



The 15th IEEE Photonics Society - Hong Kong Chapter Postgraduate Conference

December 6, 2014 (Saturday)



Lecture Theatre H, Academic Concourse,
HKUST

Conference Programme

8:45 – 9:10	Registration
9:10 – 9:15	Welcome Speech <i>(Prof. Alan P. T. Lau, Chairman, IEEE Photonics Society - Hong Kong Chapter)</i>
9:15 – 11:00	Optical Communications (Papers A1 - A7) <i>(Presider: Prof. Calvin C. K. Chan, The Chinese University of Hong Kong)</i>
11:00 – 11:15	Coffee Break
11:15 – 12:30	Biophotonics I (Papers B1-B5) <i>(Presider: Prof. Kenneth K. Y. Wong, The University of Hong Kong)</i>
12:30 – 14:00	Group Photo and Lunch <i>(G/F Chinese Restaurant)</i>
14:00 – 15:45	Photonic Devices (Papers C1 - C7) <i>(Presider: Prof. Nelson S. C. Chan, The City University of Hong Kong)</i>
15:45 – 16:00	Coffee Break
16:00 – 17:30	Biophotonics II (Papers D1 - D6) <i>(Presider: Prof. Kevin K. Tsia, The University of Hong Kong)</i>
17:30 – 18:00	Break / Free Discussion
18:00 – 18:20	Certificate and Award Ceremony

Programme Details

Optical Communications

(Presider: Prof. Calvin C. K. Chan, The Chinese University of Hong Kong)

- 9:15 – 9:30 <A1> **Modulation-format-independent OSNR monitoring insensitive to filtering effects by low-cost coherent reception and RF power measurements**
Zhenhua Dong, Kangping Zhong, Chao Lu, Alan Pak Tao Lau, Yanzhao Lu and Liangchuan Li
The Hong Kong Polytechnic University
- 9:30 – 9:45 <A2> **Locking range of the sideband injection locking for the microwave signal generation in directly modulated Fabry-Perot laser diode**
Liqing Gan, Feng Li and P. K. A. Wai
The Hong Kong Polytechnic University
- 9:45 – 10:00 <A3> **Auto Bias Control Technique for Optical OFDM**
Tao Gui, Qi Yang, Xiao, Zhaohui Li, Alan Pak Tao Lau
The Hong Kong Polytechnic University
- 10:00 – 10:15 <A4> **40 Gb/s CAP32 short reach transmission over 80 km single mode fiber**
Yuliang Gao, Qunbi Zhuge, Wei Wang, Xian Xu, Jonathan M. Buset, Meng Qiu, Mohamed Morsy-Osman, Mathieu Chagnon, Junjia Wang, Liang Wang, Chao Lu, Alan Pak Tao Lau and David V. Plant
The Hong Kong Polytechnic University
- 10:15 – 10:30 <A5> **Optical Physical-layer Network Coding in Coherent Optical OFDM Systems**
Xun Guan and Calvin Chun-kit Chan
The Chinese University of Hong Kong
- 10:30 – 10:45 <A6> **Mitigation of Nonlinear Distortion in OPC Module with Backward Raman Pumping**
Chaoran Huang, Yajun Wu, Xiaojie Guo, Ming Li, and Chester Shu
The Chinese University of Hong Kong
- 10:45 – 11:00 <A7> **Secure and noise-free holographic encryption with a quick-response code**
Zhenbo Ren and Edmund Y. Lam
The University of Hong Kong
- 11:00 – 11:15 **Coffee Break**

Biophotonics I

(Presider: Prof. Kenneth K. Y. Wong, The University of Hong Kong)

- 11:15 – 11:30 <B1> **Particle Acceleration Using a Multimode Interference Waveguide and a Few-mode Fiber**
Yiu Kin Tat and Andrew W. Poon
The Hong Kong University of Science and Technology
- 11:30 – 11:45 <B2> **Flow-assisted Nanoparticle Sorting using Silicon Nitride Microring Resonators on an Optofluidic Chip**
Jiawei Wang and Andrew W. Poon
The Hong Kong University of Science and Technology
- 11:45 – 12:00 <B3> **Nonlinear Optical Imaging Study on Ultrasound-mediated Transscleral Drug Delivery**
Jun JIANG and Jianan Y. QU
The Hong Kong University of Science and Technology
- 12:00 – 12:15 <B4> **Compact swept source for high-quality ultrafast optical bioimaging**
Xiaoming Wei, Jingjiang Xu, Yiqing Xu, Luoqin Yu, Jianbing Xu, Bowen Li, Andy K. S. Lau, Xie Wang, Chi Zhang, Kevin K. Tsia, and Kenneth Kin-Yip Wong
The University of Hong Kong
- 12:15 – 12:30 <B5> **Development of Bench-top Optical Stimulation System for Optogenetic Study**
Aaron T. Y. Mok, Anson H. L. Tang, Andy K.S. Lau, Russell W. Chan, Alex T.L. Leong, Ed X. Wu and Kevin K. Tsia
The University of Hong Kong
- 12:30 – 14:00 **Group Photo and Lunch**
(G/F Chinese Restaurant)

