deep transfer learning. <i>Traitement du Signal</i> , Vol. 36, No. 4, pp. 339-344. <a href="https://doi.org/10.18280/ts.360406">https://doi.org/10.18280/ts.360406</a>
1075	Qin, Z., Zhang, Y., Zhang, S., Zhao, J.W., Wang, T.F., Shen, K.	Identification of microscopic damage law of rocks through digital image processing of computed tomography images	Digital Image Processing (DIP), Geotechnical Engineering, Computed Tomography (CT) Scanning, Representative Elementary Volume (REV), microscopic damages	36, 4, 345-352	<a href="https://doi.org/10.18280/ts.360407">https://doi.org/10.18280/ts.360407</a>	Qin, Z., Zhang, Y., Zhang, S., Zhao, J.W., Wang, T.F., Shen, K. (2019). Identification of microscopic damage law of rocks through digital image processing of computed tomography images. <i>Traitement du Signal</i> , Vol. 36, No. 4, pp. 345-352. <a href="https://doi.org/10.18280/ts.360407">https://doi.org/10.18280/ts.360407</a>
1076	Teki, S.M., Varma, M.K., Yadav, A.K.	Brain tumour segmentation using U-net based adversarial networks	image segmentation, brain tumour, deep learning, adversarial network, neural networks	36, 4, 353-359	<a href="https://doi.org/10.18280/ts.360408">https://doi.org/10.18280/ts.360408</a>	Teki, S.M., Varma, M.K., Yadav, A.K. (2019). Brain tumour segmentation using U-net based adversarial networks. <i>Traitement du Signal</i> , Vol. 36, No. 4, pp. 353-359. <a href="https://doi.org/10.18280/ts.360408">https://doi.org/10.18280/ts.360408</a>
1077	Sheikh, T.A., Bora, J., Hussain, A.	Performance analysis of massive multi-input and multi-output with imperfect channel state information	massive multi-input and multi-output (MIMO), 5G, user scheduling, antenna selection, scale fading, channel estimation error	36, 4, 361-368	<a href="https://doi.org/10.18280/ts.360409">https://doi.org/10.18280/ts.360409</a>	Sheikh, T.A., Bora, J., Hussain, A. (2019). Performance analysis of massive multi-input and multi-output with imperfect channel state information. <i>Traitement du Signal</i> , Vol. 36, No. 4, pp. 361-368. <a href="https://doi.org/10.18280/ts.360409">https://doi.org/10.18280/ts.360409</a>
1078	Li, X., Lin, C., Xu, X.P.	A target tracking model for enterprise production monitoring system based on spatial information and appearance model	target tracking, appearance features, spatial information, multi-plane projection	36, 4, 369-375	<a href="https://doi.org/10.18280/ts.360410">https://doi.org/10.18280/ts.360410</a>	Li, X., Lin, C., Xu, X.P. (2019). A target tracking model for enterprise production monitoring system based on spatial information and appearance model. <i>Traitement du Signal</i> , Vol. 36, No. 4, pp. 369-375. <a href="https://doi.org/10.18280/ts.360410">https://doi.org/10.18280/ts.360410</a>
1079	Eva, O.D., Lazar, A.M.	Amplitude modulation index as feature in a brain computer interface	classification algorithms, EEG rhythms electroencephalography, features extraction, hilbert transform, motor imagery, modulation bands, temporal envelope	36, 3, 201-207	<a href="https://doi.org/10.18280/ts.360301">https://doi.org/10.18280/ts.360301</a>	Eva, O.D., Lazar, A.M. (2019). Amplitude modulation index as feature in a brain computer interface. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 201-207. <a href="https://doi.org/10.18280/ts.360301">https://doi.org/10.18280/ts.360301</a>
1080	Zhao Y.M., Zhao, Y.M.	Design and application of an adaptive slow feature extraction algorithm for natural images based on visual invariance	invariant, slow feature (SF), visual computing, receptive field, topology	36, 3, 209-216	<a href="https://doi.org/10.18280/ts.360302">https://doi.org/10.18280/ts.360302</a>	Zhao, Y.M. (2019). Design and application of an adaptive slow feature extraction algorithm for natural images based on visual invariance. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 209-216. <a href="https://doi.org/10.18280/ts.360302">https://doi.org/10.18280/ts.360302</a>

1081	Fatima, B., Réda, A.	Multi-modal biometric protection system using surf filter with biohashing algorithm	multi-biometric, security, fusion, biohashing, revocable	36, 3, 217-225	<a href="https://doi.org/10.18280/ts.360303">https://doi.org/10.18280/ts.360303</a>	Fatima, B., Réda, A. (2019). Multi-modal biometric protection system using SURF Filter with BioHashing algorithm. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 217-225. <a href="https://doi.org/10.18280/ts.360303">https://doi.org/10.18280/ts.360303</a>
1082	Lu, X.M., Wu, Q., Zhou, Y., Ma, Y., Song, C.C., Ma, C.	A dynamic swarm firefly algorithm based on chaos theory and max-min distance algorithm	K-means clustering (KMC), max-min distance algorithm (MM), firefly algorithm (FA), chaos theory	36, 3, 227-231	<a href="https://doi.org/10.18280/ts.360304">https://doi.org/10.18280/ts.360304</a>	Lu, X.M., Wu, Q., Zhou, Y., Ma, Y., Song, C.C., Ma, C. (2019). A dynamic swarm firefly algorithm based on chaos theory and Max-Min distance algorithm. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 227-231. <a href="https://doi.org/10.18280/ts.360304">https://doi.org/10.18280/ts.360304</a>
1083	Kumar, S.K., Reddy, P.D.K., Ramesh, G., Maddumala, V.R.	Image transformation technique using steganography methods using LWT technique	embedding, steganography, extraction, texturization, watermarking	36, 3, 233-237	<a href="https://doi.org/10.18280/ts.360305">https://doi.org/10.18280/ts.360305</a>	Kumar, S.K., Reddy, P.D.K., Ramesh, G., Maddumala, V.R. (2019). Image transformation technique using steganography methods using LWT technique. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 233-237. <a href="https://doi.org/10.18280/ts.360305">https://doi.org/10.18280/ts.360305</a>
1084	Li, Z.L., Zhou, Y., Bao, R.	An image classification method based on optimized fuzzy bag-of-words model	fuzzy bag-of-words (FBOW) model, image description, fuzzy system with positive and negative rules, particle swarm optimization (PSO), recursive least squares (RLS) algorithm	36, 3, 239-244	<a href="https://doi.org/10.18280/ts.360306">https://doi.org/10.18280/ts.360306</a>	Li, Z.L., Zhou, Y., Bao, R. (2019). An image classification method based on optimized fuzzy bag-of-words model. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 239-244. <a href="https://doi.org/10.18280/ts.360306">https://doi.org/10.18280/ts.360306</a>
