Preface

Welcome to the proceedings of CAiSE 2017 – the 29th International Conference on Advanced Information Systems Engineering, held in Essen, Germany, June 12–16, 2017. The goal of the CAiSE conference series is to bring together the R&D community working on models, methods, techniques, architectures, and technologies addressing the design, the engineering, the operation, and the evolution of information systems.

The conference theme of CAiSE 2017 was "Digital Connected World—Informed, Disruptive Business Transformation." Private and public organizations are entering in the digital world where real-time data are available about their processes, their operations, their operating environments, third-party services offered to increase their performance as well as chances in the demands of their customers. This data abundance offers new opportunities but also raises new challenges for information systems. The key challenge thereby is to evolve traditional information systems into "digital, smart systems." These systems have to be sufficiently agile to rapidly analyze, predict, and manage the disruptive and incremental business transformations of operations. From a center of profit, information systems are now becoming the center for innovation and sustainability of the organizations. The three invited keynotes of CAiSE 2017 addressed three important aspects of digital transformation:

- Dr. Reinhold Achatz (thyssenkrupp AG): "Digital Transformation at thyssenkrupp: Challenges, Strategies and Examples."
- Prof. Dr. Jorge Sanz (Luxembourg Institute of Science and Technology): "The Need for Modularizing Industries and Accelerating Digital Transformation in Enterprises - Could Productivity Be Significantly Improved and Innovation Revamped for Growth in the World's Economy?"
- Prof. Dr. Reinhard Schütte (University of Duisburg-Essen): "Information Systems for Retail Companies – Challenges in the Era of Digitalization."

The accepted research papers as well as the CAiSE Forum addressed facets related to the theme of the conference as well as more "traditional" topics associated with information systems design, engineering, and operation. The program included the following paper sessions:

- IS Architecture, Transformation and Evolution
- Business Process Model Readability and Notation
- User Knowledge Discovery, Process Discovery
- Business Process Performance, Adaptation and Variability Management
- Data Mining, Big Data Exploration

For CAiSE 2017, we received 178 papers, from 221 submitted abstracts. This year, a new selection process was put it place where each paper was reviewed by at least two Program Committee members. At the end of the first phase, we rejected papers with

consistent negative evaluations. In the second phase of evaluation, all papers with at least one positive evaluation were reviewed by one program board member. During the online discussion, the reviewer of the paper assessed the reviews. The final decision about acceptance and rejection of the papers was made at the Program Committee Board meeting, which took place in Luxembourg during February 21–22, 2017. The evaluation process of the papers resulted in the selection of 37 high-quality papers (acceptance rate of 21%). In addition, the Program Committee Board recommended 25 papers for acceptance in the CAiSE 2017 Forum. The final program of CAiSE 2017 was complemented by five workshops, five co-located working conferences, and a PhD consortium. Separate proceedings are published for all these events. We warmly thank the workshop chairs (Andreas Metzger, Anne Persson), the forum chairs (Xavier Franch, Jolita Ralyté), the doctoral symposium chairs (Raimundas Matulevičius, Camille Salinesi, Roel Wieringa), and the publicity chair (Selmin Nurcan) for their excellent work and contributions.

CAiSE 2017 would not have been possible without the efforts and expertise of a number of people who selflessly offered their time and energy to help make this conference a success. We would like to thank everyone from the Organizing Committee, especially Christina Bellinghoven, Eric Schmieders, and Vanessa Stricker. Special thanks to Dalia Boukercha, Christophe Feltus, and Richard van de Stadt for their responsive and helpful support during the paper evaluation and selection process, as well as during the preparation of the proceedings.

As editors of this volume, we also offer our sincere thanks to the members of the Program Committee and the external reviewers for their dedication in providing fair and constructive evaluations. We would like also to thank the members of the Program Board who agreed to take additional duties in the new reviewing process and devoted their time and knowledge to reviewing and discussing the submitted papers.

We hope you enjoy the proceedings of CAiSE 2017.

April 2017   Eric Dubois
                                                                                                    Klaus Pohl