

Preface

At many conferences, workshops play an important role. On the one hand, they support developing new, promising topics. On the other hand, they serve as an inspiring forum for meeting researchers that work in the same field, and, hence, contribute to creating scientific communities. For long, workshops have been an important part of the ER conference series. We are very glad that this year's workshops impressively carried on that strong tradition. The workshops' topics covered two main categories.

New application areas enabled by advanced information technologies demand for dedicated modeling approaches that account for the peculiarities of new domains by providing specific concepts and methods. Corresponding approaches to conceptual modeling do not only facilitate the appropriate design and use of systems that play a key role in the digital transformation, but also contribute to technology acceptance and user empowerment. The second category comprises foundational aspects of research on conceptual modeling. These include the semantics of language concepts, assumptions we use to justify modeling decisions, domain-specific theories, and criteria we use to assess the quality of models.

Three workshops address the first category. The Third International Workshop on Modeling for Ambient Assistance and Healthy Ageing (AHA), organized by Heinrich Mayr, Ulrich Frank, and J. Palazzo M. de Oliveira was motivated by the ever-increasing demand for supporting the elderly in managing their lives. Related research and development is driven into various directions among which the fields of "active and assisted living (AAL)" and "healthy ageing (HA)" are rather prominent. For innovation to work, the stakeholders of future assistance systems have to be involved in order to offer them comprehensible representations of possible solutions that enable them to express their concerns and demands. Therefore, the realization of advanced systems to support AAL and HA recommends the design and use of powerful models. The Sixth International Workshop on Modeling and Management of Big Data (MoBiD) resulted from three workshop proposals that were all focused on modeling approaches to analyze and manage big data, which is one more indicator of the relevance of this field. The workshop was organized by Thomas Bäck, David Gil, Nicholas Multari, Jesús Peral, Heike Trautmann, Juan Trujillo, Il-Yeol Song, and Gottfried Vossen. The MoBiD workshop was dedicated to presenting and discussing new approaches to conceptualizing large amounts of data in order to promote managing and exploiting them. The Fourth International Workshop on Conceptual Modeling in Requirements and Business Analysis (MREBA) was organized by Renata Guizzardi, Eric-Oluf Svee, and Jelena Zdravkovic. Requirements engineering has used conceptual models for long. However, often, corresponding methods are generic. In order to support the analysis and design of business information systems, it seems promising to enrich generic methods with concepts and methods for business analysis. That would include accounting for competitiveness, for costs benefit ratios and further, more specific business performance indicators. The MREBA workshop provides a forum for

researchers who work on specific methods for business analysis and on the integration of those methods with approaches to requirements engineering.

The second category comprises two workshops. The Fifth International Workshop on Ontologies and Conceptual Modeling, organized by Frederik Gailly, Giancarlo Guizzardi, Mark Lycett, Chris Partridge, and Michael Verdonck, was aimed at investigating the application of foundational ontologies to the field of conceptual modeling. Ontologies not only promise to provide a consistent foundation for modeling languages, they also propose principles that guide the conceptualization of domains of interest. The workshop is also supposed to provide a forum for the discussion of case studies that demonstrate the application of ontologies. Finally, the 4th Workshop on Quality of Models and Models of Quality (QMMQ), organized by Samira Si-Said, Ignacio Panach, and Pnina Soffer was dedicated to a topic that has been at the core of research on conceptual modeling for long. While it is widely accepted that conceptual models are suited to promoting the quality of software systems, it is evident at the same time that this effect is not independent of the quality of models themselves. Only if we have an elaborate idea of how to assess the quality of models, it is possible to convincingly compare models and modeling approaches. The QMMQ workshop aimed at fostering discussions not only on the quality of conceptual models, but also on methods and tools to promote model quality.

We would like to thank the workshop organizers who prepared and organized inspiring events that clearly contributed to making ER 2017 a special event. We are also indebted to the numerous reviewers who devoted their time and expertise to ensure the quality of the workshops. Finally, we express our gratitude to the general chairs of the conference. It has been a pleasure to work with them.

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