

Call for Papers

EDTConf Editors Nelly Bencomo nelly.bencomo@durham.ac.uk Durham University

Eduard Kamburjan eduard.kamburjan@itu.dk IT University of Copenhagen

Vinay Kulkarni vinay.vkulkarni@tcs.com Tata Consultancy Services

Editors-in-Chief

Benoit Combemale University of Rennes

<u>Jeff Gray</u> University of Alabama

Bernhard Rumpe RWTH Aachen University

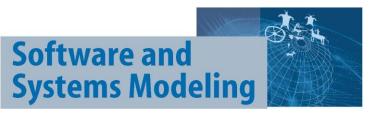
Important Dates Paper submission: any time

Deadlines if you aim to present at EDTconf²6

Papers that need to undergo two major review rounds*: *31.12.2025*

Papers that might only need one major revision round*: 19.04.2026

Notification for presentation at EDTConf26*: 09.08.2026



Theme Section: Engineering of Digital Twins

Digital Twins (DTs) have emerged over the last decade as a key technology for understanding, utilising, monitoring, and improving systems across a broad range of application domains, including agriculture, automotive, avionics, construction, healthcare, manufacturing, smart cities, and many more. DTs are based on the use of data and models, and their development requires the integration of different technologies for diverse purposes, including design-space exploration, virtual commissioning, and behaviour optimisation.

The development of Digital Twins is a multi-disciplinary process that requires the collaboration of experts from different disciplines and application domains. This includes software engineers at the core of the DT engineering process, who architect, develop, deploy, test, evolve, and validate the DT software. Additionally, it encompasses engineers from other engineering disciplines with domain expertise in the specific aspects of the DTs. Although the use of DT is growing at a rapid pace, its development is still generally conducted in an ad hoc manner. The lack of systematic frameworks and approaches represents a primary obstacle to the fast and scalable development of industrial DTs.

This rolling theme section of the Journal of Software and Systems Modeling (SoSyM) is linked to the International Conference on Engineering Digital Twins (EDTConf) as the journal-only track for full-length research papers. Starting with EDTConf 2026, all accepted papers in this section will be allowed to present at the next instance of the conference.

* Please note that these dates are rough estimation - if a paper needs more rework or if authors and reviewers need more time it might not be guaranteed to reach the point that a presentation at EDTconf 2026 can be reached. All papers accepted for publication by 09.08.2026 will be invited for presentation at EDTconf 2026.

General Author Information

Making a submission

This rolling theme section and EDTConf aim to bring together researchers and practitioners on digital twins, from both academia and industry, to shape the future of systematically designing, developing, evolving, maintaining, and validating digital twins.

Submissions should present novel research on any aspect of the engineering of DTs. They must clearly describe the engineering methods used, which can be model-based but can also use other engineering techniques, and describe the engineering challenge addressed.

It invites original, high-quality submissions focusing on, but not restricted to, topics related to Digital Twins, including:

- Modeling concepts and languages, methods, and tools for developing DTs
- AI for DTs/DTs for AI
- DevOps for DTs/DTs for DevOps
- Quality assurance for and evaluation of DTs
- DT modeling, simulation, and co-simulation of CPS
- Deployment and operation of DTs
- Model consistency, management, and evolution of engineering models
- Uncertainty and fidelity in DTs
- DT reliability, trust, and security
- Architectural patterns for DTs
- Virtual commissioning based on DTs
- DTs for continual learning and continuous improvement
- Combining models and data in DTs
- DTs for dynamic (re)configuration and optimization
- Evolution and compositionality of DTs
- Case studies, experience reports, comparisons in various application domains
- Empirical studies of DT development and use
- Teaching and education of DT skills

Submitted papers must not be simultaneously submitted in an extended form or in a shortened form to other journals or conferences. It is, however, possible to submit extended versions of previously published work if less than 75% of the content already appeared in a non-journal publication, or less than 40% in a journal publication. Please see the <u>SoSyM Policy Statement on Plagiarism</u> for further conditions.

Submitted papers do not need to adhere to a particular format or page limit. Please consult the <u>SoSyM author information for submitting papers</u> for more details.

- At least three expert reviewers will review each paper.
- Possible submission formats are:
 - Word (.doc, without macros)
 - Rich Text Format (.rtf)
 - o PostScript (.ps, special fonts must be embedded)
 - PDF (saved as readable in version 5.0 or earlier)
- Submit your work using the online submission system manuscript central:
 - In step 1, select "Theme Section Paper" as the manuscript type.
 - In step 5, make sure field "Cover Letter" includes the line: "Submission for Theme Section on Digital Twins".

This rolling theme section is closely linked to the EDTConf conference. We aim to give all papers submitted before week 52 of a year the opportunity to undergo at least two review rounds before the conference taking place in the following year, and all papers submitted before week 16 will be given the opportunity to undergo at least one review round. All papers with accepted 8 weeks before the conference will be invited to present. To accommodate quick reviewing cycles, the PC of EDTConf serves as Journal reviewers for this theme section.

If a submission is not suitable for a full journal publication, EDTConf offers additional tracks evaluated through standard conference-style reviewing:

- Vision and New Ideas papers that explore emerging ideas, novel hypotheses, and speculative yet plausible research directions in Digital Twin engineering.
- Tool demonstration papers that focus on the tooling aspects of Digital Twins.
- Exemplar papers that describe implementations or specifications of DTs in different application domains.

For details on submission to the conference directly, we refer to their website: <u>https://conf.researchr.org/series/edtconf</u> Note that EDTConf has no regular submission track.

If you have any questions or require additional information about this theme section, please contact the EDTConf editors under edtconf2026@sosym.org.

Further information