

Asia Communications and Photonics Conference (ACP) 2012

Asia Communications and Photonics Conference (ACP) is Asia's premier conference in the Pacific Rim for photonics technologies. ACP 2012, which will take place 7-10 November, 2012, in the Garden Hotel, Guangzhou (Canton), China, is sponsored by OSA, SPIE, The IEEE Photonics Society, COS, and CIC.

ACP - Where science and industry merge

Asia Communications and Photonics Conference (ACP) is Asia's premier conference in the Pacific Rim for photonics technologies, including optical communications, biophotonics, nanophotonics, illumination and applications in energy. The event will take place 7-10 November, 2012, Guangzhou (Canton), China.

The five technical societies -- SPIE, The IEEE Photonics Society, OSA, the Chinese Optical Society, and the Chinese Institute of Communications -- have joined together to co-sponsor the ACP 2012 conference. The Local Organizing Committee with participation from South China Normal University will be responsible for local organization of the technical conference.

The ACP technical conference features a full suite of plenary talks, invited talks, contributed talks, short courses, workshops, an Industry Forum, and posters given by international academic and industrial researchers who are leaders in their respective fields, including these conference topics:

With a conference program of broad scope and of the highest technical quality, ACP provides an ideal venue to keep up with new research directions, the latest technical breakthroughs and emerging new commercial applications of optoelectronics subsystems and technologies. ACP offers the opportunity to meet and interact with the researchers who are leading these advances.

Invited Speakers

Novel Fibers and Fiber-based Devices

- Limin Tong, Zhejiang University, China, "**Nano-wire fibers**"
- Wei Jin, The Hong Kong Polytechnic University, Hong Kong SAR, China, "**Photonic crystal fiber devices**"
- Shinji Yamashita, The University of Tokyo, Japan, "**Photonic and Optoelectronic Applications of Carbon Nanotube and Graphene**"
- Byoung Yoon Kim, KAIST, South Korea, "**All-fiber acousto-optic filters and modulators**"
- Evgeny M. Dianov, Fiber Optics Research Center, Russian Academy of Sciences, Russia, "**Progress in bismuth-doped silica-based fiber lasers and amplifiers**"
- Sergei Turitsyn, Aston University, UK, "**Recent progress in random distributed fibre lasers**"

- Johann Troles, University of Rennes, France, **“Chalcogenide microstructured fibers for sensors and nonlinear applications”**
- Markus Schmidt, Max Planck Institute for the Science of Light, Germany, **“Hybrid fibers: multimaterial nanophotonic devices in fiber form”**
- Xin Chen, Corning Incorporated, USA, **“Bandwidth Measurement of Multimode Fibers Using Bit Error Rate Testing”**
- Alexander Gaeta, Cornell University, USA, **“TBD”**

Optoelectronic Integration, Devices, and Materials

- Mehdi Asghari, Kotura, USA, **“Silicon Photonics Based Transceivers for High-Capacity Optical Interconnects”**
- Marco Fiorentino, HP lab, USA, **“Hybrid silicon lasers: progress and perspectives”**
- Frederic Gardes, Univ. of Southampton, UK, **“Silicon on insulator modulator structures for data rates of 40 Gb/s and above”**
- Jianjun He, Zhejiang University, China, **“Wavelength switchable semiconductor lasers”**
- Jurgen Michel, MIT, USA, **“Monolithic integration of an electrically pumped Ge laser on Silicon”**
- Delphine Morini, IEF, UPS, France, **“Low power consumption Ge/SiGe Quantum well optical modulator”**
- Jeremy L. O'Brien, University of Bristol, UK, **“Integrated quantum photonic devices”**
- Takanori Shimizu, Photonics Electronics Technology Research Association (PETRA), Japan, **“Multi-Channel and High-Density Hybrid Integrated Light Source on a Silicon Optical Waveguide Platform”**
- Eric Tournie, Univ. de Montpellier, France, **“GaSb-Based Laser, Monolithically Grown on Silicon Substrate, Emitting at 1.55um at Room Temperature”**
- Diedrik Vermeulen, Acacia Communications (worked formerly at imec), Belgium/US, **“Silicon photonics for optical communication applications”**
- Laurent Vivien, IEF, UPS, France, **“High speed silicon modulators and germanium detectors”**
- Sanshui Xiao, Technical University of Denmark, Denmark, **“Plasmonic Nanostructures: Tailoring Light-matter Interaction”**
- Christophe Kopp, CEA-LETI, MINATEC, France, **“Coupling and packaging issues of silicon based photonic integrated circuits”**
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- Jesper Moerk, DTU Fotonik - Technical University of Denmark, Denmark, **“Integrated photonics enabled by slow light”**
- Dangyuan Lei, Imperial College London, UK, **“Single-particle plasmon-resonance spectroscopy and transformation optics applications in nanoplasmonics”**

