Preface

The field of information and software systems development has resulted in a rich heritage of modeling methods and notations (e.g., ER, ORM, UML, ArchiMate, EPC, BPMN, DEMO). This canon of methods and notations continues to be enriched with extensions, refinements, and even new languages, to deal with new challenges. Even with some attempts to standardize, new modeling methods are constantly being introduced, especially in order to deal with emerging trends such as compliance and regulations, cloud computing, big data, business analytics, the Internet of Things, etc. These ongoing changes significantly impact the way information and software systems, enterprises, and business processes are being analyzed and designed in practice.

Evaluation of modeling methods contributes to the knowledge and understanding of their strengths and weaknesses. This knowledge may guide researchers toward the development of the next generation of modeling methods and help practitioners select the modeling methods most appropriate to their needs. A variety of empirical and non-empirical evaluation approaches can be found in the literature: feature comparison, meta-modeling, metrics, paradigmatic analyses, contingency identification, ontological evaluation, surveys, laboratory and field experiments, case studies, and action research. Yet, there is a paucity of such research in the literature.

The EMMSAD conference (Exploring Modeling Methods for Systems Analysis and Design) focuses on evaluating, as well as exploring and enhancing, modeling methods and techniques for the development of information and software systems, enterprises, and business processes. The objective of the EMMSAD conference series is to provide a forum for researchers and practitioners interested in evaluation and modeling methods for systems development to meet and exchange research ideas and results. It also provides the participants with an opportunity to present their research papers and experience reports, and to take part in open discussions. More details can be found at [http://www.emmsad.org/](http://www.emmsad.org/).

This year EMMSAD celebrates its 22nd edition, in Essen Germany. We opened two new categories of short papers:

- **EMMSAD-Next**: reporting on research-in-progress, preliminary findings, or initiatives.
- **EMMSAD-Practice**: reporting on lessons learned from practice or collaborations with industry.

Four papers were accepted in those tracks and constitute EMMSAD-RADAR proceedings:

1. Architectural Intelligence: a Framework and Application to e-Learning
2. Towards Modeling Monitoring Services for Large-Scale Distributed Systems with Abstract State Machines
3. A Proposed Method in Agile Practices to Create Requirements Documentation and Test Cases
4. Combining Top-down and Bottom-up Enterprise Modelling
The proceedings further include the abstract of BPMDS/EMMSAD keynote, which was given by Heinrich C. Mayr, from Alpen-Adria-Universitt Klagenfurt, Austria. The title of the keynote was *Domain Specific Conceptual Model Engineering*.

We wish to thank the EMMSAD 2017 RADAR authors for having shared their work with us, as well as the members of the EMMSAD 2017 Program Committee for their valuable reviews. We also thank the organizers of CAiSE 2017 for their help with the organization of the event and IFIP WG8.1 for the support. We wish you pleasant and fruitful event.

May 2017

Iris Reinhartz-Berger
Wided Guédria
Palash Bera
Sérgio Guerreiro
Organizers

Iris Reinhartz-Berger  University of Haifa, Israel
Wided Guédria  Luxembourg Institute of Science and Technology (LIST), Luxembourg
Palash Bera  Saint Louis University, USA
Sérgio Guerreiro  Instituto Superior Técnico, University of Lisbon, Portugal

Advisory Committee

John Krogstie  Norwegian University of Science and Technology (NTNU), Norway
Henderik A. Proper  Luxembourg Institute of Science and Technology (LIST), Luxembourg, and Radboud University Nijmegen, The Netherlands

Program Committee

Palash Bera  Saint Louis University, USA
Sjaak Brinkkemper  Utrecht University, The Netherlands
Tony Clark  Sheffield Hallam University, United Kingdom
Dolors Costal  Universitat Politècnica de Catalunya, Spain
Sybren De Kinderen  University of Duisburg-Essen, Germany
Rébecca Deneckère  Centre de Recherche en Informatique, France
John Erickson  University of Nebraska-Omaha, USA
Neil Ernst  Software Engineering Institute, Pittsburgh, USA
Christophe Feltus  Luxembourg Institute of Science and Technology (LIST), Luxembourg
Peter Fettke  German Research Center for Artificial Intelligence (DFKI) and Saarland University, Germany
Kathrin Figl  Vienna University of Economics and Business (WU), Austria
Mohamad Gharib  University of Florence, Italy
Jeff Gray  University of Alabama, USA
Wided Guédria  Luxembourg Institute of Science and Technology (LIST), Luxembourg
Sérgio Guerreiro  Instituto Superior Técnico, University of Lisbon, Portugal
Giancarlo Guizzardi  Federal University of Espirito Santo (UFES), Brazil
Stijn Hoppenbrouwers  HAN University of Applied Sciences, the Netherlands
Jennifer Horkoff  Chalmers and the University of Gothenburg, Sweden
Timothy Lethbridge  University of Ottawa, Canada
Lidia Lopez  Universitat Politècnica de Catalunya (UPC), Spain
Pericles Loucopoulos  University of Manchester, United Kingdom
Florian Matthes  Technische Universität München, Germany
Raimundas Matulevicius  University of Tartu, Estonia
Jan Mendling  Vienna University of Economics and Business, Austria
Owen Molloy  NUIG, Ireland
Haralambos Mouratidis  University of Brighton, United Kingdom
John Mylopoulos  University of Toronto, Canada
Andreas L Opdahl  University of Bergen, Norway
Hervé Panetto  CRAN, University of Lorraine, CNRS, France
Oscar Pastor Lopez  Universitat Politecnica de Valencia, Spain
Robert Pergl  Czech Technical University, Czech
Anna Perini  Fondazione Bruno Kessler Trento, Italy
Barbara Pernici  Politecnico di Milano, Italy
Anne Persson  University of Skövde, Sweden
Nuno Pombo  University of Beira Interior, Portugal
Jolita Ralytė  University of Geneva, Switzerland
Iris Reinhartz-Berger  University of Haifa, Israel
Camille Salinesi  CRI, Université de Paris 1 Panteon-Sorbonne, France
Alberto Silva  INESC-ID / Instituto Superior Técnico, Portugal
Sase Singh  Elizabeth City State University, USA
Monique Snoeck  K.U.Leuven, Belgium
Il-Yeol Song  Drexel University, USA
Janis Stirna  Stockholm University, Sweden
Arnon Sturm  Ben Gurion University of the Negev, Israel
Dirk van der Linden  University of Haifa, Israel
Steven van Kervel  Formetis BV, The Netherlands
Carson Woo  University of British Columbia, Canada
Michael Wufka  Douglas College, Canada
Marielba Zacarias  Research Centre for Spatial and Organizational Dynamics, Universidade do Algarve, Portugal
Anna Zamansky  University of Haifa, Israel
Jelena Zdravkovic  Stockholm University, Sweden

Additional Reviewers

Martin Kleehaus  Technische Universität München, Germany