1085	Chergui, L., Bouguezel, S.	A new post-whitening transform domain LMS algorithm	eigen-value spread, orthogonal transforms, post-whitening, predictive decorrelation, system identification, TDLMS	36, 3, 245-252	<a href="https://doi.org/10.18280/ts.360307">https://doi.org/10.18280/ts.360307</a>	Chergui, L., Bouguezel, S. (2019). A new post-whitening transform domain LMS algorithm. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 245-252. <a href="https://doi.org/10.18280/ts.360307">https://doi.org/10.18280/ts.360307</a>
1086	Gao, Y.H., Lu, H.L.	A novel co-planar waveguide-fed direct current wide band printed dipole antenna	dipole antenna, coplanar waveguide (CPW), base station, radio frequency identification (RFID)	36, 3, 253-257	<a href="https://doi.org/10.18280/ts.360308">https://doi.org/10.18280/ts.360308</a>	Gao, Y.H., Lu, H.L. (2019). A novel co-planar waveguide-fed direct current wide band printed dipole antenna. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 253-257. <a href="https://doi.org/10.18280/ts.360308">https://doi.org/10.18280/ts.360308</a>
1087	Shafieian, M., Zavar, M., Rahmania, M.	Simulation and control of surge phenomenon in centrifugal compressors	centrifugal compressor, surge modeling, nonlinear function, close-coupled valve, Lyapunov, surge protection, control valve, stability	36, 3, 259-264	<a href="https://doi.org/10.18280/ts.360309">https://doi.org/10.18280/ts.360309</a>	Shafieian, M., Zavar, M., Rahmania, M. (2019). Simulation and control of surge phenomenon in centrifugal compressors. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 259-264. <a href="https://doi.org/10.18280/ts.360309">https://doi.org/10.18280/ts.360309</a>
1088	Luo, Z.L., Jia, Y.B., He, J.Z.	An optic disc segmentation method based on active contour tracking	optic disc segmentation, retinal image, active contour tracking, least squares method	36, 3, 265-271	<a href="https://doi.org/10.18280/ts.360310">https://doi.org/10.18280/ts.360310</a>	Luo, Z.L., Jia, Y.B., He, J.Z. (2019). An optic disc segmentation method based on active contour tracking. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 265-271. <a href="https://doi.org/10.18280/ts.360310">https://doi.org/10.18280/ts.360310</a>
1089	Rafik, D., Larbi, B.	Autoregressive modeling based empirical mode decomposition (EMD) for epileptic seizures detection using eeg signals	epilepsy, epileptic EEG signals, EMD, autoregressive modeling, classification, seizures	36, 3, 273-279	<a href="https://doi.org/10.18280/ts.360311">https://doi.org/10.18280/ts.360311</a>	Rafik, D., Larbi, B. (2019). Autoregressive modeling based empirical mode decomposition (EMD) for epileptic seizures detection using EEG signals. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 273-279. <a href="https://doi.org/10.18280/ts.360311">https://doi.org/10.18280/ts.360311</a>
1090	Shankar, R., Kumar, I., Mishra, R.K.	Pairwise error probability analysis of dual hop relaying network over time selective nakagami-m fading channel with imperfect csi and node mobility	selective decode-and-forward, multiple- input multiple-output, channel state information, diversity order, signal to noise ratio	36, 3, 281-295	<a href="https://doi.org/10.18280/ts.360312">https://doi.org/10.18280/ts.360312</a>	Shankar, R., Kumar, I., Mishra, R.K. (2019). Pairwise error probability analysis of dual hop relaying network over time selective Nakagami-m fading channel with imperfect CSI and node mobility. <i>Traitement du Signal</i> , Vol. 36, No. 3, pp. 281-295. <a href="https://doi.org/10.18280/ts.360312">https://doi.org/10.18280/ts.360312</a>
1091	Eddine Cherif, B.D., Bendiabdellah, A., Tabakh, M.	Diagnosis of an inverter IGBT open-circuit fault by hilbert-huang transform application	inverter, IGBT, open-circuit, HHT, EMD, CEEMDAN, IMF, spectral envelope, rms	36, 2, 137-132	<a href="https://doi.org/10.18280/ts.360201">https://doi.org/10.18280/ts.360201</a>	Eddine Cherif, B.D., Bendiabdellah, A., Tabakh, M. (2019). Diagnosis of an inverter IGBT open-circuit fault by hilbert-huang transform application. <i>Traitement du Signal</i> , Vol. 36, No. 2, pp. 127-132. <a href="https://doi.org/10.18280/ts.360201">https://doi.org/10.18280/ts.360201</a>
1092	Rad, S.M., Nejad, M.B.	New analog processing technique in multichannel neural signal recording with reduce data rate and reduce power consumption	analog processor, compressive sampling, spike detection, multi-channel neural recording system, reduce power consumption	36, 2, 133-137	<a href="https://doi.org/10.18280/ts.360202">https://doi.org/10.18280/ts.360202</a>	Rad, S.M., Nejad, M.B. (2019). New analog processing technique in multichannel neural signal recording with reduce data rate and reduce power consumption. <i>Traitement du Signal</i> , Vol. 36, No. 2, pp. 133-137. <a href="https://doi.org/10.18280/ts.360202">https://doi.org/10.18280/ts.360202</a>
1093	Zhu, Y.L., Xu, C.G., Xiao, D.G.	Denosing ultrasonic echo signals with generalized s transform and singular value decomposition	echo signals, Generalized S Transform (GST), Singular value Decomposition (SVD), C-scan image	36, 2, 139-145	<a href="https://doi.org/10.18280/ts.360203">https://doi.org/10.18280/ts.360203</a>	Zhu, Y.L., Xu, C.G., Xiao, D.G. (2019). Denosing ultrasonic echo signals with generalized s transform and singular value decomposition. <i>Traitement du Signal</i> , Vol. 36, No. 2, pp. 139-145. <a href="https://doi.org/10.18280/ts.360203">https://doi.org/10.18280/ts.360203</a>
