## BMSD’19 Technical Program

<table>
<thead>
<tr>
<th>July 1</th>
<th>July 2</th>
<th>July 3</th>
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<tbody>
<tr>
<td><strong>08:30</strong></td>
<td><strong>09:00</strong></td>
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<tr>
<td>Welcome Desk Registration</td>
<td>Keynote Lecture Prof. Dr. José Tribolet Chair: Prof. Dr. Marijn Janssen</td>
<td>Welcome Desk Registration</td>
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<tr>
<td><strong>09:00</strong></td>
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<tr>
<td>BMSD’19 Session 5: Short Papers architectural governance and values</td>
<td>BMSD’19 Session 6: Full Papers knowledge transfer</td>
<td>BMSD’19 Session 11: Short Papers enterprise modeling and software specification</td>
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<td><strong>10:00</strong></td>
<td><strong>11:00</strong></td>
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<tr>
<td>Coffee-Break</td>
<td>BMSD’19 Session 7: Full Papers enterprise modeling and software specification</td>
<td>Coffee-Break</td>
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<td><strong>11:00</strong></td>
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<tr>
<td>Coffee-Break</td>
<td>BMSD’19 Session 8: Full Papers visualization of business process models &amp; multimedia enrichment of software</td>
<td>Coffee-Break</td>
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<td><strong>11:15</strong></td>
<td><strong>12:00</strong></td>
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<tr>
<td>Lunch</td>
<td>BMSD’19 Session 9: Short Papers enterprise models and IoT: values and innovative applications</td>
<td>Lunch</td>
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<td><strong>12:00</strong></td>
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<tr>
<td>BMSD’19 Session 1: Full Papers business rules</td>
<td>BMSD’19 Session 10: Full Papers digital-driven system design</td>
<td>BMSD’19 Session 15: Short Papers enterprise architectures and SOA</td>
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<td><strong>13:00</strong></td>
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<td><strong>13:45</strong></td>
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<tr>
<td>Opening Session</td>
<td>BMSD’19 Session 2: Full Papers modeling and automation of business processes</td>
<td>BMSD’19 Session 12: Short Papers data analytics</td>
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<td><strong>13:15</strong></td>
<td><strong>14:00</strong></td>
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<tr>
<td>Panel</td>
<td>BMSD’19 Session 3: Full Papers system analysis and decision support systems</td>
<td>BMSD’19 Session 13: Short Papers project management and risk management</td>
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<td><strong>14:00</strong></td>
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<tr>
<td>Coffee-Break</td>
<td>BMSD’19 Session 4: Short Papers business process optimization</td>
<td>Coffee-Break</td>
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<tr>
<td><strong>14:15</strong></td>
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<td><strong>16:00</strong></td>
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<tr>
<td>BMSD’19 Session 1: Full Papers business rules</td>
<td>BMSD’19 Session 5: Full Papers visualization of business process models &amp; multimedia enrichment of software</td>
<td>BMSD’19 Session 14 Industrial Presentations</td>
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<td><strong>15:15</strong></td>
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<td>Coffee-Break</td>
<td>BMSD’19 Session 6: Full Papers knowledge transfer</td>
<td>Coffee-Break</td>
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<td><strong>15:30</strong></td>
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<td>BMSD’19 Session 2: Full Papers modeling and automation of business processes</td>
<td>BMSD’19 Session 7: Full Papers enterprise modeling and software specification</td>
<td>BMSD’19 Session 16: Short Papers software development</td>
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<td><strong>16:00</strong></td>
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<td>BMSD’19 Session 3: Full Papers system analysis and decision support systems</td>
<td>BMSD’19 Session 8: Full Papers visualization of business process models &amp; multimedia enrichment of software</td>
<td>BMSD’19 Session 17: Short Papers business process optimization</td>
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<td><strong>17:00</strong></td>
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<td>BMSD’19 Session 4: Short Papers business process optimization</td>
<td>BMSD’19 Session 9: Short Papers enterprise models and IoT: values and innovative applications</td>
<td>BMSD’19 Session 18: Short Papers business process optimization</td>
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<td><strong>18:00</strong></td>
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<td>Meeting Point: In front of Tecnico buses leave at 18:30 h</td>
<td>BMSD’19 Session 10: Full Papers digital-driven system design</td>
<td>Symposium Dinner</td>
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<td><strong>18:15</strong></td>
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<td>Walking Tour</td>
<td>Symposium Dinner</td>
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<td><strong>19:00</strong></td>
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<td>Symposium Dinner</td>
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The list of ACCEPTED PAPERS follows on the next two pages.
Session 1: **BUSINESS RULES**

**Paper 1:**  
Rule Style: Patterns of and Extensions to Data System User Interface Specification for Business Rule Violations  
Presenter: Lloyd Rutledge  
Authors: Lloyd Rutledge, Erik Bouwer, Stef Joosten

Session 2: **MODELING AND AUTOMATION OF BUSINESS PROCESSES**

**Paper 2:**  
Business, Business Processes and Formal Models  
Presenter: Coen Suurmond  
Author: Coen Suurmond

**Paper 3:**  
Value-Driven Robotic Process Automation (RPA), A Process-Led Approach to Fast Results at Minimal Risk  
Presenter: Mathias Kirchmer  
Authors: Mathias Kirchmer, Peter Franz

