Contents

BPMDS 2016

Process Execution Support

Enabling Self-adaptive Workflows for Cyber-physical Systems 3
Ronny Seiger, Steffen Huber, Peter Heisig, and Uwe Assmann

Using the Guard-Stage-Milestone Notation for Monitoring BPMN-Based Processes 18
Luciano Baresi, Giovanni Meroni, and Pierluigi Plebani

Modelling the Process of Process Execution: A Process Model-Driven Approach to Customising User Interfaces for Business Process Support Systems 34
Udo Kannengiesser, Richard Heininger, Tobias Gründer, and Stefan Schedl

Improving Usability of Process Models

Integrating Textual and Model-Based Process Descriptions for Comprehensive Process Search 51
Henrik Leopold, Han van der Aa, Fabian Pittke, Manuel Raffel, Jan Mendling, and Hajo A. Reijers

Application of Business Process Diagrams' Complexity Management Technique Based on Highlights. 66
Gregor Jošt and Gregor Polančič

A Methodology and Implementing Tool for Semantic Business Process Annotation 80
Beniamino Di Martino, Antonio Esposito, Salvatore Augusto Maisto, and Stefania Nacchia

Social and Human Perspective

Considering Social Distance as an Influence Factor in the Process of Process Modeling 97
Michael Zimoch, Jens Kolb, and Manfred Reichert

What Have We Unlearned Since the Early Days of the Process Movement? . . . 113
Gil Regev, Olivier Hayard, and Alain Wegmann

New Directions in Process Modeling

Towards Impact Analysis of Data in Business Processes 125
Arava Tsoury, Pnina Soffer, and Iris Reinhartz-Berger

Semi-automatic Derivation of RESTful Interactions from Choreography Diagrams 141
Adriatik Nikaj, Fabian Pittke, Mathias Weske, and Jan Mendling

Controlling Time-Awareness in Modularized Processes 157
Andreas Lanz, Roberto Posenato, Carlo Combi, and Manfred Reichert

Consistency, Correctness and Compliance

A Systematic Literature Review of Consistency Among Business Process Models 175
Afef Awadid and Selmin Nurcan

Automatic Signature Generation for Anomaly Detection in Business Process Instance Data 196
Kristof Böhmer and Stefanie Rinderle-Ma

Hybrid Diagnosis Applied to Multiple Instances in Business Processes 212
Rafael Ceballos, Diana Borrego, María Teresa Gómez-López, and Rafael M. Gasca

Process and Data Mining

Connecting Databases with Process Mining: A Meta Model and Toolset 231
E. González López de Murillas, Hajo A. Reijers, and Wil M.P. van der Aalst

Towards a Formal Framework for Business Process Re-design Based on Data Mining 250
Thai-Minh Truong and Lam-Son Lê

Repairing Alignments: Striking the Right Nerve 266
Borja Vázquez-Barreiros, Sebastian J. van Zelst, Joos C.A.M. Buijs, Manuel Lama, and Manuel Mucientes

Process Variability

A Process Variant Modeling Method Comparison: Experience Report 285
Banu Aysolmaz, Ali Yaldiz, and Hajo Reijers

EMMSAD 2016

Fundamental Issues in Modeling

Representing Dynamic Invariants in Ontologically Well-Founded Conceptual Models 303
John Guerson and João Paulo Almeida

Requirements and Regulations

MATRA: A Framework for Assessing Model-Based Approaches on the Transformation Between Requirements and Architecture 321
Carlos E. Salgado, Ricardo J. Machado, and Rita S.P. Maciel

Enterprise and Software Ecosystem Modeling

Data Accountability in Socio-Technical Systems 335
Kristian Beckers, Jörg Landthaler, Florian Matthes, Alexander Pretschner, and Bernhard Waltl

Analysis of Imprecise Enterprise Models 349
Hector Florez, Mario Sánchez, and Jorge Villalobos

Enterprise Process Modeling in Practice – Experiences from a Case Study in the Healthcare Sector 365
Snorre Fossland and John Krogstie

Information and Process Model Quality

How Modeling Language Shapes Decisions: Problem-Theoretical Arguments and Illustration of an Example Case 383
Alexander Bock

On Suitability of Standard UML Notation for Relational Database Schema Representation 399
Drazen Brdjanin, Slavko Maric, and Zvjezdan Spasic Pavkovic

Meta-modeling and Domain Specific Modeling and Model Composition

Towards a Meta-Model for Networked Enterprise 417
Gabriel Leal, Wided Guédria, Hervé Panetto, and Erik Proper

PoN-S: A Systematic Approach for Applying the Physics of Notation (PoN). . . 432
Maria das Graças da Silva Teixeira, Glaice Kelly Quirino, Frederik Gailly, Ricardo de Almeida Falbo, Giancarlo Guizzardi, and Monalessa Perini Barcellos

How Cognitively Effective is a Visual Notation? On the Inherent Difficulty of Operationalizing the Physics of Notations. 448
Dirk van der Linden, Anna Zamansky, and Irit Hadar

Modeling of Architecture and Design

Modeling and Analysis of Vehicles Platoon Safety in a Dynamic Environment Based on GSPN. 465
Mohamed Garoui

Use Case Diagrams for Mobile and Multi-channel Information Systems: Experimental Comparison of Colour and Icon Annotations. 479
Sundar Gopalakrishnan and Guttorm Sindre

Author Index 495