1094	Zou, H.D., Jia, R.Q.	Visual positioning and recognition of gangues based on scratch feature detection	gangue, raw coal, grey level co-occurrence matrix (GLCM), texture feature, scratch feature	36, 2, 147-153	<a href="https://doi.org/10.18280/ts.360204">https://doi.org/10.18280/ts.360204</a>	Zou, H.D., Jia, R.Q. (2019). Visual positioning and recognition of gangues based on scratch feature detection. <i>Traitement du Signal</i> , Vol. 36, No. 2, pp. 147-153. <a href="https://doi.org/10.18280/ts.360204">https://doi.org/10.18280/ts.360204</a>
1095	Sachan, V., Mishra, R.K.	Uplink sum rate and capacity of hybrid precoding mmwave massive MIMO system	MIMO, massive MIMO, millimeter wave, hybrid precoding and combining	36, 2, 155-160	<a href="https://doi.org/10.18280/ts.360205">https://doi.org/10.18280/ts.360205</a>	Sachan, V., Mishra, R.K. (2019). Uplink sum rate and capacity of hybrid precoding mmWave massive MIMO system. <i>Traitement du Signal</i> , Vol. 36, No. 2, pp. 155-160. <a href="https://doi.org/10.18280/ts.360205">https://doi.org/10.18280/ts.360205</a>
1096	Xie, J.B., Li, R.T., Lv, S.W., Wang, Y.J., Wang, Q.Y., Vorotnitsky, Y.I.	Chinese alt text writing based on deep learning	Chinese image captioning, deep convolutional neural network (DCNN), feature extraction, gated recurrent unit (GRU) network	36, 2, 161-170	<a href="https://doi.org/10.18280/ts.360206">https://doi.org/10.18280/ts.360206</a>	Xie, J.B., Li, R.T., Lv, S.W., Wang, Y.J., Wang, Q.Y., Vorotnitsky, Y.I. (2019). Chinese alt text writing based on deep learning. <i>Traitement du Signal</i> , Vol. 36, No. 2, pp. 161-170. <a href="https://doi.org/10.18280/ts.360206">https://doi.org/10.18280/ts.360206</a>
1097	Choudira, I., Khodja, D.E., Chakroune, S.	Continuous wavelet technique for detection of broken bar faults in induction machine	continuous wavelet (cwt), induction machine diagnosis, signal processing, faults signatures, indicator values	36, 2, 171-176	<a href="https://doi.org/10.18280/ts.360207">https://doi.org/10.18280/ts.360207</a>	Choudira, I., Khodja, D.E., Chakroune, S. (2019). Continuous wavelet technique for detection of broken bar faults in induction machine. <i>Traitement du Signal</i> , Vol. 36, No. 2, pp. 171-176. <a href="https://doi.org/10.18280/ts.360207">https://doi.org/10.18280/ts.360207</a>
1098	Zhang, J.H., Zhu, Q., Song, L.	Self-adaptive hierarchical threshold denoising based on parametric construction of fixed-length tight-supported biorthogonal wavelets	fixed-length tight-supported (FLTS) biorthogonal wavelet, parametric construction, self-adaptive hierarchical threshold denoising (SAHTD), scale factor, sign function	36, 2, 177-184	<a href="https://doi.org/10.18280/ts.360208">https://doi.org/10.18280/ts.360208</a>	Zhang, J.H., Zhu, Q., Song, L. (2019). Self-adaptive hierarchical threshold denoising based on parametric construction of fixed-length tight-supported biorthogonal wavelets. <i>Traitement du Signal</i> , Vol. 36, No. 2, pp. 177-184. <a href="https://doi.org/10.18280/ts.360208">https://doi.org/10.18280/ts.360208</a>

1099	Chinnam, S.K.R., Sistla, V., Kolli, V.K.K.	SVM-PUK kernel based MRI-brain tumor identification using texture and gabor wavelets	brain tumor, statistical features, principle component analysis, Gabor, support vector machine, Puk kernel	36, 2, 185-191	<a href="https://doi.org/10.18280/ts.360209">https://doi.org/10.18280/ts.360209</a>	Chinnam, S.K.R., Sistla, V., Kolli, V.K.K. (2019). SVM-PUK kernel based MRI-brain tumor identification using texture and Gabor wavelets. <i>Traitement du Signal</i> , Vol. 36, No. 2, pp. 185-191. <a href="https://doi.org/10.18280/ts.360209">https://doi.org/10.18280/ts.360209</a>
1100	HimaBindu, G., Anuradha, C., Chandra Murty, P.S.R.	Assessment of combined shape, color and textural features for video duplication	video, shape, color, Grey-Level Co-Occurrence Matrix (GLCM), Grey-Level Run Length Matrix (GLRLM)	36, 2, 193-199	<a href="https://doi.org/10.18280/ts.360210">https://doi.org/10.18280/ts.360210</a>	HimaBindu, G., Anuradha, C., Chandra Murty, P.S.R. (2019). Assessment of combined shape, color and textural features for video duplication. <i>Traitement du Signal</i> , Vol. 36 No. 2, pp. 193-199. <a href="https://doi.org/10.18280/ts.360210">https://doi.org/10.18280/ts.360210</a>
1101	Loutfi, B., Samir, Z., Ali, D., Zinelaabidine, G.M.	Real time implementation of type-2 fuzzy backstepping sliding mode controller for twin rotor MIMO system (TRMs)	TRMS model, interval type-2 fuzzy logic, sliding mode, backstepping, T2FBSMC	36, 1, 1-11	<a href="https://doi.org/10.18280/ts.360101">https://doi.org/10.18280/ts.360101</a>	Loutfi, B., Samir, Z., Ali, D., Zinelaabidine, G.M. (2019). Real time implementation of type-2 fuzzy backstepping sliding mode controller for twin rotor MIMO system (TRMS). <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 1-11. <a href="https://doi.org/10.18280/ts.360101">https://doi.org/10.18280/ts.360101</a>
1102	Reddy, C.V.R., Reddy, U.S., Kishore, K.V.K.	Facial emotion recognition using NLPCA and SVM	gabor wavelet, HAAR wavelet, PCA, NLPCA, SVM	36, 1, 13-22	<a href="https://doi.org/10.18280/ts.360102">https://doi.org/10.18280/ts.360102</a>	Reddy, C.V.R., Reddy, U.S., Kishore, K.V.K. (2019). Facial emotion recognition using NLPCA and SVM. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 13-22. <a href="https://doi.org/10.18280/ts.360102">https://doi.org/10.18280/ts.360102</a>
1103	Huang, F., Zheng, N.N.	A novel frequent pattern mining algorithm for real-time radar data stream	frequent pattern, data mining, radar data, data stream, index pattern tree (IPT)	36, 1, 23-30	<a href="https://doi.org/10.18280/ts.360103">https://doi.org/10.18280/ts.360103</a>	Huang, F., Zheng, N.N. (2019). A novel frequent pattern mining algorithm for real-time radar data stream. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 23-30. <a href="https://doi.org/10.18280/ts.360103">https://doi.org/10.18280/ts.360103</a>
1104	Cai, Q.R.	A secure image encryption algorithm based on composite chaos theory	image encryption, permutation, diffusion, composite chaotic system	36, 1, 31-36	<a href="https://doi.org/10.18280/ts.360104">https://doi.org/10.18280/ts.360104</a>	Cai, Q.R. (2019). A secure image encryption algorithm based on composite chaos theory. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 31-36. <a href="https://doi.org/10.18280/ts.360104">https://doi.org/10.18280/ts.360104</a>
