

IFMI & ISPEMI 2024

3rd International High-level Forum on High-end Measurement Instruments &
13th International Symposium on Precision Engineering Measurements and
Instrumentation

Call for papers



8-10 August 2024, Qingdao, China

Sponsors

International Committee on Measurements and Instrumentation (ICMI)

Chinese Society for Measurement (CSM)

Technical Sponsors

Department of Information and Electronic Engineering, Chinese Academy of Engineering (IEE-CAE)

Host

Harbin Institute of Technology (HIT)

Organizers

Instrumentation Committee of CSM (IC-CSM)

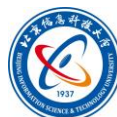
Beijing Information Science and Technology University (BISTU)

China University of Petroleum (UPC)

Hexagon Manufacturing Intelligence (Qingdao) Co., Ltd.

Conference homepage

<http://www.ispemi-icmi.org/>



IFMI & ISPEMI 2024

8-10 August 2024
Qingdao, China

3rd International High-level Forum on High-end Measurement Instruments &
13th International Symposium on Precision Engineering Measurements and Instrumentation

The International High-level Forum on High-end Measurement Instruments (IFMI) is sponsored by Chinese Academy of Engineering (CAE), and hosted by Harbin Institute of Technology (HIT). The technical sponsor is the Department of Information and Electronic Engineering of CAE. It is a platform for international first-rate scientists, technical specialists, and entrepreneurs working in the fields of metrology, industrial measurement, and instrument R&D to jointly discuss the development strategies of international high-end measurement technology. IFMI is to be held in 2024 for the third time.

The International Symposium on Precision Engineering Measurements and Instrumentation (ISPEMI) is sponsored by the International Committee on Measurements and Instrumentation (ICMI) and Chinese Society for Measurement (CSM). It is hosted by Harbin Institute of Technology (HIT), and jointly organized by the Instrumentation Committee of CSM (IC-CSM) and Beijing Information Science and Technology University (BISTU). Since its establishment in 1999, ISPEMI has been successfully held in different cities in China for 12 times. It has now become an international influential symposium concentrating on academic exchange in the field of measurements and instrumentation.

In 2024, the IFMI and ISPEMI will convene jointly. This collaborative event aims to bring together leading scientists, technical specialists, and entrepreneurs to deliberate on the opportunities and challenges presented by the ongoing scientific and technological revolution and industrial transformation. The primary focus will be on the future landscape of measurement systems, instrument technology, and the instrument industry. By providing a platform for evaluating the direction of both international and national measurement systems, as well as the instrument industries, IFMI & ISPEMI 2024 aims to facilitate insights that anticipate future trends, based on which chart the course for the establishment of robust international and national measurement systems, and to strategize the developmental pathways for emerging instrument technologies and enterprises.

The forthcoming opportunities and challenges are mainly rooted in two key factors. Firstly, the full implementation of the international unit system on the basis of fundamental physical constants in 2019 will definitely lead to a new-round transformation in international and national measurement systems, instrument technology and instrument industry. Secondly, the new round of S&T revolution will bring breakthroughs across various domains, including information technology, biotechnology, new energy technology, new material technology, intelligence manufacturing technology. In particular, the high-end manufacturing industry is on the brink of entering a new era of digitalization, networking and intelligence, generating enormous shocks and challenges for existing international and national measurement systems, as well as the technological and industrial infrastructure of measurement instruments. Simultaneously, it unveils significant opportunities and new missions that demand strategic consideration and proactive engagement.

How future international and national measurement systems will look like? What technological formation and industrial system of measurement instruments will be in the future? How we should cope with those changes? For all the considerations mentioned above, CAE and ICMI sponsor IFMI and ISPEMI 2024 to provide first-rate scientists, technical specialists, and entrepreneurs with a platform for high-level discussion and academic exchange.

IFMI & ISPEMI 2024

8-10 August 2024
Qingdao, China

3rd International High-level Forum on High-end Measurement Instruments &
13th International Symposium on Precision Engineering Measurements and Instrumentation

Topics of Interest for IFMI & ISPEMI 2024

1. Quantized Definition, and New-Generation International and National Measurement Systems
2. Demand for New-Generation International and National Measurement Systems Brought from Digitalization, Networking and Intelligence of High-end Precision Manufacturing
3. New-Generation of Instrument Technology, and New-Generation International and National Measurement Systems
4. New-Generation Instrument Technology, and Digitalization, Networking and Intelligence in Manufacturing
5. New-Generation Instrumentation Theories and Design Methodologies
6. Measurement for Precision and Ultra-Precision Machining
7. New-Generation Instrument Technology and Measurement System
8. Modern Optical Technology and Instruments for Precision and Ultra-precision Measurement
9. Sensors, Actuators, and Industrial Internet of Things
10. Micro- and Nano- Measurement Technology, Macro- and Micro-scale Measurement Technology
11. Laser Measurement Technology and Instruments
12. Metrology and Online Digital Calibration
13. Online Digital Measurement Technology for High-end Chip Manufacturing
14. Online Digital Measurement Technology for Flat-panel Display
15. Accuracy Theory and Data Processing Methods for New-Generation Measurement System
16. Computational Measurement
17. Digital Measurement and Digital Twin Technology
18. IntelliSense and Networking
19. Embedded Measurement and High-end Precise Equipment
20. Other related topics

