

Workshops

Workshop 1: Next-Generation Optical Wireless Communication (OWC) Technologies for 6G: How far to go?

Time: 8:30 - 12:30, 3 July

Organizers:



Nan Chi
Fudan University



Hongyan Fu
Tsinghua University

Invited Speakers:

8:30-8:55 **Harald Haas**, *University of Strathclyde, UK*
Topic: Towards 6G Optical Wireless Communications: How LiFi Future-Proofs Wireless Communications

8:55-9:20 **Chih-Hsien Cheng**¹ and **Gong-Ru Lin**², ¹*The University of Tokyo*; ²*National Taiwan University*
Topic: Progress of Tri-color Visible Laser Lighting and VWDM Communication

9:20-9:45 **Jean-Paul M.G. Linnartz**, *Eindhoven University of Technology, Netherlands*
Topic: Technical Challenges in Maturing Optical Wireless Communication (OWC) Technologies

9:45-10:10 **Tien Khee Ng**, **Chun Hong Kang**, **Omar**

Alkhazragi, Jorge A. Holguin-Lerma, Meiwei Kong and Boon S. Ooi, *King Abdullah University of Science & Technology, Saudi Arabia*

Topic: High Speed Lasers and Photodetectors for Terrestrial Communications

10:10-10:25 **Break**

10:25-10:50 **Jian Song**, *Tsinghua University, China*

Topic: Dimming Techniques of Visible Light Communications for Human-Centric Illumination Networks

10:50-11:15 **Jianli Zhang**, *Nanchang University, China*

Topic: Visible LEDs for Visible Light Communication

11:15-11:40 **Junping Zhang**, *Huawei Technologies, China*

Topic: Factors Restricting OWC Development

11:40-12:05 **Junwen Zhang**, *Fudan University, China*

Topic: Rate-Adaptive Flexible Access in Optical Wireless Communications by Using Advanced Signal Processing

12:05-12:30 **Panel discussion**

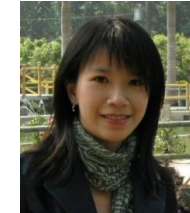
Workshop 2: Microwave Photonics - Broadband Cognitive Radio Enabled by Microwave Photonics

Time: 8:30 - 12:10, 3 July

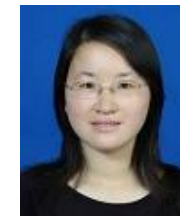
Organizers:



Antonella Bogoni
Inter-university National Consortium for Telecommunications



Mable Fok
University of Georgia



Dan Zhu
Nanjing University of Aeronautics and Astronautics

Invited Speakers:

8:30-8:55 **Roeloffzen Chris**, *LioniX International*
Topic: Low-loss Si3N4 TriPLeX platform: applications in photonics-based radars

8:55-9:20 **Mark Wade**, *Ayar Labs, USA*
Topic: Optical I/O for Digital Phase Array Systems

9:20-9:45 **Paolo Ghelfi**, *CNIT, Italy*
Topic: Photonics-based radar on chip

9:45-10:10 **Lawrence Chen**, *McGill University, Canada*
Topic: Photonic integrated devices for microwave

photonic signal processing

10:10-10:25 **Break**

10:25-10:50 **Daoxin Dai**, *Zhejiang University, China*

Topic: High-performance microwave photonic devices on silicon

10:50-11:15 **Weifeng Zhang**, *Beijing Institute of Technology, China*

Topic: Silicon photonic chips for microwave signal generation and processing

11:15-11:40 **Pei Zhou**, *Soochow University, China*

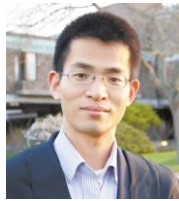
Topic: Optically-injected-semiconductor-laser-based radar waveform generator: realization and application

11:40-12:10 **Panel discussion**

Workshop 3: Photonic Quantum Technologies

Time: 13:30 - 17:10, 3 July

Organizer:



Chao-Yang Lu

University of Science and Technology of China

Invited Speakers:

13:30-13:55 **J. M. Arrazola**, *Xanadu Quantum*

Technologies Inc., Canada

Topic: Gaussian boson sampling and its applications

13:55-14:20 **Qiang Zhang**, *University of Science and Technology of China, China*

Topic: Long distance quantum communication

14:20-14:45 **Yuan Cao**, *University of Science and Technology of China, China*

Topic: Next-generation free-space quantum networks

14:45-15:10 **Hansen Zhong**, *University of Science and Technology of China, China*

Topic: Photonic quantum advantage

15:10-15:25 **Break**

15:25-15:50 **Alexander Jones**, *University of Bristol, UK*

Topic: Generation of high-dimensional photonic entanglement

15:50-16:15 **Pascale Senellart**, *University Paris-Saclay, France*

Topic: Semiconductor quantum light sources and applications

16:15-16:40 **Richard Warburton**, *University of Basel, Switzerland*

Topic: When quantum dots meet open cavity

16:40-17:10 **Panel discussion**

Workshop 4: SDM is beginning to reach its capacity limit? What is a viable path to 100 Pbit/s per fiber and beyond?

