



WCMNM 2022

5th World Congress on Micro and Nano Manufacturing

Jointly organised by the **4M Association**, the International Institute for Micro Manufacturing (**I2M2**) and the International Forum on Micro Manufacturing (**IFMM**)

Congress Chair: Sylvie Castagne, KU Leuven, Belgium

Congress Co-Chairs: Stefan Dimov, University of Birmingham, UK
Lawrence Kulinsky, University of California, Irvine, USA
Kuniaki Dohda, Northwestern University, USA
Dominiek Reynaerts, KU Leuven, Belgium

Scientific Committee Chairs: Pierre Vella, University of Malta (4M)
Ming-Chyuan Lu, National Chung Hsing University, Taiwan (I2M2)
Tohru Sasaki, University of Toyama, Japan (IFMM)



19th-22nd September 2022
Leuven, Belgium

Co-Organised by KU Leuven, 4M Association, IFMM, I2M2



<https://www.4m-association.org/conference/WCMNM2022/wcmnm2022.html>

Themes

Papers are sought to address theoretical and applied research issues related to manufacture, assembly and metrology for components and systems with nano/micro/meso-scale features and dimensions.

Topics to be covered, but not limited to:

- ❖ Micro fabrication technologies, process chains and process characterization
- ❖ Miniaturization of machines and equipment; positioning, motion generation, sensors systems, and control
- ❖ Novel product designs, micro-assembly technologies and micro-handling
- ❖ Surface engineering and interface nanotechnology
- ❖ Process modelling and simulation
- ❖ Processing and characterization of smart materials, energy materials, metamaterials and nanomaterials
- ❖ Micro and nano additive, subtractive, joining, and hybrid manufacturing technologies
- ❖ Micro and desktop factory concepts, systems, components and modules
- ❖ On-line monitoring and inspection systems, and smart manufacturing
- ❖ Standardization in micro manufacturing and micro factories
- ❖ Applications of micro and nano technologies
- ❖ Emerging micro manufacturing methods and equipment, including those that bridge the nano- and macro- worlds
- ❖ Biomanufacturing and biomedical devices

These themes represent the intended content of the WCMNM 2022 thematic sessions, to which the authors are invited to submit papers.

Invited Speakers:

- ❖ **Professor Jian Cao**, Northwestern University (USA), McCormick School of Engineering and Applied Science

Research Interests: Innovative manufacturing processes and systems, particularly in the areas of deformation-based processes and laser processes; Characterization of the effects of material structure on forming behaviour of metals and woven composites

- ❖ **Professor Takashi Matsumura**, Tokyo Denki University (Japan), Department of Mechanical Engineering

Research Interests: Machining process modelling; Optimization Micro/nano machining (cutting, grinding, polishing, water jet, FIB); Tribology; Surface engineering; Computer-aided Manufacturing; Manufacturing Process/Systems

Submission of Full Papers and Peer Review

We invite you to submit 4-page papers using the template provided on the conference website.

Link for submission: <https://conf.papercept.net/conferences/scripts/start.pl>

All papers will be peer reviewed by members of the Scientific Committee under the leadership of the Scientific Committee Chairs. Submitted papers may be selected for oral or poster presentation. All oral and poster presentations will be included in the Conference Proceedings.

Important Dates

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| ❖ Paper submission site opens: | 15 th of January 2022 |
| ❖ Submission deadline for full papers: | 30th of April 2022 |
| ❖ Feedback from the peer review to authors: | 4 th of June 2022 |
| ❖ Submission deadline of revised final paper: | 18 th of June 2022 |
| ❖ Congress dates: | 19 th to 22 nd of September 2022 |
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Scientific Committee

Tatsuhiko Aizawa
Massimiliano Annoni
Kiwamu Ashida
Vito Basile
Samuel Bigot
Giuliano Bissacco
Stefania Bruschi
Evgeni Bordatchev
Jian Cao
Sylvie Castagne
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Pierre Vella
Thomas Velten
J.-J. Junz Wang
Shih-Ming Wang
Zongwei Xu
Jiawang Yan
Yongda Yan Harbin
André Zimmermann
Wansheng Zhao

Awards

- ❖ **The Elena Ulteru Innovation Award** for the best paper presentation by a young female scientist sponsored by **SITEX 45**
- ❖ **Best Student Presentation Award** sponsored by **Micromachines**
- ❖ **Best Paper Award** sponsored by **Micromachines**

Venue

Leuven is the largest city of the province of Flemish Brabant in the Flemish Region of Belgium. It is located about 25 kilometres (16 miles) east of Brussels. With its historic centre Leuven is one of the most beautiful and atmospheric towns in Belgium. The congress will be held at the KU Leuven **Gasthuisberg Campus Onderwijs en Navorsing (O&N)** in Leuven.

Proceedings

All final papers will be included in the WCMNM 2022 Proceedings to be published by Research Publishing Services, in both hardcopies and electronic format (copyrights remain with the authors).
In addition, selected papers will be invited for publication in the Special Issue of *Micromachines*.



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4M Association Officer

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