IFMI & ISPEMI 2024

8-10 August 2024
Qingdao, China

3rd International High-level Forum on High-end Measurement Instruments &

13th International Symposium on Precision Engineering Measurements and Instrumentation

Honorary Chairs

Prof. Guofan Jin, Tsinghua University (China)

Fellow of Chinese Academy of Engineering (China)

Prof. Songlin Zhuang, University of Shanghai for Science and Technology (China)

Fellow of Chinese Academy of Engineering (China)

Prof. Zhonghua Zhang, National Institute of Metrology (China)

Fellow of Chinese Academy of Engineering (China)

Prof. Shenghua Ye, Tianjin University (China)

Fellow of Chinese Academy of Engineering (China)

Prof. Liwei Zhou, Beijing Institute of Technology (China)

Fellow of Chinese Academy of Engineering (China)

Conference Chairs

Chair

Prof. Jiubin Tan, Harbin Institute of Technology (China)

Fellow of Chinese Academy of Engineering (China)

Co-chairs

Prof. Kenneth Grattan, City University of London (U.K.)

Fellow of Royal Academy of Engineering (U.K.)

Prof. Tony Wilson, University of Oxford (U.K.)

Fellow of Royal Academy of Engineering (U.K.)

Prof. Steven Cundiff, University of Michigan (U.S.)

Fellow of the American Physical Society and the Optical Society of America (U.S.)

Prof. Detian Li, Lanzhou Institute of Physics, CAST (China)

Fellow of Chinese Academy of Engineering (China)

Technical Program Committee

Chair

Prof. Tong Sun, City University of London (U.K.)

Fellow of Royal Academy of Engineering (U.K.)

Co-chairs

Prof. Xiang Fang, National Institute of Metrology (China)

Prof. Ahmed Abou-Zeid, Physikalisch-Technische Bundesanstalt (Germany)

Prof. Fushun Nian, China Electronics Technology Group Corporation (China)

Organizing Committee

Chair

Prof. Jian Liu, Harbin Institute of Technology (China)

Co-chairs

Prof. Lianqing Zhu, Beijing Information Science and Technology University (China)

Prof. Liandong Yu, China University of Petroleum (China)

Mr. Zhanjiang Sui, Hexagon Manufacturing Intelligence (Qingdao) Co., Ltd (China)

Prof. Pengcheng Hu, Harbin Institute of Technology (China)

IFMI & ISPEMI 2024

8-10 August 2024
Qingdao, China

3rd International High-level Forum on High-end Measurement Instruments &
13th International Symposium on Precision Engineering Measurements and Instrumentation

Secretariat

Secretary-general

Prof. Pengcheng Hu, Harbin Institute of Technology (Harbin, China)

Deputy secretary-general

Prof. Jiwen Cui, Harbin Institute of Technology (Harbin, China)

Prof. Zhengang Lu, Harbin Institute of Technology (Harbin, China)

Prof. Junning Cui, Harbin Institute of Technology (Harbin, China)

Prof. Weibo Wang, Harbin Institute of Technology (Harbin, China)

General requirements for papers

Please submit an introduction of the reporter and a structured extended abstract (up to 1 page) before the **Abstract Due Date**. The structured extended abstract should have figures and sufficient data. Full manuscript is not needed. The forms of the reports on the conference will include plenary/keynote/invited talk and Poster. The IFMI & ISPEMI 2024 will adopt a **hybrid model integrating online and offline**, where all participants are welcomed to **join in person** and the inconvenient scholars can participate in the conference online. To avoid the possible problems caused by the network service, we strongly recommend the online scholars to use "pre-recorded video + online discussion" for conference speeches.

Excellent papers will be recommended for publication in one of the following journals:

1. **Photonics (SCI, IF:2.4)** in the special issue named by the conference
2. **Optics and Precision Engineering (EI)**

Critical Dates and Location

Abstract Due Date: **June 1, 2024**

Check-in Time: **August 8, 2024(CST, UTC+8)**

Duration: **August 9-10, 2024(CST, UTC+8)**

Venue: **SHERATON QINGDAO JIAOZHOU HOTEL**, Qingdao, China

Address: **No.271 Beijing East Road, Xincheng District, Jiaozhou, Qingdao 266300, China**

Contact Information

Post Add: P.O.Box 3018, Science Park, Harbin Institute of Technology, No.2 Yikuang Street,
Nangang District, Harbin 150080, China

Tel/Fax: +86-451-86402258

Website: <http://www.ispemi-icmi.org/>

E-mail: ispemi-icmi@outlook.com