



## The 24th International Symposium on Laser Precision Microfabrication

June 13 -16, 2023, Hirosaki Bunka Center, Hirosaki, Aomori, Japan

Organized by Japan Laser Processing Society

<http://www.jlps.gr.jp/lpm/lpm2023/>

### AIM AND SCOPE:

Miniaturization and high precision are rapidly becoming requirements in many industrial processes and products. As a result, there is greater interest in the use of laser micro fabrication approaches to achieve these goals. The International Symposium on Laser Precision Microfabrication (LPM) is alternatively held in Japan and in other host countries. To date, LPM has been successfully hosted in Omiya, Singapore, Osaka, Munich, Nara, Williamsburg, Kyoto, Vienna, Quebec, Kobe, Stuttgart, Takamatsu, Washington D.C., Niigata, Vilnius, Kokura, Xi'an, Toyama, Edinburgh, Hiroshima and Dresden, Germany.

The aim of this symposium is to provide a forum for discussion of fundamental aspects of laser-matter interaction, the state-of-the-art of laser materials processing, and topics for the next generation with fundamental scientists, end users and laser manufactures. We expect that LPM2023 would play an important role not only for understanding fundamental knowledge of laser precision microfabrication but also forecasting future technologies to be developed and the future laser market.

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**ABSTRACT SUBMISSION DUE DATE : January 31, 2023, JST**

<http://www.jlps.gr.jp/lpm/lpm2023/abstract/>



### PLENARY SPEAKERS:

Prof. Duncan P. Hand, Heriot Watt University, UK

*TALK TITLE: "Ultra-short pulsed laser welding: glasses, crystals and metals"*

Prof. Takashige Omatsu, Chiba University, Japan

*TOPIC: Innovative material science pioneered by chiral photonics using light to establish a new field of chiral materials*

Prof. Sean Regan, University of Rochester, USA

*TOPIC: Laser inertial confinement fusion*

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## TOPICS:

1. Fundamental aspects (Dynamics, modeling, simulation, etc.)
2. Laser and photochemistry
3. Ultra-short pulse laser processing
4. Burst ablation
5. Advanced laser processing (Fiber laser, disc laser, FEL, etc.)
6. Glass/Ceramic processing
7. VUV laser and X-ray processing
8. Nanotechnology
9. Nano ripple formation
10. Nano- and micro-particles (Including laser synthesis and processing in liquids)
11. Micro-machining
12. Micro-drilling and micro-cutting
13. Micro-welding and micro-bonding
14. Micro-forming
15. Micro-patterning and micro-structuring
16. Surface processing (Texturing, cleaning, annealing, modification, etc.)
17. 3-D micro- and nano-fabrication
18. Film deposition and synthesis of advanced materials (PLD, CVD, etc.)
19. Laser-based direct-write techniques
20. Laser-induced forward transfer (LIFT) techniques
21. Lithography (including EUV source and application)
22. Laser devices
23. Beam shaping
24. Optics and systems for laser microprocessing
25. Process monitoring and control
26. Packaging and mounting process
27. Manufacture of micro devices and systems
28. Medical and biological applications
29. Industrial applications
30. Others
31. Special Session: "Laser Ablation and Processing in Liquids"

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## SPECIAL SESSION: "Laser Ablation and Processing in Liquids"

### Session organizers (alphabetically):

Stephan Barcikowski, University of Duisburg-Essen, Germany; Katharine Tibbetts, Virginia Commonwealth University (VCU), USA; Hiroshi Yoshikawa, Osaka University, Japan; Leonid V. Zhigilei, University of Virginia, USA

### Short description:

Lasers and liquids form a beautiful liaison: Laser synthesis and processing of colloids is an emerging field, including laser ablation, photochemistry, fragmentation, melting in liquid to create nano- and submicron particles with unparalleled properties, as well as crystal growth and light-guided synthesis in liquids. Application of laser-made nanoparticle building blocks has recently approached commercialization in the field of catalysis, and first successful in vivo bio-applications have been demonstrated. In addition, fundamental theoretical and experimental studies to discover the underlying plasma physics, non-equilibrium chemistry, and particle formation mechanisms drive this comparably young field. You are highly welcome to this special session, to present, meet, and vividly discuss recent progress with your peers!

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## SPECIAL ACKNOWLEDGEMENT FOR GRANTS

一般財団法人 材料科学技術振興財団

Foundation for Promotion of Material Science and Technology of Japan (MST)

公益財団法人 天田財団

THE AMADA FOUNDATION

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### Hirosaki: 弘前市

*Hirosaki city is located in the southwestern part of the northernmost prefecture on Japan's main island, Aomori prefecture. The city is blessed with beautiful and grand natural resources where you can enjoy the nature of Japan throughout the four seasons. The city is also known as a castle town of cherry blossoms and apples. You can also enjoy delicious seafoods from the surrounded seas and sake. The conference venue is located near Hirosaki Park; easy access to enjoy the sight of the Hirosaki Castle.*



## REGISTRATION:

## LPM2023 Registration Fee (Participation in-person)

Plenary Speaker, Honorary Chair	Free of charge
JLPS member or Invited Speaker	75000 JPY
Non-member	85000 JPY
Student*, Retiree	35000 JPY
Banquet (Student/Retiree should order optionally.)	7000 JPY

- Invited speaker: Not applicable for self-recommended. Invited speakers mean those who have received the official invitation letters for invited talks from LPM2023 General Chair
- Student rate is applicable only to those who have student status at the time of symposium. Please be advised that student rate will not be applied for adult students with full time job. Student is required to submit a scanned image file (in either or pdf format) of Student ID.
- JLPS member= Person who completed the payment of the JLPS annual membership fee.
- Registration fee includes access to "LPM2023 Technical Digests & Symposium Program" (No hardcopies available) and access to "Proceedings of LPM2023" (To be published online after LPM2023)
- "Early-Bird" and "One-Day" rates are not available.
- Online registration system will be open in January 2023.

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ORGANIZED BY: Japan Laser Processing Society (JLPS)



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