1105	Loutfi, B.	Faults detection and diagnosis of multilevel inverter based on signal processing	active power filter, multilevel inverter, PWM-controlled, open transistor fault, THD, mean values	36, 1, 37-44	<a href="https://doi.org/10.18280/ts.360105">https://doi.org/10.18280/ts.360105</a>	Loutfi, B. (2019). Faults detection and diagnosis of multilevel inverter based on signal processing. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 37-44. <a href="https://doi.org/10.18280/ts.360105">https://doi.org/10.18280/ts.360105</a>
1106	Oulaya, B., Aissa, B., Salim, O.	Secure transfer of color images using horizontal and vertical scan	image, encryption, decryption, scan pattern, stream cipher, keystream generator, permutation, NLFPSR	36, 1, 45-51	<a href="https://doi.org/10.18280/ts.360106">https://doi.org/10.18280/ts.360106</a>	Oulaya, B., Aissa, B., Salim, O. (2019). Secure transfer of color images using horizontal and vertical scan. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 45-51. <a href="https://doi.org/10.18280/ts.360106">https://doi.org/10.18280/ts.360106</a>
1107	Liang, H., Zhang, Q., Fu, C., Liang, F., Sun, Y.S.	Surface modelling of jun ware based on ordinary differential equations	ordinary differential equation (ODE), shape modelling, digital modelling, JUN ware	36, 1, 53-58	<a href="https://doi.org/10.18280/ts.360107">https://doi.org/10.18280/ts.360107</a>	Liang, H., Zhang, Q., Fu, C., Liang, F., Sun, Y.S. (2019). Surface modelling of Jun ware based on ordinary differential equations. <i>Traitement du Signal</i> , Vol. 1, No. 1, pp. 53-58. <a href="https://doi.org/10.18280/ts.360107">https://doi.org/10.18280/ts.360107</a>
1108	Shankar, R., Kumar, I., Mishra, R.K.	Outage probability analysis of MIMO-OSTBC relaying network over nakagami-m fading channel conditions	cooperative communication, outage probability, pairwise error probability, channel state information, convex optimization	36, 1, 59-64	<a href="https://doi.org/10.18280/ts.360108">https://doi.org/10.18280/ts.360108</a>	Shankar, R., Kumar, I., Mishra, R.K. (2019). Outage probability analysis of MIMO-OSTBC relaying network over Nakagami-m fading channel conditions. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 59-64. <a href="https://doi.org/10.18280/ts.360108">https://doi.org/10.18280/ts.360108</a>
1109	Wang, S., Hu, Y.Z., Liu, N.	Signal separation of phase-sensitive optical time-domain reflectometry considering thermo-mechanical coupling and 3D data matching	Phase-Sensitive Optical Time-Domain Reflectometry ( $\Phi$ -OTDR), Thermo-Mechanical Coupling (TMC), 3D data matching	36, 1, 65-77	<a href="https://doi.org/10.18280/ts.360109">https://doi.org/10.18280/ts.360109</a>	Wang, S., Hu, Y.Z., Liu, N. (2019). Signal separation of phase-sensitive optical time-domain reflectometry considering thermo-mechanical coupling and 3D data matching. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 65-77. <a href="https://doi.org/10.18280/ts.360109">https://doi.org/10.18280/ts.360109</a>
1110	Kumar K., Mishra R.K., Kumar, K., Mishra, R.K.	A robust mRMR based pedestrian detection approach using shape descriptor	classifier, feature selection, hog, hsg, pedestrian detection, SVM	36, 1, 79-85	<a href="https://doi.org/10.18280/ts.360110">https://doi.org/10.18280/ts.360110</a>	Kumar, K., Mishra, R.K. (2019). A robust mRMR based pedestrian detection approach using shape descriptor. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 79-85. <a href="https://doi.org/10.18280/ts.360110">https://doi.org/10.18280/ts.360110</a>
1111	Reddy, U.J., Reddy, B.R.V.R., Reddy, B.E.	Recognition of lung cancer using machine learning mechanisms with fuzzy neural networks	pre-processing, Binarization, segmentation, feature extraction, neural network, lung cancer detection	36, 1, 87-91	<a href="https://doi.org/10.18280/ts.360111">https://doi.org/10.18280/ts.360111</a>	Reddy, U.J., Reddy, B.R.V.R., Reddy, B.E. (2019). Recognition of lung cancer using machine learning mechanisms with fuzzy neural networks. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 87-91. <a href="https://doi.org/10.18280/ts.360111">https://doi.org/10.18280/ts.360111</a>
1112	Qin, J.L., Shang, S.P.	Design and application of ultrasonic measurement systems for akashiwo sanguinea	ultrasonic measurement, akashiwo sanguinea (a. sanguinea), acoustic doppler velocimeter (ADV), development board (DB), integrated backscattered strength (IBS), algae cell concentration	36, 1, 93-101	<a href="https://doi.org/10.18280/ts.360112">https://doi.org/10.18280/ts.360112</a>	Qin, J.L., Shang, S.P. (2019). Design and application of ultrasonic measurement systems for Akashiwo Sanguinea. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 93-101. <a href="https://doi.org/10.18280/ts.360112">https://doi.org/10.18280/ts.360112</a>
1113	Ren, J., Huang, S.Y., Song, W., Han, J.	A novel indoor positioning algorithm for wireless sensor network based on received signal strength indicator filtering and improved Taylor series expansion	wireless sensor network (WSN), received signal strength indicator (RSSI), indoor positioning, Taylor series expansion (TSE), positioning accuracy	36, 1, 103-108	<a href="https://doi.org/10.18280/ts.360113">https://doi.org/10.18280/ts.360113</a>	Ren, J., Huang, S.Y., Song, W., Han, J. (2019). A novel indoor positioning algorithm for wireless sensor network based on received signal strength indicator filtering and improved Taylor series expansion. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 103-108. <a href="https://doi.org/10.18280/ts.360113">https://doi.org/10.18280/ts.360113</a>
1114	Bikku, T., Paturi, R.	Frequency domain steganography with reversible texture combination	texture combination, steganography, embedding, steganalysis, discrete cosine transform	36, 1, 109-117	<a href="https://doi.org/10.18280/ts.360114">https://doi.org/10.18280/ts.360114</a>	Bikku, T., Paturi, R. (2019). Frequency domain steganography with reversible texture combination. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 109-117. <a href="https://doi.org/10.18280/ts.360114">https://doi.org/10.18280/ts.360114</a>
