EDITORIAL

The focus of this JWE theme issue is on **Engineering the Web in the Big Data Era**, which was also the main topic of the 15th edition of the International Conference on Web Engineering (ICWE'15) taken place from June 23rd to 26th 2015 in Rotterdam, the Netherlands. In fact, the four works included in this issue are selected from the many presentations of ICWE'15. And these works take the current forms after being extended from the conference presentations and subject to the JWE peer-reviews and revisions.

The first paper *Relaxation of Keyword Pattern Graphs on RDF Data* by Ananya Dass, Cem Aksoy, Aggeliki Dimitriou, and Dimitri Theodoratos deals with the problem of querying large graphs of RDF data via keywords. The authors present a novel approach that uses both a structural summary of the data and a query relaxation technique that produces relaxed query patterns which increases the number of results returned. A number of metrics are designed to measure the degree of relaxation, ensuring that the result patterns are close to the original query.

The second paper *Getting the Query Right for Crisis Informatics Design Issues for Web-Based Analysis Environments* by Mario Barrenechea, Sahar Jambi, Ahmet A. Aydin, Mazin Hakeem, and Ken M. Anderson deals with the problem of how to provide users with tools to explore large datasets. They present a web interface for a custom analytics platform called EPIC Analyze that supports interactive search over large datasets, in particular Twitter data sets collected during crisis management. Seven think-aloud sessions have been performed with users to gather relevant feedback on the interface as a basis to improve the EPIC Analyze platform.

The paper *Architecting Liquid Software* by Andrea Gallidabino, Cesare Pautasso, Tommi Mikkonen, Kari Systa, Jari-Pekka Voutilainen, and Antero Taivalsaari focuses on developing an understanding of the design principles for liquid software systems that allow to dynamically migrate software applications from one device to another, following the users context and attention. The paper analyzes the design space for liquid software applications and provides a systematic overview of the most important architectural dimensions and technical choices.

The paper *A Semantic Framework for Sequential Decision Making* by Patrick Philipp, Maria Maleshkova, Achim Rettinger, and Darko Katic presents a framework that supports sequential decision making in clinical settings. In clinical decision making, more and more data needs to be taken into account, ranging from study results, patient records, clinical guidelines, images, etc. Decision making is thus a complex task requiring the interpretation and consideration of various datasets. To support clinical decision making, the authors propose a semantic framework for sequential decision making and develop the foundations of a Linked Agent who executes interpretation algorithms available as Linked APIs on a data-driven, declarative basis. This is achieved by integrating structured knowledge formalized in

RDF and OWL, and accessing meta-components for planning and learning from experience.

All these papers thus tackle important issues that are characteristic for the Big Data Era: supporting access to and querying of large datasets, mobility and consistent user experience across contexts of software applications, as well as supporting decision making by humans in complex decision spaces characterized by data-driven evidence that needs to be analyzed and interpreted to reach a decision. With this wide-ranging selection of relevant topics, we hope you enjoy this special issue of the Journal of Web Engineering and wish you a pleasant read!

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Guest Editors