



IEEE HK Section

The 10th IEEE Photonics Society Hong Kong Chapter Postgraduate Conference

November 28, 2009 (Saturday)



Lecture Theatre H
The Hong Kong University of Science and Technology

Conference Program

8:30 – 8:55	Registration
8:55 – 9:00	Welcome <i>(Prof. Andrew W. Poon, Chairman, IEEE Photonics Society HK)</i>
9:00 – 10:30	Photonic Signal Processing <i>(Chair: Prof. Chester Shu, The Chinese University of Hong Kong)</i>
10:30 – 11:00	Coffee Break
11:00 – 11:45	Photonic Signal Generation <i>(Chair: Prof. Chao Lu, The Polytechnic University of Hong Kong)</i>
11:45 – 12:30	Biophotonics <i>(Chair: Prof. Edwin B. Pun, The City University of Hong Kong)</i>
12:30 – 14:00	Lunch (G/F Chinese Restaurant)
14:00 – 15:30	Photonic Devices and Materials <i>(Chair: Prof. Andy H. P. Chan, The City University of Hong Kong)</i>
15:30 – 16:00	Coffee Break
16:00 – 17:00	Silicon Photonics <i>(Chair: Prof. Hon Ki Tsang, The Chinese University of Hong Kong)</i>
17:00 – 17:20	Break / Free Discussion
17:20 – 17:30	Certificate and Award Ceremony

Program Details

Photonic Signal Processing

(Chair: Prof. Chester Shu, The Chinese University of Hong Kong)

- 9:00 – 9:15 **A1: RZ-to-NRZ and NRZ-to-PRZ format conversions using a photonic crystal fiber based Mach-Zehnder interferometer**
Jiangbing Du, Yongheng Dai, Gordon K. P. Lei, Huifeng Wei[#], and Chester Shu
The Chinese University of Hong Kong
[#]*Yangtze Optical Fiber and Cable Company Ltd., China*
- 9:15 – 9:30 **A2: Wide dynamic range in-band OSNR monitoring for RZ-DQPSK systems using delay-tap sampling technique**
F. N. Khan, Alan Pak Tao Lau, Chao Lu and P. K. A. Wai
The Hong Kong Polytechnic University
- 9:30 – 9:45 **A3: Bit-error rate analysis on chaos communication with parameter mismatch using optical injection**
Hon-Man Chau and Sze-Chun Chan
The City University of Hong Kong
- 9:45 – 10:00 **A4: Polarization-insensitive wideband wavelength conversion for DPSK signal by dual-pump Four-Wave Mixing in a photonic crystal fiber**
Yongheng Dai and Chester Shu
The Chinese University of Hong Kong
- 10:00 – 10:15 **A5: Equalization-enhanced phase noise for 100Gb/s transmission with coherent detection**
Shunrong Shen, Alan Pak Tao Lau, William Shieh and Keang-Po Ho
The Hong Kong Polytechnic University
- 10:15 – 10:30 **A6: 4×10 Gb/s time and wavelength multicasting with NRZ to RZ format conversion using Four-Wave Mixing in a highly nonlinear photonic crystal fiber**
Gordon K. P. Lei and Chester Shu
The Chinese University of Hong Kong
- 10:30 – 11:00 **Coffee Break**

Photonic Signal Generation

(Chair: Prof. Chao Lu, The Polytechnic University of Hong Kong)

- 11:00 – 11:15 **B1: Picosecond fiber optical parametric oscillator with 500 nm tuning range using dispersion-shifted fiber**
Yue Zhou, Kim K. Y. Cheung, Sigang Yang, P. C. Chui and Kenneth K. Y. Wong
The University of Hong Kong
- 11:15 – 11:30 **B2: Fourier domain mode locking laser sweeping based on optical parametric amplification**
Kim K. Y. Cheung, Ho Yiu K. Cheng, Sigang Yang, Yue Zhou and Kenneth K. Y. Wong
The University of Hong Kong
- 11:30 – 11:45 **B3: Energy-efficient optical power and signal transmission system with distributed Raman amplification**
Xing Xu, Yu Liang, Mengzhe Shen[#], Sigang Yang, T. I. Yuk and Kenneth K. Y. Wong
The University of Hong Kong
[#]*University of British Columbia, Canada*

