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Institute of
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ICOPS 2024

51st IEEE International Conference on Plasma Science
4th Asia-Pacific Conference on Plasma and Terahertz Science

ICOPS & APCOPTS 2024



June 16-20, 2024



Beijing, China

ICOPS is an annual conference coordinated by the Plasma Science and Application Committee (PSAC) of the IEEE Nuclear & Plasma Sciences Society (NPSS). The 1st Asia-Pacific Conference on Plasma and Terahertz Science (APCOPTS) was organized in Xi'an, China, as the future Asian version of ICOPS in 2018, which has strong component on fast emerging terahertz science. The ICOPS 2024 is organized together with the 4th APCOPTS. The program of the 51st ICOPS & 4th APCOPTS covers both traditional areas of plasma and terahertz science and new exploratory research areas. The conference offers an outstanding forum for scientists and engineers to learn further about some of the greatest advances in plasma science and technology, terahertz science and new exploratory research areas in recent years and to discuss future directions of research.

General Chair:



Tao Shao

*Institute of Electrical Engineering,
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Important Dates

Abstract Submission Opens: November 1, 2023

Registration Opens: February 16, 2024

Abstract Deadline: February 24, 2024

Conference Dates: June 16-20, 2024

Committee

• Treasurers:

Chunqi Jiang Old Dominion University

Cheng Zhang Institute of Electrical Engineering,
Chinese Academy of Sciences

• Technical Chairs:

Kentaro Hara Stanford University

Chao Chang Xi'an Jiaotong University

Conference Topics

TA1 Basic Processes in Fully and Partially Ionized Plasmas

- 1.1 Basic Phenomena
- 1.2 Computational Plasma Physics
- 1.3 Space Plasmas
- 1.4 Partially Ionized Plasmas
- 1.5 Dusty Plasmas and Strongly Coupled Plasmas
- 1.6 Plasma Chemistry

TA2 Microwave Generation and Plasma Interactions

- 2.1 Intense Beam Microwave Generation
- 2.2 Fast-Wave Devices
- 2.3 Slow-Wave Devices
- 2.4 Vacuum Microelectronics
- 2.5 Codes and Modeling
- 2.6 Non-Fusion Microwave Systems
- 2.7 Microwave Plasma Interactions

TA3 Charged Particle Beams and Sources

- 3.1 Plasma, Ion and Electron Sources
- 3.2 Intense Electron and Ion Beams
- 3.3 Advanced Concepts, Novel Materials, and New Applications

TA4 High Energy Density Plasmas and Applications

- 4.1 Fusion (Inertial, Magnetic and Alternate Concepts)
- 4.2 Particle Acceleration with Lasers and Beams
- 4.3 Radiation Physics & X-ray Lasers
- 4.4 High Energy Density Matter
- 4.5 Laser Produced Plasmas
- 4.6 Fast Z-pinches

TA5 Industrial, Commercial and Medical Plasma Applications

- 5.1 Nonequilibrium Plasma Applications
- 5.2 High-Pressure and Thermal Plasma Processing
- 5.3 Plasma Aerodynamics (Thrusters, Flow Control, Ignition and Combustion)
- 5.4 Environmental and Industrial Applications
- 5.5 Medical and Biological Applications
- 5.6 Plasma Enabled Energy Conversion

TA6 Plasma Diagnostics

- 6.1 Optical, X-ray, and Microwave Diagnostics
- 6.2 Particle Diagnostics
- 6.3 Electrical (Probe) Diagnostics
- 6.4 Laser Diagnostics

TA7 Pulsed Power and Other Plasma Applications

- 7.1 Insulation and Dielectric Breakdown
- 7.2 Opening and Closing Switches
- 7.3 Pulsed Generators and Compact Pulsed Power

TA8 Terahertz Sources, Radiation and Applications

- 8.1 THz Sources
- 8.2 THz Bio-medicine
- 8.3 THz Communication
- 8.4 THz Vacuum Device
- 8.5 THz Metamaterials and Spintronics
- 8.6 THz Spectroscopy and Imaging
- 8.7 THz Biophysics

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