



# WCMNM 2024

## The 7<sup>th</sup> World Congress on Micro and Nano Manufacturing

September 16 - 19, 2024

Dusit Thani Pattaya, THAILAND

Three research societies jointly organize the World Congress on Micro and Nano Manufacturing (WCMNM): The International Institution for Micro Manufacturing (I2M2), 4M Association, and The International Forum on MicroManufacturing (IFMM). Originally, these societies started as organizations for micromanufacturing scientists and engineers in North America, Europe, and Asia, respectively. The first 4M conference was held at Forschungszentrum in Karlsruhe in 2005. Just a year later, International Conference on Micro Manufacturing (ICOMM) 2006 was organized at University of Illinois by I2M2 community. The two communities organized their first joint 4M/ICOMM conference at Karlsruhe Institute of Technology. Over the years these communities grew and started to include members from all over the globe. Eventually, since all three organizations became international, it was decided to unite efforts in organizing joint conferences and the first such conference – the 1<sup>st</sup> World Congress on Micro and Nano Manufacturing (WCMNM) took place in Taiwan in 2017 with the support of Asian Micro Manufacturing community (IFMM).

Since 2017, the I2M2, 4M, and IFMM have been hosting WCMNM by alternating the conference among three continents: Europe, America, and Asia. The previous WCMNM was held in Evanston, IL, USA, by Northwestern University. Thus, the conference returns to Asia this year, and it will be organized in Pattaya, Thailand, by the Thai Tribology Association (TTA), National Metal and Materials Technology Center (MTEC), King Mongkut's University of Technology North Bangkok (KMUTNB), King Mongkut's University of Technology Thonburi (KMUTT), Thai Corrosion of Metals and Materials Association (TCMA), and Thailand Electroplating Industrial Network Association (TEPNET).

### Scope

- 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
- Wear, tribo-corrosion, bio-tribo-corrosion, surface engineering and materials, nano-corrosion, and surface modifications (nano reinforcement and texturing) to improve tribocorrosion resistance

### Key Dates

- Papers Submission Starts: February 6, 2024
- Papers Submission Deadline: April 15, 2024
- Papers Acceptance Announcement: June 15, 2024
- Early Bird Registration: February 6 to July 15, 2024
- Late Registration: July 16, 2024 to September 15, 2024

### Program Overview

Dates	Key Activities
Monday, September 16, 2024	<ul style="list-style-type: none"> <li>• Welcome Reception and Registration</li> </ul>
Tuesday, September 17, 2024	<ul style="list-style-type: none"> <li>• Plenary and Paper Sessions</li> <li>• I2M2/IFMM/4M EC Meetings</li> <li>• Joint EC Meetings</li> </ul>
Wednesday, September 18, 2024	<ul style="list-style-type: none"> <li>• Plenary and Paper Sessions</li> <li>• Banquet Dinner</li> </ul>
Thursday, September 19, 2024	<ul style="list-style-type: none"> <li>• Plenary and Paper Sessions</li> <li>• Optional Tour to Eastern Economic Corridor of Innovation (EECI)</li> </ul>

### Publications

All accepted papers will be published electronically in the Proceedings of WCMNM 2024 (copyrights remain with the authors). Selected papers will be published in the special issues of the following journals:

- ASME Journal of Micro and Nano-Manufacturing
- Journal of Bio- and Tribo-Corrosion



**WCMNM 2024 Secretariat**

✉ E-mail: [wcmnm2024@mtec.or.th](mailto:wcmnm2024@mtec.or.th)

🌐 <https://www.mtec.or.th/WCMNM2024>