

Keynote Speakers



Han Haitjema Professor

- KU Leuven (Belgium)
- Department of Mechanical Engineering

Title

Metrologic characteristics and uncertainty evaluation of surface texture measurements

Keynote-1

Sep. 18 (Mon.) / 09:00~09:30
Room E5



Sang-Yoon LEE CEO

- INTEKPLUS (South Korea)

Title

Industrial use cases of 3D optical metrology

Keynote-2

Sep. 18 (Mon.) / 09:30~10:00
Room E5



Eberhard Manske Professor

- Technische Universität Ilmenau (Germany)
- Institute of Process Measurement and Sensor Technology

Title

Nanopositioning and nanomeasuring machines with a direct link to the unit of time

Keynote-3

Sep. 18 (Mon.) / 10:00~10:30
Room E5



Kaoru Minoshima Professor

- University of Electro-Communications (Japan)
- Department of Engineering Science

Title

Precision measurements beyond frequency metrology using versatile control of optical waves with optical frequency comb

Keynote-4

Sep. 19 (Tue.) / 08:30~09:00
Room E5



Laura Sinclair Doctor

- National Institute of Standards and Technology (USA)
- Fiber Sources and Applications Group

Title

Pushing the boundaries of ranging and time transfer through precise control of optical frequency combs

Keynote-5

Sep. 19 (Tue.) / 09:00~09:30
Room E5



Liandong Yu Professor

- China University of Petroleum (UPC) (China)
- College of Control Science and Engineering

Title

Microfluidic sensor on the early diagnostic of cancer diseases

Keynote-6

Sep. 19 (Tue.) / 09:30~10:00
Room E5



Peter de Groot Doctor

- Chief Scientist, Zygo Corporation (USA)

Title

Interferometric metrology solutions for digital optical immersive displays

Keynote-7

Sep. 19 (Tue.) / 10:00~10:30
Room E5

Invited Speakers



Florian Pollinger
Doctor

• Physikalisch-Technische Bundesanstalt (Germany)

Title

Multi-wavelength interferometry for geodesy and large volume metrology

B-1

Sep. 18 (Mon.) / 10:45~11:10

Room E2



Satoru Takahashi
Professor

• The University of Tokyo (Japan)

Title

Super resolution optical measurement for functional microstructures beyond the diffraction limit

C-4

Sep. 19 (Tue.) / 10:45~11:10

Room E3



Liang-Chia Chen
Professor

• National Taiwan University (Taiwan)

Title

Current advances and challenges in optical metrology for advanced semiconductor packaging

A-1

Sep. 18 (Mon.) / 10:45~11:10

Room E1



Masato Aketagawa
Professor

• Nagaoka University of Technology (Japan)

Title

Picometer displacement/length measurement using regular crystalline lattice and super-resolution interferometry

B-1

Sep. 18 (Mon.) / 11:10~11:35

Room E2



Guanhao Wu
Professor

• Tsinghua University (China)

Title

Dual-comb-based distance and multi-degree-of-freedom measurements

B-2

Sep. 18 (Mon.) / 13:50~14:15

Room E2



Daewook Kim
Professor

• University of Arizona (USA)

Title

Deflectometry and Interferometry

C-1

Sep. 18 (Mon.) / 11:10~11:35

Room E3



Sang-Joon Cho
Vice President

• Park Systems (South Korea)

Title

Automated Nano-Metrological AFM with Intelligent Data Preparation

E-3

Sep. 19 (Tue.) / 14:00~14:25

Room E4



Chao Zuo
Professor

• Nanjing University of Science and Technology (China)

Title

Learning based fringe projection profilometry

C-5

Sep. 19 (Tue.) / 14:00~14:25

Room E3

Invited Speakers



Kye-Sung Lee
Doctor

• Korea Basic Science Institute
(South Korea)

Title

Tissue culture monitoring using line-field
fluorescence microscopy combined with
optical coherence microscopy

C-4

Sep. 19 (Tue.) / 11:10~11:35
Room E3



Byung-Seon Chun
Doctor

• Nanoscope Systems, Inc. (South Korea)

Title

Thermoreflectance microscopy for steady-
state and transient thermal analysis of
electronic devices in microscopic scale

C-3

Sep. 18 (Mon.) / 16:25~16:50
Room E3



Chi Ho Ng
Vice President of Technology

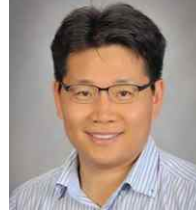
• LMI Technologies (Canada)

Title

Simplified solutions in an increasingly
complicated market

A-4

Sep. 19 (Tue.) / 10:45~11:10
Room E1



ChaBum Lee
Professor

• Texas A&M University (USA)

Title

Wafer-level metrology and inspection for
advanced electronics packaging

A-3

Sep. 18 (Mon.) / 16:25~16:50
Room E1



Matteo Bosi
President

• Marposs Korea (Italy)

Title

A capacitor coupling-based instrument to
assess in a more reliable way the quality of
insulation in mass-produced electric stators
and motors

B-6

Sep. 19 (Tue.) / 15:40~16:05
Room E2



Youjian Song
Professor

• Tianjin University (China)

Title

Time-of-flight measurement of micro-
structures based on electronically controlled
optical sampling

B-2

Sep. 18 (Mon.) / 14:15~14:40
Room E2



Byoung-Ho Lee
Doctor

• Hitachi High-tech (Japan)

Title

MI (Metrology & Inspection): essential
technology for future devices

C-3

Sep. 18 (Mon.) / 16:50~17:15
Room E3



Taejoong Kim
Doctor

• Samsung Electronics (South Korea)