- Xiaobo Yin, University of California, Berkeley, USA, “**Deep-subwavelength Integrated Optoelectronics**”
- Haisheng Rong, Intel Labs, USA, “**Silicon Photonics: Opportunities and Challenges**”
- Wounjhang (Won) Park, University of Colorado, USA, “**Manipulating light scattering with plasmonic nanostructures**”

Optical Transmission Systems, Subsystems, and Technologies

- Yu Changyuan, National University of Singapore, Singapore, “**Phase estimation in Digital Coherent Optical Communications**”
- Jianping Chen, Shanghai Jiao Tong Univ., China, “**High stability time-frequency transmission over optical fiber**”
- Hung-chang Chien, ZTE, USA, “**Terabit Superchannel Transmission: from Laboratory Testing to Field Demonstration**”
- Yun Chung, KAIST, South Korea, “**Recent Progress in Coherent WDM PON Technology**”
- Dan Sadot, Ben Gurion University of the Negev, Israel, “**Symbol spaced adaptive MIMO equalization for ultra high bit rate coherent optical communication**”
- Ezra Ip, NEC Labs America, USA, “**MIMO transmission through few mode fiber**”
- Sakaguchi, Jun, National Inst. of Information and Communications Technology, Japan, “**Large-scale space division multiplexed transmission through multi-core fiber**”
- Robert Killey, Univ. College London, UK, “**Advanced DSP for optical transmission impairment mitigation**”
- Chao Lu, The Hong Kong Polytechnic University, China, “**Optical Performance Monitoring: from direct detection to coherent optical communication systems**”
- Yuanqiu Luo, Huawei, USA, “**Next Generation PON offering 40G or more bandwidth**”
- Benny Mikkelsen, Acacia, USA, “**100G Coherent transponder in MSA with advanced SD FEC**”
- Bernd Nebendahl, Agilent, Germany, “**Quality Metrics in Optical Modulation Analysis: EVM and its relation to Q-factor, OSNR, and BER**”
- Akihide Sano, NTT, Japan, “**Ultra-high Capacity Optical Transmission Technologies for 100 Tb/s and Beyond**”
- Mark Shtaif, Tel Aviv Univ, Israel, “**Polarization dependent loss and polarization mode dispersion in coherent polarization multiplexed transmission**”
- Jianming Tang, Bangor University, UK, “**Real-Time Optical OFDM and Colorless OOFDMA PONs**”
- Yoshida Tsuyoshi, Mitsubishi Electric Corporation, Japan, “**Nonlinearity equalization technology in digital coherent receiver**”
- Bo Wang, China Telecom, China, “**China Telecom FTTH deployment - lessons learnt and future plans**”

- Jian Wang, Huazhong Univ. of Science & Technol., China, **“Optical Signal Processing for Multi-level Modulation Formats”**
- Winston Way, NeoPhotonics, USA, **“Next Generation ROADM Architectures”**
- Peng Wei-Ren, KDDI, Japan, **“500-Gb/s Transmission by 41-GBd PDM-64QAM”**
- Ian White, University of Cambridge, UK, **“Uncooled Dense WDM”**
- Xiaoxia Wu, JDSU, USA, **“High-Speed Optical Signal Processing for Terabit/Second Optical Networks”**
- Chen Xi, University of Melbourne, Australia, **“Few-mode compatible Optical Add/Drop Multiplexor”**
- Chongjin Xie, Bell Labs, Alcatel-Lucent, USA, **“Colorless coherent reception”**
- Lei Wang, China Mobile, China, **“New applications and evolution of optical transport network in China Mobile”**