1115	Babu, K.S., Vemuru, S.	Spectrum signals handoff in LTE cognitive radio networks using reinforcement learning	cognitive radio network, long-term evolution, spectrum handoff, galactic swarm optimization, reinforcement learning	36, 1, 119-125	<a href="https://doi.org/10.18280/ts.360115">https://doi.org/10.18280/ts.360115</a>	Babu, K.S., Vemuru, S. (2019). Spectrum signals handoff in LTE cognitive radio networks using reinforcement learning. <i>Traitement du Signal</i> , Vol. 36, No. 1, pp. 119-125. <a href="https://doi.org/10.18280/ts.360115">https://doi.org/10.18280/ts.360115</a>
1116	Dai, C.Q., Lv, Y.L., Long, Y.X., Sui, H.T.	A novel image enhancement technique for tunnel leakage image detection	tunnel leakage image, wavelet transform, image enhancement	35, 3-4, 209-222	<a href="https://doi.org/10.3166/TS.35.209-222">https://doi.org/10.3166/TS.35.209-222</a>	Dai, C.Q., Lv, Y.L., Long, Y.X., Sui, H.T. (2018). A novel image enhancement technique for tunnel leakage image detection. <i>Traitement du Signal</i> , Vol. 35, No. 3-4, pp. 209-222. <a href="https://doi.org/10.3166/TS.35.209-222">https://doi.org/10.3166/TS.35.209-222</a>



1117	Song, X.R., Gao, S., Chen, C.B.	A novel vehicle feature extraction algorithm based on wavelet moment	feature extraction, modified hu invariant moment, wavelet moment, target recognition	35, 3-4, 223-242	<a href="https://doi.org/10.3166/TS.35.223-242">https://doi.org/10.3166/TS.35.223-242</a>	Song, X.R., Gao, S., Chen, C.B. (2018). A novel vehicle feature extraction algorithm based on wavelet moment. <i>Traitement du Signal</i> , Vol. 35, No. 3-4, pp. 223-242. <a href="https://doi.org/10.3166/TS.35.223-242">https://doi.org/10.3166/TS.35.223-242</a>
1118	Jian, C.F., Lu, T., Xiang, X.Y., Zhang, M.Y.	An improved mixed gaussian-based background modelling method for fast gesture segmentation of mobile terminals	mixed gaussian model, background modelling, learning rate, gesture segmentation	35, 3-4, 243-252	<a href="https://doi.org/10.3166/TS.35.243-252">https://doi.org/10.3166/TS.35.243-252</a>	Jian, C.F., Lu, T., Xiang, X.Y., Zhang, M.Y. (2018). An improved mixed gaussian-based background modelling method for fast gesture segmentation of mobile terminals. <i>Traitement du Signal</i> , Vol. 35, No. 3-4, pp. 243-252. <a href="https://doi.org/10.3166/TS.35.243-252">https://doi.org/10.3166/TS.35.243-252</a>
1119	Wang, S., Hu, Y.Z.	Binocular visual positioning under inhomogeneous, transforming and fluctuating media	inhomogeneous media, transforming media, media fluctuation, binocular visual positioning, uncertainty, kalman filter, cloud model	35, 3-4, 253-276	<a href="https://doi.org/10.3166/TS.35.253-276">https://doi.org/10.3166/TS.35.253-276</a>	Wang, S., Hu, Y.Z. (2018). Binocular visual positioning under inhomogeneous, transforming and fluctuating media. <i>Traitement du Signal</i> , Vol. 35, No. 3-4, pp. 253-276. <a href="https://doi.org/10.3166/TS.35.253-276">https://doi.org/10.3166/TS.35.253-276</a>
1120	Zeng, X.X., Shao, Z.H., Lin, W.Z., Luo, H.B.	Orientation holes positioning of printed board based on LS-Power spectrum density algorithm	orientation holes positioning, ls-power spectrum density (LS-PSD), image processing technology, region of interest (ROI)	35, 3-4, 277-288	<a href="https://doi.org/10.3166/TS.35.277-288">https://doi.org/10.3166/TS.35.277-288</a>	Zeng, X.X., Shao, Z.H., Lin, W.Z., Luo, H.B. (2018). Orientation holes positioning of printed board based on LS-Power spectrum density algorithm. <i>Traitement du Signal</i> , Vol. 35, No. 3-4, pp. 277-288. <a href="https://doi.org/10.3166/TS.35.277-288">https://doi.org/10.3166/TS.35.277-288</a>
1121	He, L.L., Zhu, H., Gao, Z.X.	A novel asphalt pavement crack detection algorithm based on multi-feature test of cross-section image	asphalt pavement, crack detection, multi-feature test, cross-section image	35, 3-4, 289-302	<a href="https://doi.org/10.3166/TS.35.289-302">https://doi.org/10.3166/TS.35.289-302</a>	He, L.L., Zhu, H., Gao, Z.X. (2018). A novel asphalt pavement crack detection algorithm based on multi-feature test of cross-section image. <i>Traitement du Signal</i> , Vol. 35, No. 3-4, pp. 289-302. <a href="https://doi.org/10.3166/TS.35.289-302">https://doi.org/10.3166/TS.35.289-302</a>
1122	Wu, Q.S., Meng, P., Liu, G.	Reconstruction of 3D building model based on the information in floor plan	floor plan, building components, space subdivision, 3D model reconstruction	35, 3-4, 303-316	<a href="https://doi.org/10.3166/TS.35.303-316">https://doi.org/10.3166/TS.35.303-316</a>	Wu, Q.S., Meng, P., Liu, G. (2018). Reconstruction of 3D building model based on the information in floor plan. <i>Traitement du Signal</i> , Vol. 35, No. 3-4, pp. 303-316. <a href="https://doi.org/10.3166/TS.35.303-316">https://doi.org/10.3166/TS.35.303-316</a>
1123	Peng, L.	A brain nuclear magnetic resonance image segmentation algorithm based on non-rigid registration	non-rigid registration, brain NMR image, atlas prior, shape knowledge	35, 3-4, 317-330	<a href="https://doi.org/10.3166/TS.35.317-330">https://doi.org/10.3166/TS.35.317-330</a>	Peng, L. (2018). A brain nuclear magnetic resonance image segmentation algorithm based on non-rigid registration. <i>Traitement du Signal</i> , Vol. 35, No. 3-4, pp. 317-330. <a href="https://doi.org/10.3166/TS.35.317-330">https://doi.org/10.3166/TS.35.317-330</a>
1124	Fu, H.H., Xu, J., Zhang, H., Zhang, M., Xu, X.X.	A novel video target tracking method based on lie group manifold	target tracking, lie group, Riemannian manifold, particle filtering (PF)	35, 3-4, 331-340	<a href="https://doi.org/10.3166/TS.35.331-340">https://doi.org/10.3166/TS.35.331-340</a>	Fu, H.H., Xu, J., Zhang, H., Zhang, M., Xu, X.X. (2018). A novel video target tracking method based on lie group manifold. <i>Traitement du Signal</i> , Vol. 35, No. 3-4, pp. 331-340. <a href="https://doi.org/10.3166/TS.35.331-340">https://doi.org/10.3166/TS.35.331-340</a>
