

# IFMI & ISPEMI 2022

2nd International High-level Forum on High-end Measurement Instruments &  
12th International Symposium on Precision Engineering Measurements and  
Instrumentation

## Call for papers



**8-10 August 2022 Guilin, China**

## Sponsors

Chinese Academy of Engineering (CAE)

International Committee on Measurements and Instrumentation (ICMI)

## Organizers

Division of Information and Electronic Engineering of CAE (DIEE-CAE)

Chinese Society for Measurement (CSM)

China Instrument and Control Society (CIS)

Instrumentation Committee of CSM (IC-CSM)

Harbin Institute of Technology (HIT)

## Cooperating Organizations

Guilin University of Electronic Technology (GUET)

Beijing Information Science and Technology University (BISTU)

## Conference homepage

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



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The International High-level Forum on High-end Measurement Instruments (IFMI) is sponsored by Chinese Academy of Engineering (CAE), and jointly organized by the Division of Information and Electronic Engineering of CAE, Chinese Society for Measurement (CSM), China Instrument and Control Society (CIS), and Harbin Institute of Technology (HIT). 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 2022 for the second time. The International Symposium on Precision Engineering Measurements and Instrumentation (ISPEMI) is sponsored by the International Committee on Measurements and Instrumentation (ICMI), and jointly organized by the Instrumentation Committee of CSM (IC-CSM) and Harbin Institute of Technology (HIT). Since its establishment in 1999, ISPEMI has been successfully held in different cities in China for 11 times and now is an international influential symposium concentrating on academic exchange in the field of measurements and instrumentation. In 2022, IFMI and ISPEMI will be held together for the purpose of inviting leading scientists, technical specialists and entrepreneurs to discuss and judge the opportunities and challenges brought about by the new round of S&T revolution and industrial transformation for future measurement system, instrument technology, instrument industry, and jointly predict the development trends toward future international and national measurement systems and instrument industry, thereby planning the building of international and national measurement systems, and the development paths of new instrument technology and enterprises.

Opportunities and challenges mainly come from two aspects. First, 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. Second, the new round of S&T revolution will bring breakthroughs in the fields of information technology, biotechnology, new energy technology, new material technology, intelligence manufacturing technology, and so on. In particular, the high-end manufacturing industry will enter a new era of digitalization, networking and intelligence, generating enormous shocks and challenges for existing international and national measurement systems, and technological formation and industrial system of measurement instruments, while great opportunities and new missions are there to be faced.

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 2022 to provide first-rate scientists, technical specialists, and entrepreneurs with a platform for high-level discussion and academic exchange.

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## Topics of Interest for IFMI & ISPEMI 2022

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

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## Honorary Chairs

- Prof. Guofan Jin**, Tsinghua University (China)  
Fellow of Chinese Academy of Engineering (China)
- Prof. Frank Härtig**, Physikalisch-Technische Bundesanstalt (Germany)  
President of International Measurement Confederation (IMEKO)
- 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. 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. Jie Gao**, Sichuan University (China)  
Fellow of Chinese Academy of Engineering (China)
- Prof. Shenghua Ye**, Tianjin University (China)  
Fellow of Chinese Academy of Engineering (China)
- Prof. Tianchu Li**, National Institute of Metrology (China)  
Fellow of Chinese Academy of Engineering (China)
- Prof. Zhu Li**, Huazhong University of Science and Technology (China)

## Conference Chairs

### Chair

- Prof. Jiubin Tan**, Harbin Institute of Technology (China)  
Fellow of Chinese Academy of Engineering (China)

### Co-chairs

- Prof. Dr. Harald Bosse**, Physikalisch-Technische Bundesanstalt (Germany)
- Prof. Zhuangde Jiang**, Xi'an Jiaotong University (China)  
Fellow of Chinese Academy of Engineering (China)
- Prof. Tong Sun**, City University of London (U.K.)  
Fellow of Royal Academy of Engineering (U.K.)
- Prof. Detian Li**, Lanzhou Institute of Physics, CAST (China)  
Fellow of International Academy of Astronautics
- Prof. Kuang-Chao Fan**, National Taiwan University (China)

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## 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)

## 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.

Considering the ongoing pandemic, IFMI & ISPEMI 2022 will adopt a **hybrid model integrating online and offline**, where overseas scholars will participate in the conference online and domestic participators will join us offline. **To avoid the possible problems caused by the network service, we strongly recommend overseas 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:2.676)** in the special issue named by the conference
2. **Optics and Precision Engineering (EI)**

## Critical Dates and Location

Abstract Due Date: **June 1, 2022**

Check-in Time: **August 8, 2022(CST, UTC+8)**

Duration: **August 9-10, 2022(CST, UTC+8)**

Venue: **Grand Bravo Guilin Hotel (Guilin, China)** (In Chinese: 桂林大公馆)

## Contact Information

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