Network Architectures, Management, and Applications

- S. J. Ben Yoo, UC Davis, USA, **“Intra- and Inter- Data Center Networking Architectures for Future Cloud Computing”**
- Ivan Andonovic, University of Strathclyde, UK, **“Adjustable Gain-Clamped Semiconductor Optical Amplifiers (AGC-SOA)”**
- Ori Gerstel, CISCO, Israel, **“Adaptive DWDM - a new dawn for optical networking?”**
- Christine Tremblay, ETS, Canada, **“Advanced performance measurements using 40G coherent systems”**
- Pin-Han Ho, University of Waterloo, Canada, **“A Framework of All-optical Restoration via Monitoring Trails (m-trails)”**
- Jing Wu, CRC, Canada, **“Flow Availability in Two-Layer Networks with Dedicated Path Protection”**
- George Rouskas, North Carolina State University, USA, **“Scalable Traffic Grooming in Optical Networks”**
- Ken-ichi Kitayama, Osaka Univ., Japan, **“High-Performance Optoelectronic Packet Switching Network for Data Center”**
- Christina Lim, The University of Melbourne, Australia, **“High Performance Fiber-Radio Link: Digitized Radio-over-Fiber Transport”**
- Carmen Mas Machuca, TUM, Germany, **“Complete cost analysis of Hybrid PON architectures for Next Generation Optical Access Networks”**
- Ting Wang, NEC America Laboratories, USA, **“The Role of Optical Transport in “Software Defined Networking””**
- Renaud Larsen, JUNIPER, France, **“TBD”**
- Biswanath Mukherjee, UC Davis, USA, **“Recent Advances in (Optical) Network Survivability”**

- Zuqing Zhu, University of Science and Technology, China, **“Strategies for Improving the Throughput of Dynamic Service Provisioning in Elastic Optical Networks”**
- Huiying Xu, Huawei, China, **“Service-aware transport networks”**
- Luca Valcarenghi, SSSUP, Italy, **“Cognitive PONs: a Novel Approach Toward Energy Efficiency”**
- Bart Lannoo, IBBT, Belgium, **“Architectural solutions for open access in next-generation passive optical networks (NG-PONs)”**
- Ivan Djordjevic, University of Arizona, USA, **“Hybrid Multidimensional Dynamic Optical Networking Based on Adaptive LDPC-Coded Mode-Multiplexed CO-OFDM”**
- Jiajia Chen, Royal Institute of Technology, Sweden, **“Reducing the impact of failures in Next-Generation Optical Access Networks”**
- Chien Aun Chan, Elaine Wong, André F. Gygax, Christopher A. Leckie, Ampalavanapillai Nirmalathas, and Daniel C. Kilper, University Of Melbourne, Australia, **“Energy Star Rating for Future Telecom Services: Motivation, Methodologies and Challenges”**

Biophotonics and Optical Sensors

- Kishan Dholakia, University of St Andrews, Scotland, **“Shaped Light for Biophotonics”**
- Peter Andersen, Technical University of Denmark, Denmark, **“Green, Compact Diode Laser-based Systems for Biophotonics Application”**
- Francesco Pavone, European Laboratory for Non Linear Spectroscopy, Italy, **“Laser Detection of Tumors”**
- Malini Olivo, Singapore Bioimaging Consortium, Singapore, **“SERS Based Biosensors”**
- Yong Zhang, National University of Singapore, Singapore, **“Upconverting Fluorescent Nanoparticles for Bioimaging and Therapy”**
- Zuyuan He, Shanghai Jiao Tong University, China, **“Development of Nano-Strain-Resolution Fiber Optic Static Strain Sensor for Crustal Deformation Monitoring”**
- Frank Tittel, Rice University, USA, **“Mid-Infrared semiconductor laser based trace gas sensor technologies: recent advances and applications”**
- Yuh-Lin Wang, Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan, **“A Fast Nanotechnology Platform to Detect/Capture Bacteria in Clinical Samples”**
- Hamish Adam, Boreal Laser, Canada, **“4-11 μm Distributed Feedback Quantum Cascade Lasers for Environmental Monitoring, Industrial Process Control and Health Diagnostic Applications”**
- Chung-en Zah, Corning, USA, **“4-11 μm Distributed Feedback Quantum Cascade Lasers for Environmental Monitoring, Industrial Process Control and Health Diagnostic Applications”**
- Juergen Roepcke, INP Greifswald, Germany, **“Applications of MIR-Laser Systems for Plasma Diagnostics and Trace Gas Detection in Basic Research and Industry”**