1125	Seng, D.W., Zhang, H.Q., Fang, X.J., Zhang, X.F., Chen, J.	An improved fingerprint image matching and multi-view fingerprint recognition algorithm	fingerprint recognition, fingerprint image, direction field, matching, multi-view	35, 3-4, 341-354	<a href="https://doi.org/10.3166/TS.35.341-354">https://doi.org/10.3166/TS.35.341-354</a>	Seng, D.W., Zhang, H.Q., Fang, X.J., Zhang, X.F., Chen, J. (2018). An improved fingerprint image matching and multi-view fingerprint recognition algorithm. <i>Traitement du Signal</i> , Vol. 35, No. 3-4, pp. 341-354. <a href="https://doi.org/10.3166/TS.35.341-354">https://doi.org/10.3166/TS.35.341-354</a>
1126	Kumar, I., Sachan, V., Shankar, R., Mishra, R.K.	An investigation of wireless S-DF hybrid satellite terrestrial relaying network over time selective fading channel	node mobility, selective decode-forward, space-time block code, hybrid satellite network, pairwise error probability	35, 2, 103-120	<a href="https://doi.org/10.3166/TS.35.103-120">https://doi.org/10.3166/TS.35.103-120</a>	Kumar, I., Sachan, V., Shankar, R., Mishra, R.K. (2018). An investigation of wireless S-DF hybrid satellite terrestrial relaying network over time selective fading channel. <i>Traitement du Signal</i> , Vol. 35, No. 2, pp. 103-120. <a href="https://doi.org/10.3166/TS.35.103-120">https://doi.org/10.3166/TS.35.103-120</a>
1127	Panigrahi, S.K., Gupta, S.	Automatic ranking of image thresholding techniques using consensus of ground truth	consensus ground truth, edge mismatch error (EMM), F-measure (FM), modified hausdorff distance (HD), object level consistency error (OCE), relative area error (RAE)	35, 2, 121-136	<a href="https://doi.org/10.3166/TS.35.121-136">https://doi.org/10.3166/TS.35.121-136</a>	Panigrahi, S.K., Gupta, S. (2018). Automatic ranking of image thresholding techniques using consensus of ground truth. <i>Traitement du Signal</i> , Vol. 35, No. 2, pp. 121-136. <a href="https://doi.org/10.3166/TS.35.121-136">https://doi.org/10.3166/TS.35.121-136</a>
1128	Huang, Y.L., Meng, S.Y., Li, X.S., Fan, W.Y.	A classification method for wood vibration signals of Chinese musical instruments based on GMM and SVM	gaussian mixture model (GMM), Gabor, Chinese musical instruments, support vector machine (SVM)	35, 2, 137-151	<a href="https://doi.org/10.3166/TS.35.137-151">https://doi.org/10.3166/TS.35.137-151</a>	Huang, Y.L., Meng, S.Y., Li, X.S., Fan, W.Y. (2018). A classification method for wood vibration signals of Chinese musical instruments based on GMM and SVM. <i>Traitement du Signal</i> , Vol. 35, No. 2, pp. 137-151. <a href="https://doi.org/10.3166/TS.35.137-151">https://doi.org/10.3166/TS.35.137-151</a>
1129	Kadam, R.S., Kulkarni, A.	Radiation pattern of reconfigurable antenna design for portable device applications	reconfigurable antenna, radiation pattern, portable device	35, 2, 153-168	<a href="https://doi.org/10.3166/TS.35.153-168">https://doi.org/10.3166/TS.35.153-168</a>	Kadam, R.S., Kulkarni, A. (2018). Radiation pattern of reconfigurable antenna design for portable device applications. <i>Traitement du Signal</i> , Vol. 35, No. 2, pp. 153-168. <a href="https://doi.org/10.3166/TS.35.153-168">https://doi.org/10.3166/TS.35.153-168</a>
1130	Neelapu, R., Devi, G.L., Rao, K.S.	Deep learning based conventional neural network architecture for medical image classification	deep learning, neural networks, medical image classification, processing, CNN, SVM	35, 2, 169-182	<a href="https://doi.org/10.3166/TS.35.169-182">https://doi.org/10.3166/TS.35.169-182</a>	Neelapu, R., Devi, G.L., Rao, K.S. (2018). Deep learning based conventional neural network architecture for medical image classification. <i>Traitement du Signal</i> , Vol. 35, No. 2, pp. 169-182. <a href="https://doi.org/10.3166/TS.35.169-182">https://doi.org/10.3166/TS.35.169-182</a>
1131	Zhang, J., Li, Y.B., Liu, B.X., Wu, Y.Q., Yi, H.C.	Forward modelling of circular loop source and calculation of whole area apparent resistivity based on TEM	circular loop source, forward modelling, whole area apparent resistivity, geo-electric model, numerical calculation, electrical characteristic response	35, 2, 183-198	<a href="https://doi.org/10.3166/TS.35.183-198">https://doi.org/10.3166/TS.35.183-198</a>	Zhang, J., Li, Y.B., Liu, B.X., Wu, Y.Q., Yi, H.C. (2018). Forward modelling of circular loop source and calculation of whole area apparent resistivity based on TEM. <i>Traitement du Signal</i> , Vol. 35, No. 2, pp. 183-198. <a href="https://doi.org/10.3166/TS.35.183-198">https://doi.org/10.3166/TS.35.183-198</a>
1132	Mostefa, T., Tarak, B., Hachemi, G.	An automatic diagnosis method for an open switch fault in unified power quality conditioner based on artificial neural network	UPQC, active power filter, ANN, fault detection, open switch fault, FFT, skewness	35, 1, 7-21	<a href="https://doi.org/10.3166/TS.35.7-21">https://doi.org/10.3166/TS.35.7-21</a>	Mostefa, T., Tarak, B., Hachemi, G. (2018). An automatic diagnosis method for an open switch fault in unified power quality conditioner based on artificial neural network. <i>Traitement du Signal</i> , Vol. 35, No. 1, pp. 7-21. <a href="https://doi.org/10.3166/TS.35.7-21">https://doi.org/10.3166/TS.35.7-21</a>
1133	Devi, B.R.	Texture feature-based image searching system using wavelet transform approach	feature extraction, image searching, pyramid structure wavelet transform model (PSWTM), wavelet transform, feature-based image searching system (FBISS), precision, recall, similarity matching	35, 1, 23-33	<a href="https://doi.org/10.3166/TS.35.23-33">https://doi.org/10.3166/TS.35.23-33</a>	Devi, B.R. (2018). Texture feature-based image searching system using wavelet transform approach. <i>Traitement du Signal</i> , Vol. 35, No. 1, pp. 23-33. <a href="https://doi.org/10.3166/TS.35.23-33">https://doi.org/10.3166/TS.35.23-33</a>