Session 3: **SYSTEM ANALYSIS AND DECISION SUPPORT SYSTEMS**

**Paper 4:**  
Failure and Change Impact Analysis for Safety-Critical Systems, Applied on a Medical Use Case  
Presenter: Philipp Lohmueller  
Authors: Philipp Lohmueller, Julia Rauscher, Bernhard Bauer

**Paper 6:**  
Supporting the Use of Decision Aiding Methods by Non-Specialists  
Presenter: Ana Sara Costa  
Authors: Ana Sara Costa, Rúben Rodrigues, André Xiang, José Rui Figueira, José Borbinha

Session 4: **BUSINESS PROCESS OPTIMIZATION**

**Paper 13:**  
Business Process Optimization with Reinforcement Learning  
Presenter: Johan Silvander  
Author: Johan Silvander

Session 5: **ARCHITECTURAL GOVERNANCE AND VALUES**

**Paper 16:**  
Governance as Condition for Creating Business Value from Enterprise Architecture  
Presenter: Marijn Janssen  
Author: Marijn Janssen

Session 6: **KNOWLEDGE TRANSFER**

**Paper 7:**  
Accelerating Knowledge, The Speed Optimization of Knowledge Transfers  
Presenter: Norbert Gronau  
Authors: Marcus Grum, Simon Rapp, Norbert Gronau, Albert Albers

Session 7: **ENTERPRISE MODELING AND SOFTWARE SPECIFICATION**

**Paper 8:**  
Declarative Modelling of Transactions for IS Development  
Presenter: Bert de Brock  
Author: Bert de Brock

**Paper 9:**  
Tuning the Behavior of Context-Aware Applications, Using Semiotic Norms and Bayesian Modeling to Establish the User Situation  
Presenter: Boris Shishkov  
Author: Boris Shishkov

**Paper 10:**  
Business Models of Store-Oriented Software Ecosystems: A Variability Modeling Approach  
Presenter: Sebastian Gottschalk  
Authors: Sebastian Gottschalk, Florian Rittmeier, Gregor Engels

Session 8: **VISUALIZATION OF BUSINESS PROCESS MODELS & MULTIMEDIA ENRICHMENT OF SOFTWARE**

**Paper 11:**  
VR-EA: Virtual Reality Visualization of Enterprise Architecture Models with ArchiMate and BPMN  
Presenter: Roy Oberhauser  
Authors: Roy Oberhauser, Camil Pogolski

**Paper 12:**  
Towards Integrating Software Development and Multimedia Content Creation  
Presenter: Noriko Hanakawa  
Authors: Noriko Hanakawa, Masaki Obana
Session 9: ENTERPRISE MODELS AND IoT VALUES AND INNOVATIVE APPLICATIONS

Paper 22:
Capturing Human Authority and Responsibility by Considering Composite Public Values
Presenter: Magdalena Garvanova
Authors: Magdalena Garvanova, Boris Shishkov

Paper 23:
On the Modeling of Innovative Navigation Systems
Presenter: Ivan Garvanov
Authors: Ivan Garvanov, Hristo Kabakchiev, Vera Behar, Magdalena Garvanova, Ruska Iyninbor

Session 10: DIGITAL-DRIVEN SYSTEM DESIGN

Paper 5:
Chasing the Crowd: Digital Transformations and the Digital Driven System Design Paradigm
Presenter: Ivan Ivanov
Author: Ivan Ivanov

Session 11: ENTERPRISE MODELING AND SOFTWARE SPECIFICATION

Paper 19:
Analysing Enterprise Ontology and its Suitability for Model-Based Software Development
Presenter: José Cordeiro
Author: José Cordeiro

Paper 20:
Business Process Model Driven Automatic Software Requirements Generation
Presenter: Adel Taweel
Authors: Salam Turkman, Adel Taweel

Session 12: DATA ANALYTICS

Paper 14:
A Comparative Study of Methods for Deciding to Open Data
Presenter: Ahmad Luthfi
Authors: Ahmad Luthfi, Marijn Janssen

Session 13: PROJECT MANAGEMENT AND RISK MANAGEMENT

Paper 15:
On the Roles of Project, Program and Portfolio Governance
Presenter: Bruno Fragoso
Authors: Bruno Fragoso, André Vasconcelos, José Borbinha

Paper 18:
A Case Management Approach to Risk Management
Presenter: Ricardo Vieira
Authors: Tiago Ferreira, Diogo Gonçalves, Ricardo Vieira, Diogo Proença, José Borbinha

Session 14: INDUSTRIAL PRESENTATIONS

Presentation 1:
Presenters: Mathias Kirchmer & Peter Franz
Presentation 2:
Presenter: Andreas Sinnhofer

Session 15: ENTERPRISE ARCHITECTURES AND SOA

Paper 17:
Microservice Architecture from Enterprise Architecture Management Perspective
Presenter: Sérgio Guerreiro
Authors: Carlos Pinheiro, André Vasconcelos, Sérgio Guerreiro

Session 16: SOFTWARE DEVELOPMENT

Paper 21:
An Experimental Study on Decomposition: Process First or Structure First?
Presenter: Anil Cetinkaya
Authors: Anil Cetinkaya, Selma Suleoglu, M. Cagri Kaya, Alper Karamanlioglu, Gul Tekdemir, Ali H. Dogru