



MATHMOD 2025 Vienna

11th Vienna International Conference on Mathematical Modelling

19 - 21 February 2025, Vienna, Austria

1st Call for Papers

SCOPE

Topics

- ▶ Theoretic and applied aspects of any type of mathematical modeling (including equations of various types, discrete systems, graphs, machine learning, neural networks, data-driven models)
- ▶ Static and dynamic systems including deterministic, stochastic, continuous-time, discrete-time, hybrid, distributed-parameter, and lumped-parameter models
- ▶ Modeling theory including structure, topology, and complexity of models, first-principles, identification, adaptation, optimization, model-order reduction, and validation
- ▶ Automation and software tools for modeling, computer-based modeling, modeling for real-time applications
- ▶ Modeling for/by simulation, co-simulation, modeling standards
- ▶ Modeling aspects in numeric and scientific computing
- ▶ Mathematical, numerical, qualitative, modular, interdisciplinary modeling
- ▶ Reviews and comparisons of modeling techniques
- ▶ Machine learning and artificial intelligence for modeling
- ▶ Digital twins
- ▶ Data analytics, data processing, big data, data-driven techniques for modeling
- ▶ Model analysis and calibration, effects of modeling errors
- ▶ Education in/for/with modeling

Fields of Application

- ▶ Any application from engineering or natural sciences
- ▶ Mechatronics, robotics, sensors, actuators, manufacturing, processing, energy systems, transportation, etc.
- ▶ Environmental systems, biotechnology, biology, life sciences, social systems, human-centered modeling
- ▶ Econometrics, finance, operations research, logistics, planning
- ▶ Medicine, physiology, health care and health systems

PROGRAM

- ▶ Plenary lectures, evening lecture
- ▶ Regular sessions with full contributions (oral presentations)
- ▶ Minisymposia with full and short contributions (oral presentations)
- ▶ Poster presentation sessions with poster contributions
- ▶ Exhibition & tutorials on methods, tools, and software
- ▶ Several social events

MATHMOD 2025 is an on-site-only event.



CONTRIBUTIONS

Types

▶ Full contribution (regular session/minisymposium)

6 pages paper & oral on-site presentation.

Full paper peer review, paper published in the IFAC-PapersOnLine proceedings series (open access, <https://www.sciencedirect.com/journal/ifac-papersonline>, ISSN and individual DOI assigned, indexed in SCOPUS, Web of Science, Google Scholar, and other databases), oral on-site presentation (20 min) in regular session or minisymposium.

▶ Short contribution (minisymposium)

2 pages paper & oral on-site presentation.

Short paper peer review, paper published in MATHMOD Short Contributions Volume (ISBN and DOI assigned), oral on-site presentation (20 min) in minisymposium.

▶ Poster contribution

2 pages paper & poster.

Short paper peer review, short paper published in MATHMOD Short Contributions Volume (ISBN and DOI assigned), poster (size DIN A0, portrait, 841 x 1189 mm), poster display in permanent poster exhibition with short on-site poster presentation (5 min) in poster session.

Submission

The language of the conference and all contributions is English. All contributions must be submitted as PDF files through the PaperPlaza System <https://ifac.papercept.net>. Templates for papers are available at www.mathmod.at.

MINISYMPOSIA

Experts in mathematical modeling are encouraged to organize a minisymposium by inviting contributions on a special topic of interest (full or short contributions). Details for the organization of a minisymposium are available at www.mathmod.at. The deadline for proposing a minisymposium is 15 August 2024. Organizers of a minisymposium get € 50 discount on the conference fees (up to two organizers per minisymposium).

DEADLINES

- | | |
|-------------------|--------------------------------------|
| 15 August 2024 | Submission of minisymposium proposal |
| 15 September 2024 | Submission of full & short papers |
| 15 January 2025 | Notification of acceptance |
| 31 January 2025 | End of normal registration |

REGISTRATION FEES

	normal *	late
<i>Standard</i>	€ 700	€ 800
<i>Student</i>	€ 350	€ 450
<i>Accompanying person</i>	€ 200	€ 250

* until 31 January 2025

The standard registration includes the submission of up to 2 contributions. The student registration allows the submission of 1 contribution. The registration fee includes access to all social events: Welcome Reception, Evening Lecture, Conference Dinner, Coffee Breaks, and Closing Ceremony. Accompanying persons are invited to all these social events.

COMMITTEES

International Program Committee

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- ▶ Biao HUANG, Co-Chair
- ▶ Derik LE ROUX, Co-Chair
- ▶ Andreas DEUTSCHMANN-OLEK, Co-Chair
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National Organizing Committee

- ▶ Andreas KÖRNER, Chair
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SPONSORING ORGANIZATIONS

Main Sponsors

- ACIN** Automation & Control Institute, TU Wien
- ASC** Institute of Analysis and Scientific Computing, TU Wien

Co-Sponsors

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- ▶ ASIM, Arbeitsgemeinschaft Simulation
- ▶ EUROSIM, Federation of European Simulation Societies
- ▶ IFAC, International Federation of Automatic Control, TC 1.1 and 4.2
- ▶ OVE, Austrian Electrotechnical Association
- ▶ VDI/VDE-Gesellschaft Mess- und Automatisierungstechnik

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VENUE

MATHMOD 2025 takes place in **Vienna**, a unique metropolis in the heart of Europe. The city offers an international atmosphere, outstanding infrastructure, affordable prices, and easy accessibility from all over the world. It is famous for its splendid sightseeing locations, imperial tradition, musical and cultural heritage, contemporary creativity, sincere friendliness, first-class hospitality, and culinary delights. **TU Wien** hosts MATHMOD 2025. The venue is located in the city center, can be reached within 30 min from Vienna International Airport, and is only a short walk away from the central station and numerous hotels.



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