Photonic Devices

(*Presider: Prof. Nelson S. C. Chan, The City University of Hong Kong*)

- 14:00 – 14:15 <C1> **Generation of mode locked laser pulses with a high order micro-ring resonator**
Li Jin, Alessia Pasquazi, K.S. Tsang, Victor Ho, Marco Peccianti, Marcello Ferrera, David J. Moss, Roberto Morandotti, and Sai T. Chu
The City University of Hong Kong
- 14:15 – 14:30 <C2> **Effects of Cavity Designs on Performances of Passively Mode-locked Semiconductor Lasers**
Jun-Ping Zhuang, Song-Sui Li, Xiao-Zhou Li, Vincenzo Pusino, Ying Ding, Marc Sorel, and Sze-Chun Chan
The City University of Hong Kong
- 14:30 – 14:45 <C3> **Hyperuniform disordered point patterns on silicon membranes: evaluation of criteria for photonic bandgaps**
Wen Zhou and Hon Ki Tsang
The Chinese University of Hong Kong
- 14:45 – 15:00 <C4> **Waveguide-integrated unidirectional emission microspiral laser for optical interconnects**
Yu Zhang and Andrew W. Poon
The Hong Kong University of Science and Technology
- 15:00 – 15:15 <C5> **Proposal and modeling of a 2×2 quantum photonic switch fabric using two-photon quantum interference in an integrated optical microring resonator array**
Zhanshi Yao, Lei Zhang and Andrew W. Poon
The Hong Kong University of Science and Technology
- 15:15 – 15:30 <C6> **Active resonance wavelength stabilization for silicon microring resonators with an in-resonator defect-state-absorption-based photodetector**
Yu Li and Andrew W. Poon
The Hong Kong University of Science and Technology
- 15:30 – 15:45 <C7> **Computational techniques for optical lithography resolution enhancement**
Xiaofei Wu and Edmund Y. Lam
The University of Hong Kong
- 15:45 – 16:00 ***Coffee Break***

Biophotonics II

(Presider: Prof. Kevin K. Tsia, The University of Hong Kong)

- 16:00 – 16:15 <D1> **Amplified optical time-stretch optical coherence tomography for endoscopic imaging**
Luoqin Yu, Xiaoming Wei, Jingjiang Xu, Jianbing Xu, William K. Hau, Kevin K. Tsia and Kenneth. K. Y. Wong
The University of Hong Kong
- 16:15 – 16:30 <D2> **60 MHz tomographic imaging based on wavelength-encoded tomography (WET) and parametric spectro-temporal analyzer (PASTA)**
Bowen Li, Chi Zhang, SiSi Tan, Xiaoming Wei, Yiqing Xu and Kenneth K. Y. Wong
The University of Hong Kong
- 16:30 – 16:45 <D3> **High throughput cellular and microsphere time-stretch imaging on a spinning planar platform**
Anson H. L. Tang, Antony C. S. Chan, P. Yeung, Edmund Y. Lam, Barbara P. Chan, Kenneth K. Y. Wong, Kevin K. Tsia
The University of Hong Kong
- 16:45 – 17:00 <D4> **Ultrafast label-free multi-parametric cellular analysis by interferometric time-stretch microscopy**
Andy K. S. Lau, Matthew Y. H. Tang, Anson H. L. Tang, Bob M. F. Chung, Xiaoming Wei, Kenneth K. Y. Wong, Ho Cheung Shum, and Kevin K. Tsia
The University of Hong Kong
- 17:00 – 17:15 <D5> **Signal reduction in fluorescence imaging using radio frequency-multiplexed excitation by compressed sensing**
Antony C. S. Chan, Edmund Y. Lam and Kevin K. Tsia
The University of Hong Kong
- 17:15 – 17:30 <D6> **Optical-fiber-bundle-based system for simultaneous fluorescence microendoscopy and laser microsurgery**
Queenie T.K. Lai, Andy K.S. Lau, Kevin K. Tsia
The University of Hong Kong
- 17:30 – 18:00 **Break / Free Discussion**
- 18:00 – 18:20 **Certificate and Award Ceremony**