Biophotonics

(Chair: Prof. Edwin B. Pun, The City University of Hong Kong)

- 11:45 – 12:00 **C1: Optothermal coherent manipulation of microparticles**
Yangyang Liu and Andrew W. Poon
The Hong Kong University of Science and Technology
- 12:00 – 12:15 **C2: Enhanced fluorescence using annealed silver films**
Q. R. Wang, F. Song[#], S. X. Lin and E. Y. B. Pun
The City University of Hong Kong
[#]*Nankai University, P R. China*
- 12:15 – 12:30 **C3: Optimal incident angle for surface plasmon resonance imaging with LED light source**
Yilei Li and Andrew W. Poon
The Hong Kong University of Science and Technology
- 12:30 – 14:00 **Lunch (G/F Chinese Restaurant)**

Photonic Devices and Materials

(Chair: Prof. Andy H. P. Chan, The City University of Hong Kong)

- 14:00 – 14:15 **D1: DNA biopolymer channel waveguides**
X. Yang, C.-Y. Wong and E. Y. B. Pun
The City University of Hong Kong
- 14:15 – 14:30 **D2: Coupled-microresonators array sensor by detecting spatial pattern distribution using a CCD camera**
Ting Lei, Xianshu Luo, Hui Chen, Hong Cai and Andrew W. Poon
The Hong Kong University of Science and Technology
- 14:30 – 14:45 **D3: Multilevel amplitude modulation of 1.55-um VCSELs**
L. Xu, W. Hofmann[#], H. K. Tsang and M-C. Amann[#]
The Chinese University of Hong Kong
#Technische Universität München, Germany
- 14:45 – 15:00 **D4: InGaN light-emitting diodes with an integrated reflector cavity**
L. Zhu, X. H. Wang, P. T. Lai and H. W. Choi
The University of Hong Kong
- 15:00 – 15:15 **D5: Design of a low-loss ultra compact power splitter using three-dimensional structure**
Z. Huang, H. P. Chan and M. A. Uddin
The City University of Hong Kong
- 15:15 – 15:30 **D6: A polarizing photonic crystal fiber with high index defects**
Yuan Mao, Jie Li and Chao Lu
The Polytechnic University of Hong Kong
- 15:30 – 16:00 **Coffee Break**

Silicon Photonics

(Chair: Prof. Hon K. Tsang, The Chinese University of Hong Kong)

- 16:00 – 16:15 **E1: Characterization of integrated polarization-diversity DPSK demodulator with two-dimensional chirped grating couplers and ring resonators**
Xia Chen, Chao Li, Ying Gao[#], Lin Xu, Hon Ki Tsang and Chester Shu
The Chinese University of Hong Kong
[#]Zhejiang University, P. R. China
- 16:15 – 16:30 **E2: Silicon nitride based optofluidic chip for optical manipulation**
Hong Cai and Andrew W. Poon
The Hong Kong University of Science and Technology
- 16:30 – 16:45 **E3: Cavity-enhanced photocurrent generation in the p-i-n diode integrated silicon microring resonator matrix**
Shaoqi Feng, Hui Chen, Xianshu Luo and Andrew W. Poon
The Hong Kong University of Science and Technology
- 16:45 – 17:00 **E4: Electro-optical tunable time delay and advance in silicon microring resonator-based notch filter**
Xianshu Luo and Andrew W. Poon
The Hong Kong University of Science and Technology
- 17:00 – 17:20 ***Break / Free Discussion***
- 17:20 – 17:30 ***Certificate and Award Ceremony***