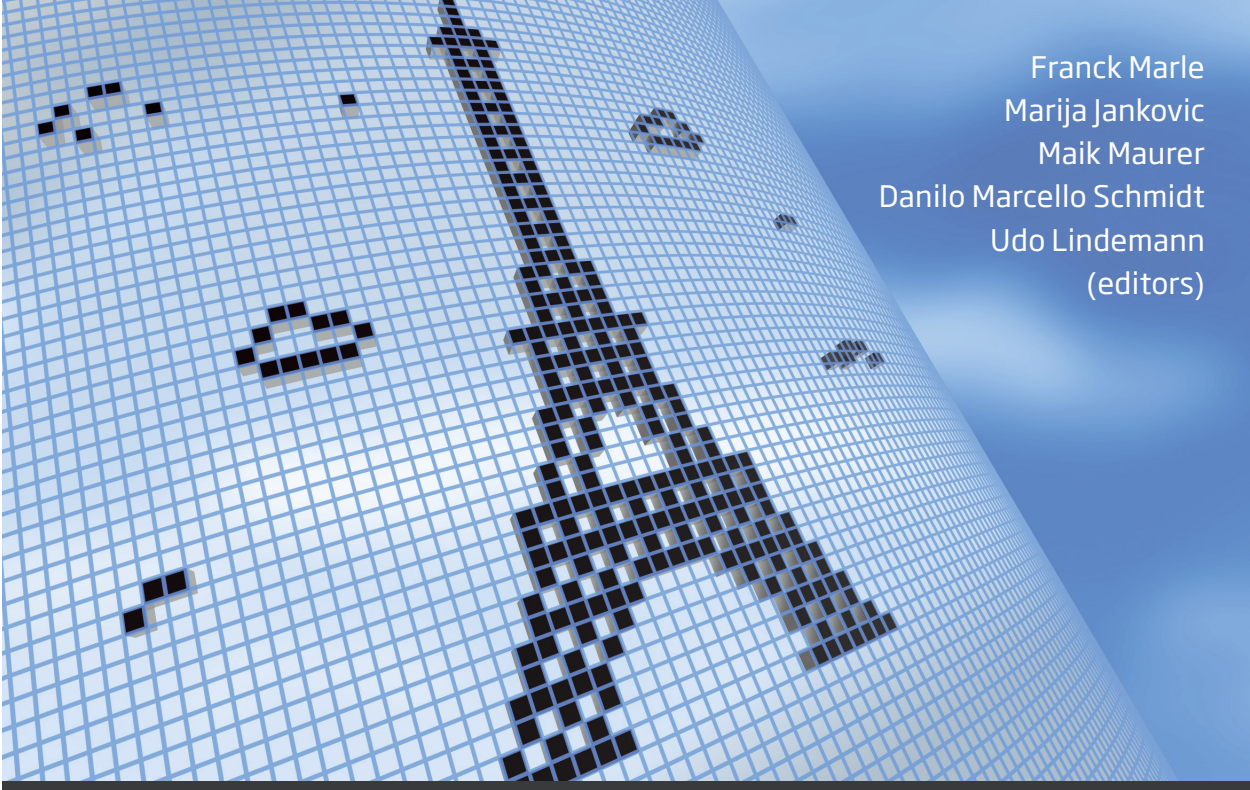

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(editors)

Risk and change management in complex systems

Proceedings of the 16th International DSM Conference
Paris, France, 2 - 4 July 2014

DSM
2-4 July 2014
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Table of Contents

Part III: DSM in Decision-Making

Part IV: Clustering and Optimization

Part V: Dependencies between Tasks and Processes

Part VI: Process Management in Complex Projects

Part VII: Managing Multiple Domains in Complex Projects

Foreword

We are very pleased to welcome you to the 16th edition of the international DSM Conference.

The theme of this 2014 edition is "Risk and Change Management in Complex Systems". It is justified by the ever-growing complexity of our systems, involving the difficulty to anticipate potential indirect consequences of events, whether desired or not. Accordingly, this implies improvement of the methods and tools supporting the design and management of such systems.

Dependency and Structure Modeling (DSM) techniques focus on system elements and their interdependencies related to product, process and organization domains. They contribute to support mastering the amount of information required to better understand, model, and analyze, then make improved decisions to design and manage complex systems.

The International DSM Conference is the annual forum for practitioners, researchers and developers to exchange experiences, discuss new concepts and showcase results and tools. Hosted by Ecole Centrale Paris and organized in collaboration with Technische Universität München, the 16th edition of DSM Conference takes place in Chatenay-Malabry, France, during 2 to 4 July 2014.

Preceding this year's DSM Conference on July 2, will be a DSM Industry Special Interest Group (DSMiSIG) Industry Day workshop. Industry participants will contribute to the gathering of views and evidence of the risks in current product operations, from lack of advanced systems integration methods.

Regular attendees of the DSM Conference series will have noticed that a significant change has been introduced for this edition. The size of the paper is now 10 pages at most, without slides. This allocation expansion has allowed authors to put more details about their ideas, approaches and results. This was supported by the peer-reviews of at least two members of the Scientific Committee.

This volume contains 37 peer-reviewed papers, that describe the recent advances and emerging challenges in DSM research and applications. They advance the DSM concepts and practice in 7 areas:

1. DSM Methods and Complexity Management
2. System Architecture and Product Modularity
3. DSM in Decision-Making
4. Clustering and Optimization
5. Dependencies between tasks and processes
6. Process Management in Complex Projects
7. Managing Multiple Domains in Complex Projects

These Proceedings represent a broad overview of the state-of-the-art on the development and application of DSM. There are a significant number of papers with industry authors or co-authors, reflecting this balance and synergy between conceptual development and real-life industrial application, which are in the genes of the DSM Conference series.

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Part I: DSM Methods and Complexity Management