1134	Song, J.B., Song, R., Xiong, Z.	Acoustic radiation features and structural-acoustic sensitivity of channel beam	channel beam, indirect boundary element, structural noise, structural-acoustic sensitivity	35, 1, 35-45	<a href="https://doi.org/10.3166/TS.35.35-45">https://doi.org/10.3166/TS.35.35-45</a>	Song, J.B., Song, R., Xiong, Z. (2018). Acoustic radiation features and structural-acoustic sensitivity of channel beam. <i>Traitement du Signal</i> , Vol. 35, No. 1, pp. 35-45. <a href="https://doi.org/10.3166/TS.35.35-45">https://doi.org/10.3166/TS.35.35-45</a>

1135	Sachan, V., Kumar, I., Shankar, R., Mishra, R.K.	Analysis of transmit antenna selection based selective decode forward cooperative communication protocol	multiple input multiple output, space-time-block-code, selective decode and forward, pairwise error probability	35, 1, 47-60	<a href="https://doi.org/10.3166/TS.35.47-60">https://doi.org/10.3166/TS.35.47-60</a>	Sachan, V., Kumar, I., Shankar, R., Mishra, R.K. (2018). Analysis of transmit antenna selection based selective decode forward cooperative communication protocol. <i>Traitement du Signal</i> , Vol. 35, No. 1, pp. 47-60. <a href="https://doi.org/10.3166/TS.35.47-60">https://doi.org/10.3166/TS.35.47-60</a>
1136	Huang, X.L., Zhang, T.F., Deng, Z.H., Li, Z.	Design of moving target detection and tracking system based on cortex-A7 and openCV	behavior analysis, camshift, cortex-A7, embedded system, target tracking, openCV	35, 1, 61-73	<a href="https://doi.org/10.3166/TS.35.61-73">https://doi.org/10.3166/TS.35.61-73</a>	Huang, X.L., Zhang, T.F., Deng, Z.H., Li, Z. (2018). Design of moving target detection and tracking system based on cortex-A7 and OpenCV. <i>Traitement du Signal</i> , Vol. 35, No. 1, pp. 61-73. <a href="https://doi.org/10.3166/TS.35.61-73">https://doi.org/10.3166/TS.35.61-73</a>
1137	Choubey, H., Pandey, A.	Classification of healthy, inter-ictal and seizure signal using various classification techniques	electroencephalogram (EEG) signal, levenberg marquardt (LM) classifier, epileptic seizure detection, k-nearest neighbour (KNN), artificial neural network (ANN), and variance	35, 1, 75-84	<a href="https://doi.org/10.3166/TS.35.75-84">https://doi.org/10.3166/TS.35.75-84</a>	Choubey, H., Pandey, A. (2018). Classification of healthy, inter-ictal and seizure signal using various classification techniques. <i>Traitement du Signal</i> , Vol. 35, No. 1, pp. 75-84. <a href="https://doi.org/10.3166/TS.35.75-84">https://doi.org/10.3166/TS.35.75-84</a>
1138	Lu, M., Li, H., Zhang, Y.F., Xie, Q., Cai, X.H.	Vector control of brushless double fed generator based on control winding orientation on smooth switch from stand-alone mode to grid-tied mode	brushless double fed induction generator (BDFIG), power winding (PW), control winding (CW), field-orientation	35, 1, 85-95	<a href="https://doi.org/10.3166/TS.35.85-95">https://doi.org/10.3166/TS.35.85-95</a>	Lu, M., Li, H., Zhang, Y.F., Xie, Q., Cai, X.H. (2018). Vector control of brushless double fed generator based on control winding orientation on smooth switch from stand-alone mode to grid-tied mode. <i>Traitement du Signal</i> , Vol. 35, No. 1, pp. 85-95. <a href="https://doi.org/10.3166/TS.35.85-95">https://doi.org/10.3166/TS.35.85-95</a>
1139	Rao, D.K., Srinivas, K.	An analysis of feature identification for tool wear monitoring by using acoustic emission	hardturning, tool condition monitoring, dominant features, acoustic emission, grey relation analysis	34, 3-4, 117-135	<a href="https://doi.org/10.3166/TS.35.117-135">https://doi.org/10.3166/TS.35.117-135</a>	Rao, D.K., Srinivas, K. (2017). An analysis of feature identification for tool wear monitoring by using acoustic emission. <i>Traitement du Signal</i> , Vol. 34, No. 3-4, pp. 117-135. <a href="https://doi.org/10.3166/TS.35.117-135">https://doi.org/10.3166/TS.35.117-135</a>
1140	Raguram, L.S.B., Shanmugam, V.M.	Deep belief networks for phoneme recognition in continuous Tamil speech—an analysis	deep belief networks, phoneme recognition, speech recognition, artificial neural networks, deep learning, tamil speech, acoustic model, continuous speech, bernoulli-bernoulli, gaussian-bernoulli	34, 3-4, 137-151	<a href="https://doi.org/10.3166/TS.35.137-151">https://doi.org/10.3166/TS.35.137-151</a>	Raguram, L.S.B., Shanmugam, V.M. (2017). Deep belief networks for phoneme recognition in continuous Tamil speech—an analysis. <i>Traitement du Signal</i> , Vol. 34, No. 3-4, pp. 137-151. <a href="https://doi.org/10.3166/TS.35.137-151">https://doi.org/10.3166/TS.35.137-151</a>
1141	Hu, T., Lv, J., Xie, Q.S., Sun, H., Yuan, Q.N.	A novel human behaviour information coding method based on eye-tracking technology	information identification, information coding, motion capture, fixation duration, virtual reality	34, 3-4, 153-173	<a href="https://doi.org/10.3166/TS.35.153-173">https://doi.org/10.3166/TS.35.153-173</a>	Hu, T., Lv, J., Xie, Q.S., Sun, H., Yuan, Q.N. (2017). A novel human behaviour information coding method based on eye-tracking technology. <i>Traitement du Signal</i> , Vol. 34, No. 3-4, pp. 153-173. <a href="https://doi.org/10.3166/TS.35.153-173">https://doi.org/10.3166/TS.35.153-173</a>
1142	Gopil, A.P., Narayana, V.L.	Protected strength approach for image steganography	steganography, cryptography, protected strength, embedding, decomposing, stegoimage	34, 3-4, 175-181	<a href="https://doi.org/10.3166/TS.35.175-181">https://doi.org/10.3166/TS.35.175-181</a>	Gopil, A.P., Narayana, V.L. (2017). Protected strength approach for image steganography. <i>Traitement du Signal</i> , Vol. 34, No. 3-4, pp. 175-181. <a href="https://doi.org/10.3166/TS.35.175-181">https://doi.org/10.3166/TS.35.175-181</a>
1143	Wang, J., Ding, R., Yang, Y.D., Pan, S.	A novel signal processing technique for travelling detection pulse radar in 3D geographic scene	pulse radar, traveling detection, geographic scene, signal processing, speed compensation	34, 3-4, 183-196	<a href="https://doi.org/10.3166/TS.35.183-196">https://doi.org/10.3166/TS.35.183-196</a>	Wang, J., Ding, R., Yang, Y.D., Pan, S. (2017). A novel signal processing technique for travelling detection pulse radar in 3D geographic scene. <i>Traitement du Signal</i> , Vol. 34, No. 3-4, pp. 183-196. <a href="https://doi.org/10.3166/TS.35.183-196">https://doi.org/10.3166/TS.35.183-196</a>
