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(Eds.)

**Proceedings of the 20th
International Dependency and
Structure Modeling (DSM)
Conference**

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**20TH INTERNATIONAL DEPENDENCY AND STRUCTURE MODELING
CONFERENCE, DSM 2018**

TRIESTE, ITALY, OCTOBER 15 – 17, 2018

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Foreword

Welcome to the 2018 edition of the International Dependency and Structure Modeling (DSM) Conference. DSM 2018 is held on October 15th to 17th in Trieste, Italy. This year, the conference celebrates its 20th anniversary.

DSM (Dependency and Structure Modelling, also known as the Design Structure Matrix) methods have proven invaluable in designing complex systems, from product architectures to large organizations.

The International DSM Conference is the annual forum for practitioners, researchers and developers to exchange experiences, discuss new concepts and showcase results and tools. We are confident that this event will provide participants new insights, ideas, and solutions on dependency and structure modelling.

Furthermore, after last year's success we are pleased to host the second "DSM Sprint Workshop". Teams composed of a mix of researchers, practitioners, and tool providers will compete to solve one of two real industry challenges.

The papers submitted for this year's conference were each peer-reviewed by at least two members of the Scientific Committee, who made acceptance/rejection recommendations and provided helpful guidance for revisions. The accepted papers appearing in these Proceedings have been improved based on that feedback.

This volume contains 22 peer-reviewed papers that describe the recent advances and emerging challenges in DSM research and applications. They advance the DSM concepts and practice in 5 main areas:

1. Managing Risk
2. Complex Organizations
3. Product & System Architecture
4. Using Data
5. Product development

These Proceedings represent a broad overview of the state-of-the-art on the development and application of DSM. Following global trends, combining DSM Methods with data analysis, simulation and optimization is a recurring theme throughout this year's conference. Furthermore, there are a significant number of contributions 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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