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- Part 1: Full Papers -

Threads of Collaboration: Interlacing Minds and Machines

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Welcome to DSM 2026!

It is with great pleasure that we welcome you to the **28th International Dependency and Structure Modeling (DSM) Conference – DSM 2026**, taking place at **Politecnico di Milano, Italy.**

As the DSM community continues to grow and evolve, this year's conference brings together researchers, practitioners, and thought leaders from around the world to explore the latest advancements in complexity management, systems thinking, and the use of Dependency and Structure Modeling (DSM) methods across diverse domains. From academia to industry, our shared commitment to solving complex challenges through structured, systems-oriented approaches makes this annual gathering both timely and vital.

We extend special thanks to the local host team, led by **Massimo Panarotto** and **Gaetano Cascini**, for their outstanding efforts in shaping this edition at Politecnico di Milano.

This year's conference marks another step in our global rotation, with DSM 2024 in Europe, North America in 2025, and returning to Europe for 2026. The growth of submissions underscores the expanding relevance of our field: **DSM 2026 shows a record number of papers submitted in many years**. This reflects not only heightened interest but also the deepening engagement of our community.

Over the past year, collaboration with the key organizations of **INCOSE** and **PMI** under the theme of "**Integration**" has intensified, with this focus also prominently featured in this year's **Industry Sprint Workshop (ISW) hosted by ABB**. Apart from the ISW, which has been part of our conferences for several years now, we introduce new formats in 2026, including the **DSM Community Forum** to strengthen our community even further, and the **Solution Provider Session.** The latter will feature an exhibition-style layout at the conference venue where companies offering solutions in the field of complexity management, such as tool vendors or consultancies, can interact with participants from industry and academia. This format ensures all attendees benefit from insights into current challenges while exploring market-ready solutions offered by our providers.

As in every year, the conference is strongly supported by the **Design Society,** the leading scientific design community, as an endorsed event. Apart from the Design Society, we are supported by a number of impactful sponsors - thank you all for your support!

For DSM 2026, authors were given the option to submit either **Full Papers**, included in **Part 1 of the Proceedings**, or **Extended Abstracts**, published **in a separate Part 2**. As in past years, all Full Paper submissions underwent a rigorous peer review process, evaluated by at least two members of our esteemed Scientific Committee. As a result, these proceedings offer a robust snapshot of the current state and future directions of Dependency and Structure Modeling.

We extend our sincere gratitude to all contributors, reviewers, sponsors, and organizers whose efforts have made DSM 2026 possible. We are confident that this year's conference will provide valuable insights, foster new collaborations, and contribute meaningfully to the ongoing development of our field.

We encourage you to engage fully with the technical program, participate actively in discussions, and take advantage of the many networking opportunities. Whether you are presenting your latest work, exploring new ideas, or attending for the first time, we hope this conference proves to be intellectually rewarding and professionally enriching.

On behalf of the organizing committee, **welcome to DSM 2026**. We look forward to a memorable and inspiring event. Warm regards,

Christopher Langner & Matthias Kreimeyer

Welcome to Milan!

The setting for this year's conference – at the crossroads of Southern and Central Europe, in a city renowned equally for fashion, design, and industry – offers an inspiring environment for intellectual exchange, reconnecting with colleagues, and weaving new collaborations across disciplines and domains.

The theme for DSM 2026 is "**Threads of Collaboration: Interlacing Minds and Machines.**" It reflects the essence of dependency modelling: understanding, representing, and shaping the connections that bind complex systems together. At the same time, it draws inspiration from Milan itself – a city where threads become fashion, ideas become designs, and technology and industry connect people and markets across Europe and the world.

The theme is also strongly reflected in this year's **keynotes, papers, industry presentations, and extended abstracts**, which explore the rapidly evolving interplay between human expertise and artificial intelligence. Contributions demonstrate how AI can support people in identifying and structuring dependencies, inform the construction of DSMs, and increasingly help analyze and even resolve complex dependency problems. In this sense, interlacing minds and machines is not only our conference theme, but a development already shaping the methods, tools, and applications discussed within our community.

Aligned with this theme, we are delighted to welcome the support and sponsorship of key industry partners:

- **ABB**, a leading technology company in electrification and automation, who will host us on the second conference day and partner with us for this year's Industry Sprint Workshop (ISW), where participants will work together on a real-world challenge in complexity;
- **Zuken**, a global engineering software company enabling Connected Engineering across the product lifecycle, building on decades of expertise in electronic and electrical engineering; and
- The **Network for Excellence in Modularization (NEM)**, a global network of industrial companies advancing modular strategies, who will also contribute to our Solution Provider Session.

Together with the continued strong support of the **Design Society**, these partnerships embody this year's theme: interlacing research and practice, minds and machines, disciplines and industries – creating connections that advance our community and the field.

Massimo Panarotto & Gaetano Cascini

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All contributions in these proceedings have undergone a rigid review process. We would like to cordially thank all reviewers for their invaluable support.

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