- Sune Svanberg, Lund University, Sweden, and South China Normal University, China, **“Laser remote sensing – from environmental to medical applications”**
- Antoine Muller, Alpes Lasers, Switzerland, **“Optimisation of fabrication and specification of quantum cascade lasers for spectroscopic applications”**
- Jozef Piotrowski, Vigo System, Poland, **“Recent progress in uncooled photodetection of the mid-infrared radiation”**
- Patrick Rairoux, Lyon University, France, **“Remote sensing of atmospheric compounds using backscattered light from nanosecond and femtosecond laser light”**
- Kit S. Lam, University of California Davis, USA, **“From combinatorial chemistry to nanocarriers for cancer therapy and imaging”**
- John Canning, University of Sydney, Australia, **“From gases in glass to ultra-high temperature stable optical fibre grating sensors”**
- Valery Tuchin, Saratov State University (Russia) and University of Oulu (Finland), **“Tissue enhanced optical imaging and monitoring of drug delivery”**
- Kun Liu, Anhui Institute of Optics & Fine Mechanics, Chinese Academy of Sciences, China, **“Trace gas sensors based on TDLAS and their application”**
- Halina Rubinsztein-Dunlop, University of Queensland, Australia, **“Optically driven micromachines”**
- Koray Karakaya, Philips Research Laboratories, the Netherlands, **“Smart Sensors: trends, opportunities and challenges for the future”**
- Jürgen Popp, Friedrich Schiller University Jena, Germany, **“The many facets of Raman spectroscopy”**
- Weidong Chen, Université du Littoral, France, **“Recent Progress in Photonic Sensing of Key Atmospheric Reactive Species”**

LEDs, Photovoltaics, and Optoelectronics in Energy

- P. Dan Dapkus, University of Southern California, USA, **“InGaN/GaN nanostructures for efficient LEDs”**
- Boon S. Ooi, King Abdullah University of Science and Technology, Saudi Arabia, **“Simultaneous Formation of InGaN Nanostructures with Varying Shapes for White Light Source Applications”**
- Chenglin Xu, Synopsys, USA, **“Simulation and Design of High Efficient LED”**
- In-Hwan Lee, Chonbuk National University, Korea, **“Performance Enhancement of InGaN/GaN LEDs by Using Localized Surface Plasmons: Problems and Possible Solutions”**
- Min-Ho Kim, Samsung LED, Korea, **“Efficiency Droop in III-Nitride LEDs”**
- Schang J. Hon, Epistar, Taiwan, **“Development of High Power LEDs”**
- Shou-Jinn Chang, National Cheng Kung University, Taiwan, **“Light Extraction Efficiency in III-Nitride LEDs”**

- Hui Yang, Chinese Academy of Sciences, China, “**High Performance Multi-Junction Solar Cells**”
- Jonathan J. Wierer, Sandia National Laboratories, USA, “**III-Nitride Photovoltaics**”
- John E. Bowers, University of California - Santa Barbara, USA, “**Bonded Multijunction Photovoltaics to Improve Efficiency and Performance**”
- Hongxing Jiang, Texas Tech University, USA, “**III-Nitride Based Solar Hydrogen**”
- Nelson Tansu, Lehigh University, USA, “**Physics of High-Efficiency III-Nitride Quantum Wells Light-Emitting Diodes**”
- Cees Ronda, Philips Research, the Netherlands, “**Development of Solid State Lighting Technologies**”
- Hao-Chung Kuo, National Chiao-Tung University, Taiwan, “**Improvement in efficiency droop of GaN-based light-emitting diodes by optimization of active regions**”
- Hilmi Volkan Demir, Nanyang Technological University, Singapore, “**Nanocrystal Optoelectronics for High Quality Semiconductor Lighting**”
- Euijoon Yoon, Seoul National University, Korea, “**Controlled Integration of Silica Nanospheres in A-plane GaN on R-plane Sapphire**”
- Jing Zhang, Hua Tong, Guangyu Liu, and Nelson Tansu, Lehigh Univ., USA, “**III-Nitride Based Thermoelectric - Current Status and Future Potential**”
- Haiyan Ou, DTU Fotonik - Technical University of Denmark, Denmark, “**Fluorescent SiC for white light-emitting diodes**”
- K. M. Fung, S. Y. Ching, and K. W. Cheah, Hong Kong Baptist University, Hong Kong, “**Design of Efficient OLEDs**”
- S. David Roh, LG Innotek, Republic of Korea, “**Production Technology of High Performance III-Nitride Devices**”
- Zhifeng Ren, Boston College, USA, “**Solar Energy Conversion into Electricity and Hot Water by Thermoelectric Effect**”
- Hongbin Wu, South China Univ. of Technology, China, “**Efficient Polymer Solar Cells with an Power Conversion Efficiency Over 9%**”
- Michael Giersig, Free Univ. Berlin, Germany, “**Electromagnetic Waves Interaction with Various Metallic Nanomaterials**”

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