Time: 14:00 - 18:00, 3 July

Organizers:



Toshio Morioka
Technical University of Denmark



Emmanuel Le Taillandier de Gabory
NEC, Japan



Itsuro Morita
KDDI Research, Japan

Invited Speakers:

14:00-14:25 **Chongjin Xie**, *Alibaba, USA*

Topic: Capacity demand of data center networks

14:25-14:50 **Kazunori Mukasa**, *Furukawa, Japan*

Topic: Technologies to increase the number of cores in a fiber - beyond 100

14:50-15:15 **Yusuke Sasaki**, *Fujikura, Japan*

Topic: High density spatial channel fibers, few-mode fibers and few-mode multicore fibers

15:15-15:40 **Yongmin Jung**, *University of Southampton, UK*

Topic: High-density SDM amplifiers

15:40-15:55 **Break**

15:55-16:20 **Joel Carpenter**, *University of Queensland, Australia*

Topic: Laguerre-Gaussian mode sorters of high spatial mode count

16:20-16:45 **Georg Rademacher**, *NICT, Japan*

Topic: Ultra-high capacity transmission using SDM

16:45-17:10 **Yutaka Miyamoto**, *NTT, Japan*

Topic: Ultra-high capacity optical transport using SDM

17:10-17:35 **Jianjun Yu**, *Fudan University, China*

Topic: Ultra-high level modulation

17:35-18:00 **Panel discussion**

Workshop 5: Advanced Photonic Sensors

Time: 14:00 - 18:00, 3 July

Organizers:



Wei Jin
The Hong Kong Polytechnic University



Yongkang Dong
Harbin Institute of Technology

Invited Speakers:

14:00-14:25 **Yosuke Mizuno**, *Yokohama National University*

Topic: Plastic optical fiber fuse and its application to magnetic field sensing

14:25-14:50 **Zinan Wang**, *University of Electronic Science and Technology of China*

Topic: Continuous chirped-wave phase-sensitive optical time domain reflectometry

14:50-15:15 **Dengwang Zhou**, *Harbin Institute of Technology*

Title: Ultrafast distributed Brillouin optical fiber sensing based on optical chirp chain

15:15-15:40 **Wei Ren**, *Chinese University of Hong Kong*

Title: Ultra-sensitive optical gas sensors with photoacoustic spectroscopy

15:40-15:55 **Break**

15:55-16:20 **Yan Zhao**, *The Hong Kong Polytechnic University*

Topic: Photoacoustic Brillouin spectroscopy of gas-filled anti-resonant hollow-core fibers

16:20-16:45 **Avi Zadok**, *Bar-Ilan University*

Topic: Opto-mechanical sensors of media outside standard fibers

16:45-17:10 **Shangran Xie**, *Beijing Institute of Technology, China*

Topic: On-the-fly particle metrology in hollow-core photonic crystal fiber

17:10-17:35 **Fan Yang**, *European Molecular Biology Laboratory (EMBL)*

Topic: Gas photonics using hollow-core fibers: Brillouin

nonlinear optics and gas spectroscopic sensors

17:35-18:00 **Panel discussion**

Workshop 6: Data Center Interconnects Technology

Time: 14:00 - 18:00, 3 July

Organizers:



Maxim Kushnerov
Huawei Technologies



Raymond Leung
Huawei Technologies



Dawei Wang
Sun Yat-sen University

Invited Speakers:

14:00-14:25 **Maxim Kushnerov**, *Huawei Technologies*

Topic: Future data center optical interconnect and 800G pluggable MSA

14:25-14:50 **Frank Chang**, *Source Photonics*

Topic: What's the future of pluggable optical transceivers?

14:50-15:15 **Anbin Wang**, *Alibaba Group*

Topic: Next generation optical interconnect for datacenters

15:15-15:40 **Alvin Y. Sukmadji** and **Frank R. Kschischang**,
University of Toronto, Canada

Title: Designing Zipper codes for optical communications

15:40-15:55 **Break**

15:55-16:20 **Franesco Poletti**, *University of Southampton, UK*

Topic: Low latency hollow core fibres

16:20-16:45 **Kazuhiko Naoe**, *Lumentum*

Topic: 224Gbps PAM4 EA-DFB lasers for Data Center Interconnection

16:45-17:10 **Masahiro Honda**, *Sumitomo Electric Industries*

Topic: Optical device technologies for 200 Gbps/lane transmission

17:10-17:35 **Leibin Ni** and **Raymond Leung**, *Huawei Technologies*

Topic: The applications of analogue computing in optical DSP

17:35-18:00 **Panel discussion**