



Advanced Information Systems Engineering

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Proceedings of CAiSE Forum and Doctoral Consortium Papers

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CAiSE 2017 Forum and Doctoral Consortium Papers Proceedings

This volume of CEUR-WS Proceedings contains 20 Forum and 4 Doctoral Consortium papers presented at the 29th International Conference on Advanced Information Systems Engineering (CAiSE 2017). The conference was held in Essen, Germany, June 12-16, 2017.

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CAiSE 2017 Forum Foreword

The objective of the CAiSE conferences is to provide a forum for the exchange of experience, research results, ideas and prototypes between the research community and industry, in the field of information systems engineering. Along almost three decades, the conference has become the yearly worldwide meeting point for the information system engineering community. This year, the 29th edition of the CAiSE conference is held in Essen, Germany, from the 12th to the 6th of June 2017.

One of the usual tracks in the CAiSE conference is the Forum, and this year is not an exception. The Forum sessions facilitate the interaction, discussion, and exchange of ideas among presenters and participants. Intended to serve as an interactive platform, the Forum aims at the presentation of emerging new topics and controversial positions, as well as demonstration of innovative systems, tools and applications. In accordance, two types of submissions have been called to the Forum:

Visionary papers presenting innovative research projects, which are still at a relatively early stage and do not necessarily include a full-scale validation.

Demo papers describe innovative tools and prototypes that implement the results of research efforts. The tools and prototypes will be presented as demos in the Forum.

Each submission to the CAiSE'17 Forum was reviewed by three Program Committee members. Only those submissions for which there was an agreement on the relevance, novelty and rigor were accepted for presentation in the Forum. Additionally, some papers were invited to the Forum as a result of the evaluation process in the main conference. All in all, there was a total of 20 papers that were presented as part of the main conference program. The presenters gave a 3-minute elevator pitch and were available to discuss their work through a poster and/or system demonstration in a dedicated session. The 8-page papers describing the works are compiled in these proceedings.

We would like to thank everyone who contributed to CAiSE'17 Forum. First, to our excellent Program Committee members who provided thorough evaluation of the papers and contributed to the promotion of the event. We thank all the authors who submitted and presented papers to the Forum for having shared their work with the community. Last, we would like to thank the CAiSE'17 Program Committee and General Chairs as well as the Local Organization Committee for their support.

June 2017

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CAiSE Forum Co-Chairs

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CAiSE 2017 Doctoral Consortium Foreword

The CAiSE 2017 Doctoral Consortium (DC) was the 24th Doctoral Consortium of a series held in conjunction with the International CAiSE conference. It brought together PhD students working on foundations, techniques, tools and applications of Information Systems Engineering and provided them with an opportunity to present and discuss their research to an audience of peers and senior faculty in a supportive environment. The CAiSE 2017 DC was a unique opportunity to:

- Get fruitful feedback and advice to the selected Doctoral students on their research project;
- Meet experts from different backgrounds working on topics related to the Information Systems Engineering field;
- Interact with other Doctoral students and stimulate an exchange of ideas and suggestions among participants;
- Discuss concerns about research, supervision, the job market, and other career-related issues.

The doctoral students involved were selected after a careful evaluation process of their papers by a couple of senior academics. Besides, the common quality, originality and thematic criteria, candidates had to have at least 6-12 months of work remaining before expected completion (and at least 12 months of work already performed), so as to fully benefit from the Doctoral Consortium. Based on the recommendations provided by the mentors, papers were revised before publication in the proceedings. A collection of 4 papers was selected then presented at the meeting:

In Stage-based Business Process Mining Hoang Nguyen presented a set of techniques for process mining at the process stages. The major goals of the research were to extract business process stages from the event logs, to mine process logs and to perform predictive process monitoring at different process stages. The paper reports on the preliminary results for discovering process stages and for mining process logs based on the process stages.

Christian Fleig presented the paper Towards the Design of a Process Mining-Enabled Decision Support System for Digital Business Process Transformation. The author proposed the process-mining enabled decision support systems to guide development and transformations of the business processes.

Towards Operationalization of Business Models: Designing Service Compositions for Service-Dominant Business Models by Bambang Suratno considered transformations of the business process models to the service compositions. A successful composition requires understanding of the essential properties and guidance for the service composition and execution.

Alex Mircoli in his presentation of Automatic Emotional Text Annotation Using Facial Expression Analysis discussed the approach to enrich textual information with the emotional aspects. The major challenge of this study is to explain how to capture such an information from the speech and video presentations.

Last but not least the CAiSE DC featured a short tutorial on the research methods given by Prof. Roel Wieringa.

We would like to thank warmly the DC mentors for their dedication and advice to the doctoral students. We hope students could fully benefit from all advices that were provided about their papers and during the meeting, and we wish them a long and fruitful career in research and higher education.

June 2017

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