



Special section of BPMDS'2017: enabling business transformation by business process modeling, development and support

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Received: 24 November 2019 / Accepted: 3 December 2019 / Published online: 17 December 2019
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The BPMDS series has produced 11 workshops from 1998 to 2010. Nine of these workshops were held in conjunction with CAiSE conferences. From 2011, BPMDS has become a two-day working conference attached to CAiSE (Conference on Advanced Information Systems Engineering). The topics addressed by the BPMDS series are focused on IT support for business processes. This is one of the keystones of information systems theory. The goals, format and history of BPMDS can be found on the Web site <http://www.bpmds.org/>.

1 Scope

This special section follows the 18th edition of the BPMDS (Business Process Modeling, Development and Support) series, organized in conjunction with CAiSE'17, which was held in Essen, Germany, June 2017. BPMDS'2017 received 24 submissions from 18 countries, and 11 papers were selected and published in Springer LNBIP 287 volume.

The theme of BPMDS'2017: “Enabling business transformation by business process modeling, development and support” questions the challenges of business transformation in the digitally connected world and the ways business process modeling, development and support may provide capabilities to deal with those challenges. The challenges result, among others, from the impacts of the ubiquity of the actors, social networks, new business models, the co-existence of flexibility, exception handling, context awareness and personalization requirements together with other compliance and quality requirements. Practitioners are producing business process models, and researchers are studying/producing business process models and also producing new modeling

languages when they consider those existing ones are not sufficient. What is beyond? Which kind of analyses can we make using those process models? How can we complete/enhance those process models with annotations, with data coming from everywhere out of the immediate process environment? How can the understanding we gain by working on those models in a sandbox help/facilitate the undergoing business transformation?

The two papers in this special section reflect this focus. They are extensively revised and extended versions of research papers that were initially presented at the BPMDS'2017 working conference and passed again a blind review for the special section.

2 Two selected papers for this special section

The first paper by J. Gulden, A. Burattin, A.A. Andaloussi and B. weber, “From Analytical Purposes to Data Visualizations: A Decision Process Guided by a Conceptual Framework and Eye Tracking,” proposes a methodological approach for matching visualization types and analytical purposes. Using the case of Process Modeling Behavior Analysis as running example, authors developed the ViP framework that gets instantiated for the studied domain with three fundamental dimensions: timing, actions and instance handling. The framework has been applied to selected visualization types for process modeling behavior analysis. The analysis of the collected eye-tracking data includes a statistical analysis using fixation-derived measures and the analysis of reading patterns using a process mining-based technique.

The second paper by N. Argyropoulos, H. Mouratidis, and A. Fish, “Enhancing Secure Business Process Design with Security Process Patterns,” introduces an attempt to produce a novel pattern-based approach to support the design and analysis of secure business processes. The work draws on elements from the security requirements engineering area

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and the security patterns area combined with business process modeling and produces a set of process-level security patterns that are used to implement security in a given business process model. Such an approach advances the existing literature by providing a structured way of operationalizing security at the business process level of abstraction. The evaluation indicates that non-experts are able comprehend and utilize the developed patterns to construct secure business process designs.

Acknowledgements We wish to thank the referees from the BPMDS'2017 Program Committee members for their timely and accurate reviews during the two-round and blind review process for this special section, namely Eric Andonoff, Said Assar, Kahina Bes-sai, Karsten Boehm, Lars Brehm, Eric Dubois, Dirk Fahland, Claude Godart, Renata Guizzardi, John Krogstie, Oscar Pastor, Geert Poels, Manfred Reichert, Hajo Reijers, Iris Reinhartz-Berger, Samira Si-Said Cherfi, Pnina Soffer, Matthias Weidlich and Jelena Zdravkovic. We would like to thank the Editors-in-Chief of the Journal of Software and Systems Modeling for agreeing to publish this special section. We particularly would like to thank Martin Schindler for his support in helping us put this special section together. Our gratitude goes to all authors of selected papers from BPMDS'2017 who made this special section possible by submitting their work and revising it according to the reviewers' comments.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.



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Rainer Schmidt is a professor of business information systems at Munich University of Applied Sciences. He has a PhD and an engineering degree in Computer Science. His current research areas include service science, enterprise computing, business process management, social software, business/IS alignment and the integration of these themes. He has industrial experience as management consultant and researcher. Rainer Schmidt is co-organizer of the BPMDS working conference at CAiSE, the

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