1144	Narayana, V.L., Gopi, A.P.	Visual cryptography for gray scale images with enhanced security mechanisms	visual cryptography, dwt, digital watermarking	34, 3-4, 197-208	<a href="https://doi.org/10.3166/TS.35.197-208">https://doi.org/10.3166/TS.35.197-208</a>	Narayana, V.L., Gopi, A.P. (2017). Visual cryptography for gray scale images with enhanced security mechanisms. <i>Traitement du Signal</i> , Vol. 34, No. 3-4, pp. 197-208. <a href="https://doi.org/10.3166/TS.35.197-208">https://doi.org/10.3166/TS.35.197-208</a>
1145	Bi, Q.L., Liu, Z.J., Wang, M.H., Lai, M.L., Xiao, L.M., Yan, Y.P., Liu, X.G.	An automatic camera calibration method based on checkerboard	computer vision, camera calibration, checkerboard, corner recognition, corner matching	34, 3-4, 209-226	<a href="https://doi.org/10.3166/TS.35.209-226">https://doi.org/10.3166/TS.35.209-226</a>	Bi, Q.L., Liu, Z.J., Wang, M.H., Lai, M.L., Xiao, L.M., Yan, Y.P., Liu, X.G. (2017). An automatic camera calibration method based on checkerboard. <i>Traitement du Signal</i> , Vol. 34, No. 3-4, pp. 197-208. <a href="https://doi.org/10.3166/TS.35.209-226">https://doi.org/10.3166/TS.35.209-226</a>
1146	Deore, S. P., Pravin, A.	Ensembling: Model of histogram of oriented gradient based handwritten devanagari character recognition system	devanagari character, K-NN, SVM, NN, HWCR	34, 1-2, 7-20	<a href="https://doi.org/10.3166/TS.34.7-20">https://doi.org/10.3166/TS.34.7-20</a>	Deore, S. P., Pravin, A. (2017). Ensembling: Model of histogram of oriented gradient based handwritten devanagari character recognition system. <i>Traitement du Signal</i> , Vol. 34, No. 1-2, pp. 7-20. <a href="https://doi.org/10.3166/TS.34.7-20">https://doi.org/10.3166/TS.34.7-20</a>
1147	Rout, G., Roy, J.S.	A new student-teacher mentoring algorithm for online feedback using statistical signal processing	online feedback, student-teacher mentoring, mentoring algorithm, statistical signal processing	34, 1-2, 21-32	<a href="https://doi.org/10.3166/TS.34.21-32">https://doi.org/10.3166/TS.34.21-32</a>	Rout, G., Roy, J.S. (2017). A new student-teacher mentoring algorithm for online feedback using statistical signal processing. <i>Traitement du Signal</i> , Vol. 34, No. 1-2, pp. 21-32. <a href="https://doi.org/10.3166/TS.34.21-32">https://doi.org/10.3166/TS.34.21-32</a>
1148	Yang, K., Xue, L.Y., Yin, K., Liu, S., Meng, J.	Microbubble generation and trapping induced by femtosecond laser and acoustic signal analysis	femtosecond laser, microbubble, self-focusing, laser-induced optical breakdown (LIOB), high-speed camera, high-frequency ultrasonic imager	34, 1-2, 33-44	<a href="https://doi.org/10.3166/TS.34.33-44">https://doi.org/10.3166/TS.34.33-44</a>	Yang, K., Xue, L.Y., Yin, K., Liu, S., Meng, J. (2017). Microbubble generation and trapping induced by femtosecond laser and acoustic signal analysis. <i>Traitement du Signal</i> , Vol. 34, No. 1-2, pp. 33-44. <a href="https://doi.org/10.3166/TS.34.33-44">https://doi.org/10.3166/TS.34.33-44</a>
1149	Sailaja, R., Rupa, C., Chakravarthy, A.S.N.	Robust and indiscernible multimedia watermarking using light weight mutational methodology	three lines maximum, lifting wavelet transform, singular value decomposition, peak signal to noise ratio, normalized Correlatio	34, 1-2, 45-55	<a href="https://doi.org/10.3166/TS.34.45-55">https://doi.org/10.3166/TS.34.45-55</a>	Sailaja, R., Rupa, C., Chakravarthy, A.S.N. (2017). Robust and indiscernible multimedia watermarking using light weight mutational methodology. <i>Traitement du Signal</i> , Vol. 34, No. 1-2, pp. 45-55. <a href="https://doi.org/10.3166/TS.34.45-55">https://doi.org/10.3166/TS.34.45-55</a>
1150	Tian, H.Q., Dang, X.Q., Wang, J.H., Wu, D.M.	Registration method for three-dimensional point cloud in rough and fine registrations based on principal component analysis and iterative closest point algorithm	intraoperative registration, principal component analysis (PCA), iterative closest point (ICP) algorithm, point cloud, gaussian noise	34, 1-2, 57-75	<a href="https://doi.org/10.3166/TS.34.57-75">https://doi.org/10.3166/TS.34.57-75</a>	Tian, H.Q., Dang, X.Q., Wang, J.H., Wu, D.M. (2017). Registration method for three-dimensional point cloud in rough and fine registrations based on principal component analysis and iterative closest point algorithm. <i>Traitement du Signal</i> , Vol. 34, No. 1-2, pp. 57-75. <a href="https://doi.org/10.3166/TS.34.57-75">https://doi.org/10.3166/TS.34.57-75</a>
1151	Benkaddour, M.K., Bounoua, A.	Feature extraction and classification using deep convolutional neural networks, PCA and SVC for face recognition	biometrics, face recognition, feature extraction, convolutional neural network, CNN, support vector machines (SVM), svc, principal component analysis, PCA	34, 1-2, 77-91	<a href="https://doi.org/10.3166/TS.34.77-91">https://doi.org/10.3166/TS.34.77-91</a>	Benkaddour, M.K., Bounoua, A. (2017). Feature extraction and classification using deep convolutional neural networks, PCA and SVC for face recognition. <i>Traitement du Signal</i> , Vol. 34, No. 1-2, pp. 77-91. <a href="https://doi.org/10.3166/TS.34.77-91">https://doi.org/10.3166/TS.34.77-91</a>
1152	Jiang, C.H., Zhang, C., Zhang, Y.H., Xu, H.	An improved particle swarm optimization algorithm for parameter optimization of proportional-integral-derivative controller	flying time, adaptive weight, constriction factor, Improved Particle Swarm Optimization (IPSO), Proportional-Integral-Derivative (PID) controller	34, 1-2, 93-110	<a href="https://doi.org/10.3166/TS.34.93-110">https://doi.org/10.3166/TS.34.93-110</a>	Jiang, C.H., Zhang, C., Zhang, Y.H., Xu, H. (2017). An improved particle swarm optimization algorithm for parameter optimization of proportional-integral-derivative controller. <i>Traitement du Signal</i> , Vol. 34, No. 1-2, pp. 93-110. <a href="https://doi.org/10.3166/TS.34.93-110">https://doi.org/10.3166/TS.34.93-110</a>