Venue

The conference will take place on the premises of the TU Wien, within only a few minutes of walking distance to many of the city's world-famous attractions.

It can be easily reached by public transport from Vienna International Airport, which provides direct flights to 170 destinations worldwide.

Accommodation

Block reservations at preference rates will be arranged by the organizers. Detailed information is available on the conference webpage.

Social Programme

A welcome cocktail will take place on Wednesday, June 4.

A banquet, given by the Mayor of the City of Vienna, will take place at the Rathauskeller in the picturesque City Hall on Thursday, June 5.

Registration Fees

Early registration fees are applicable if payment is received not later than April 11, 2025.

	Early	Late
ECCOMAS Members	€ 590	€ 690
Delegates	€ 630	€ 730
Students	€ 390	€ 490
Banquet	€ 40	€ 40

The fees include the Book of Abstracts, coffee breaks, lunches, and the welcome cocktail.



Main building of TU Wien © Matthias Heisler

Important Dates

Abstract submission, deadline Notification of acceptance Early registration, deadline Presenter registration, deadline January 31, 2025 March 14, 2025 April 11, 2025 April 30, 2025

Conference Secretariat

Correspondence should be sent to:

Technische Universität Wien Institute for Mechanics of Materials and Structures Karlsplatz 13/202 1040 Vienna, Austria Email: compwood2025@tuwien.ac.at Phone: (+43 1) 588 01-20211



Cupola Hall at TU Wien © TU Wien/ Johannes Braumann



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International Conference on

Computational Methods in Wood Mechanics – from Material Properties to Timber Structures



https://compwood2025.conf.tuwien.ac.at

ECCOMAS European Community on Computational Methods in Applied Sciences

Scope and Invitation

Wood is an excellent building material, due to its outstanding weight-performance characteristics, its sustainable availability and its appearance generally perceived as very pleasant. For all these reasons, wood as main building component is very well suited for a lot of engineering structures. Nevertheless, it is not used as extensively and efficiently as these properties would suggest. The inherent heterogeneous material structure and the great diversity of species make wood a challenging material as regards computational mechanical and engineering design models. Thus, the potential of wood, wood-based products, and timber building components is not fully exploited yet. Limits in existing design methods hamper a reliable and economically competitive design of timber structures. The use of modern computational methods is expected to complement experimental investigations and to enhance the predictive capability of design methods for wood and wood-based products as well as for timber engineering.

Challenges are for example the appropriate description of complex brittle and ductile failure modes (triggered by the anisotropic material behaviour), the resulting load transfer mechanisms (specifically in the case of reinforcements), and a realistic determination of compliances of connections between timber components. For all this, the time-, moisture- and temperature-dependency of wood may be taken into account. To address these challenges, detailed knowledge of the physical behaviour of wood on different length scales, from the 'cell wall material' over 'woodbased products' up to 'timber structures', must be gained, brought together in modern modelling strategies, and finally transferred to engineering practice.

The resulting goal of this ECCOMAS Thematic Conference is to establish a platform for knowledge exchange between scientists in the field of computational wood mechanics. Related experimental and theoretical research as well as applied research up to design solutions for practical examples are also welcome, to extend the knowledge base of this unique material.

Thus, the scientific and technical areas covered by this conference are numerical and analytical models, experimental investigations, and design concepts for wood at different length scales, wood-based products, building components, and timber structures.

Conference Topics

The topics covered by CompWood 2025 are

- **theoretical investigations** (design concepts, material modelling, and wood physics),
- numerical investigations (nonlinear and stochastic simulations), and
- experimental investigations related to computational wood mechanics and physics at different length scales, like the
- wood microscale (cell behaviour, fibers, pulp and paper),
- **wood macroscale** (solid wood, wood products, laminated members, joints), and
- **structural scale** (building constructions, construction details, historical applications, etc).

Call for Abstracts

Prospective authors are kindly invited to submit a onepage abstract related to the conference topics through the conference online system by January 31, 2025.

The template is available for download at the conference webpage.

Plenary Lecturers



Thomas BADER Linnaeus University, Sweden



University of Stuttgart, Germany Eric N. LANDIS University of Maine, USA

Philippe GRÖNQUIST



Carmen SANDHAAS Karlsruhe Institute of Technology, Germany



Staffan SVENSSON University of Borås, Sweden

Organizing Institution

Technische Universität Wien (TU Wien), Austria Institute for Mechanics of Materials and Structures



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Josef FÜSSL (TU Wien, Austria) Markus LUKACEVIC (TU Wien, Austria)

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