Title

Massive overlay metrology solution by
realizing imaging Mueller matrix spectroscopic
ellipsometry

C-1

Sep. 18 (Mon.) / 10:45~11:10
Room E3



Dong-Wook Lee

Doctor

- Advanced Materials Research Center, Technology Innovation Institute (UAE)

Title

Deep learning-based stress intensity factors analysis of bi-material interface crack from photoelastic images

F-2

Sep. 19 (Tue.) / 10:45~11:10
Room E5



Wanxin Sun

Doctor

- Bruker Singapore Pte Ltd. (Singapore)

Title

Nano scale physical and chemical property characterization by scanning probe techniques

D-3

Sep. 18 (Mon.) / 16:25~16:50
Room E4



In-Ho Lee

Doctor

- Korea Research Institute of Standards and Science (South Korea)

Title

Designing and exploring super functional materials and devices using evolutionary and deep learning methods

F-4

Sep. 19 (Tue.) / 15:40~16:05
Room E5



Yang Lu

Professor

- China University of Petroleum (UPC) (China)

Title

Ultrafast holographic microscopy based on fs laser for wavefront inspection and biological applications

B-4

Sep. 19 (Tue.) / 10:45~11:10
Room E2



Rongke Gao

Professor

- China University of Petroleum (UPC) (China)

Title

The SERS measurements on micro-nano interface substrate integrated microfluidic biosensor

C-5

Sep. 19 (Tue.) / 14:25~14:50
Room E3



Ruitao Yang

Professor

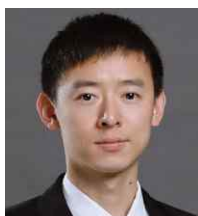
- Harbin Institute of Technology (China)

Title

Real-time suppression of random phase drift for optical frequency comb ranging with high-frequency intermode beats

B-4

Sep. 19 (Tue.) / 11:10~11:35
Room E2



Kai Ni

Professor

- Tsinghua University (China)

Title

Dual-comb spectroscopy and ranging based on mechanical sharing mode-locked fiber lasers

B-3

Sep. 18 (Mon.) / 16:50~17:15
Room E2



Akifumi Asahara

Professor

- University of Electro-Communications (Japan)

Title

Dual-comb spectroscopy extended for spatiotemporal measurement applications using OAM light

B-3

Sep. 18 (Mon.) / 16:25~16:50
Room E2

Invited Speakers



Takashi Kato
Professor

• University of Electro-Communications
(Japan)

Title

Optical phased array with phase-
controlled optical frequency comb

B-5

Sep. 19 (Tue.) / 14:00~14:25
Room E2



Jiao Jiannan
Professor

• Shenzhen University (China)

Title

Generation of non-divergent surface third-
harmonics with a two-photon-polymerized
phase-type diffractive micro axicon

B-5

Sep. 19 (Tue.) / 14:25~14:50
Room E2



Jindong Tian
Professor

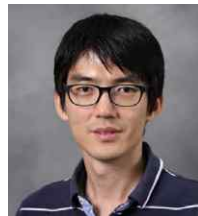
• Shenzhen University (China)

Title

Quantitative phase imaging for dynamic
processes

C-2

Sep. 18 (Mon.) / 14:15~14:40
Room E3



Huitaek Yun
Professor

• Korea Advanced Institute of Science and
Technology (South Korea)

Title

Virtual reality based human-machine
interface for human-AI collaboration

F-1

Sep. 18 (Mon.) / 16:25~16:50
Room E5



Jiyeon Choi
Doctor

• Korea Institute of Machinery & Materials
(South Korea)

Title

Ultrafast laser processing for advanced
packaging of glass-based devices

D-1

Sep. 18 (Mon.) / 10:45~11:10
Room E4



Sangbaek Park
Professor

• Chungnam National University
(South Korea)

Title

Laser-patterned energy storage devices
integrated with wearable electronics

D-2

Sep. 18 (Mon.) / 13:50~14:15
Room E4



Hyung Cheoul Shim
Doctor

• Korea Institute of Machinery & Materials
(South Korea)

Title

Advanced characterization of the active
materials for lithium Ion batteries using
TEM techniques to promote mechanism
understanding

D-2

Sep. 18 (Mon.) / 14:15~14:40
Room E4



Soongeun Kwon
Doctor

• Korea Institute of Machinery & Materials
(South Korea)

Title

Laser processing of graphene materials for
high-performance energy storage devices

D-1

Sep. 18 (Mon.) / 11:10~11:35
Room E4



In Sung Kang
Doctor

• KOH YOUNG TECHNOLOGY, INC.
(South Korea)

Title
Optical 3D inspection technologies

A-2
Sep. 18 (Mon.) / 13:50~14:15
Room E1



Ki Joon Heo
Professor

• Chonnam National University (South Korea)

Title
Real-time monitoring of airborne microbial colony forming unit based on on-chip cell imaging platform with continuous aerosol-to-hydrosol transfer

C-6
Sep. 19 (Tue.) / 15:40~16:05
Room E3



Sungho Suh
Doctor

• Deutsches Forschungszentrum für Künstliche Intelligenz (Germany)

Title
Remaining useful life prediction of lithium-ion batteries using spatio-temporal transformers

A-3
Sep. 18 (Mon.) / 16:50~17:15
Room E1



Martin Tangari Larrategui
Doctor

• University of Arizona (USA)

Title
Advancements in non-null surface figure measurement interferometry

C-2
Sep. 18 (Mon.) / 13:50~14:15
Room E3



Ilkoo Kim
Doctor

• Gauss Labs (USA)

Title
Universal denoising method for boosting the throughput of semiconductor image metrology

F-3
Sep. 19 (Tue.) / 14:00~14:25
Room E5