

Moritoyo Onishi
Maik Maurer
Katharina Kirner
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[editors]

Gain competitive advantage by managing complexity

Proceedings of the 14th International DSM Conference
Kyoto, Japan 2012

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Steven D. Eppinger | Maik Maurer |
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[editors]

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Dependency and Structure Modelling (DSM) techniques support the management of complexity by focusing attention on the elements of a complex system and how they are related to each other. The DSM perspective can assist in understanding, designing and optimising complex systems – including products, processes and organisations.

This volume comprises peer-reviewed papers representing state-of-the-art in DSM research and applications. The papers were presented at the 13th International DSM Conference held in September 2011 in Cambridge, MA, USA

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FOREWORD

Welcome to the 14th International DSM conference in Kyoto Japan, which represents a major step for our DSM community. Starting in the US more than a decade ago, an additional significantly large member group has been established in Europe. For this reason our conferences were held alternately at locations on both continents in the past.

The DSM community is very lively, which can be seen by different but related activities and impacts. Today, the “Design Structure Matrix” is one of the most popular keywords within the Design Society. This year’s conference tracks, along with a special interest group on structural complexity reflects the broad interest existing in the engineering research community. In addition, a newly established working group focuses on industrial applications and solutions provided by DSM methods. The members of this group want to close the gap between the scientific knowledge and its application for problem solving in the daily business of companies.

Another noteworthy milestone of the DSM community this year was the release of the Design Structure Matrix Methods and Applications book by Steve Eppinger & Tyson Browning, which describes the current state of practice and applications from numerous institutions.

Over the years, the DSM community registered significant growth, and today, we count industry-related as well as scientific members worldwide. This development encouraged us to hold the 14th DSM conference in Japan, which represents the first time ever on the Asian continent! With this step we want to attract new contributors to the DSM methods and the list of authors and conference participants confirms our intention. We are convinced that this event will provide participants new insights, solutions and research focuses on dependency and structure modeling.

At the 2010 DSM Conference, Japan was announced as the next conference venue for 2011. The natural catastrophe in March 2011 made it necessary to change the venue to MIT in Boston, and postpone hosting the event in Japan by one year. Now, ISID feels honored to be the local host of the 14th International DSM conference. ISID has developed a DSM-based software for new product development and is one of the major CAD and PLM solution providers in the world. The strong focus on industrial solutions and the home base in Japan is helping us to attract new members for the DSM community.

With two days of sharing all of the discoveries and challenges on recent scientific and industrial development in the community, we believe this year’s conference will be remembered as a major milestone on dependency and structure modeling.

We wish you a fruitful conference in Kyoto!

Moritoyo Onishi and Maik Maurer

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