University of Southampton

Your guide to the Optoelectronics Research Centre at CLEO 2018

Find us at CLEO 2018 - use this schedule to find talks and posters from University of Southampton's Optoelectronics Research Centre at CLEO Conference 2018, 13-18 May 2018 (San Jose, California USA)

Monday 14 May 2018

09:00 (Marriott Salon V) *Variable Pattern Projection via a Spatial Light Modulator for Laser Machining on Curved Surfaces*. Benjamin Mills1, Daniel Heath1, James Grant-Jacob1, Richard Oreffo1, Robert Eason1; 1Univ. of Southampton. (SM10.4)

09:15 (Meeting Rm 212 B/D) *Multi-Wavelength Diode-Pumping of Fiber Raman Laser*. Soonki Hong1, Yutong Feng1,Johan Nilsson 1;1Univ. of Southampton. (S&I11)

12:00 (Meeting Rm 212 B/D) *Single-shot phase measurement and fluctuation analysis of Yb-doped fiber amplifier for nanosecond pulses*. Yujun Feng1, Huaiqin Lin1, Johan Nilsson1; 1Univ. of Southampton. (SM2K.7)

13:45 (Meeting Rm 212 A/C) *Far-field Metamaterial Superlens*. Guanghui Yuan1, Katrine S. Rogers2, Edward T. Rogers3, Nikolay I. Zheludev1,3; 1Nanyang Technological Univ., Singapore; 2School of Mathematics and Statistics, The Open Univ., UK; 3 Univ. of Southampton, UK. (FM3J.2)

14:45 (Executive Ballroom 210B) *20Gbps silicon lateral MOS-Capacitor electro-optic modulator*. Weiwei Zhang1, Kapil Debnath1, Graham T. Reed1, David J. Thomson1, Ali Z. Khokhar1, Callum Littlejohns1, James Byers1, Lorenzo Mastronardi1, Muhammad K. Husain1, Frederic Gardes1, Shinichi Saito1; 1Univ. of Southampton, UK. (SM3B.5)

14:45 (Executive Ballroom 210D) *Octave-Spanning Supercontinuum Generation in a Dispersion Managed Tapered Crystalline Silicon Core Fiber*. Haonan Ren1, Li Shen2, Joseph Campling1, Antoine Runge1, Ozan Aktas1, Thomas Hawkins3, Peter Horak1, John Ballato3, Ursula J. Gibson4, Anna C. Peacock1; 1Univ. of Southampton, UK; 2Wuhan National Lab for Optoelectronics, Huazhong Univ. of Science and Technology, China; 3School of Materials Science and Engineering, Clemson Univ., USA; 4Dept. of Physics, Norwegian Univ. of Science and Technology, Norway. (SM3D.5)

16:30 (Meeting Rm 212 B/D) *A Watt-level Supercontinuum Source from a Fiber-laserpumped Fluoroindate Fiber Spanning 750 nm to 5 microns*. Sijing Liang1, Lin Xu1, Qiang Fu1, David Shepherd1, David Richardson1, Shaif-Ul Alam1; 1Univ. of Southampton, UK. (SM4K.2)

16:45 (Meeting Rm 212 A/C) *Variable Environmental Index Spectroscopy in Metamaterials*. Wei-Yi Tsai1,2, Vassili Savinov1, Jun-Yu Ou1, Din Ping Tsai3,2, Nikolay I. Zheludev1,4; 1Univ. of Southampton, UK; 2Dept. of Physics, National Taiwan Univ., Taiwan; 3Research Center for Applied Sciences, Academia Sinica, Taiwan; 4Centre for Disruptive Photonic Technologies, Nanyang Technological Univ., Singapore. (FM4J.4)

17:15 (Marriott Salon V) *Surface Relief Structuring via Multiple Pulse Femtosecond Ablation using an Intensity Spatial Light Modulator*. Benjamin Mills1, Daniel Heath1, Rupert Bapty1, Taimoor Rana1, Behrad Gholipour1, James Grant-Jacob1, Robert Eason1; 1Univ. of Southampton. (SM40.3)

17:15 (Meeting Rm 212 B/D) *High-peak-power, high-efficiency, frequency doubled and quadrupled Thulium fiber laser*. Lin Xu1, Sijing Liang1, Qiang Fu1, David Shepherd1, David Richardson1, Shaif-Ul Alam1; 1Univ. of Southampton, UK. (SM4K.5)

17:30 (Executive Ballroom 210G) *Quantum interferometry through cascading broadband entanglement sources*. Arash Riazi1, Chang j. Chen1, Eric Y. Zhu1, Alexey Gladyshev3, Peter Kazansky2, John E. Sipe1, Li Qian1; 1Univ. of Toronto, Canada; 2Univ. of Southampton, UK; 3Russian Ac. of Sci (FM4G.7)

17:45 (Executive Ballroom 210G) *A Compact All-fiber Polarization-Entangled Photon Source Pumped by a Laser Diode*. Arash Riazi1, Chang j. Chen1, Eric Y. Zhu1, Alexey Gladyshev3, Peter Kazansky2, John E. Sipe1, Li Qian1; 1Univ. of Toronto, Canada; 2Univ. of Southampton; 3Russian Ac. of Sci (FM4G.8)

Tuesday 15 May 2018

11:30-13:00 (Exhibit Hall) Poster Session 1:

All-optical Wavelength Conversion of Phase-encoded Signals in Silicon-rich Silicon Nitride Waveguides. Cosimo Lacava1, Stuart May2, David Richardson1, Graham T. Reed1, Marc Sorel2, Periklis Petropoulos1; 1Univ. of Southampton, UK; 2Univ. of Glasgow, UK.

12:00 *High Power Fiber Lasers and Amplifiers*. Instructor: W. Andrew Clarkson, Univ. of Southampton, UK. (Short course SC270)

13:00 (Theatre II) *The Development of Tailored Supercontinuum Sources in Silica and Non-silica Fibers*. Jonathan Price, Univ. of Southampton, UK.

13:00 (Meeting Rm 212 B/D) *Towards in-fiber Silicon Photonics (Invited)*. Anna C. Peacock1; 1Univ. of Southampton, UK. (STu3K.1)

13:15 (Executive Ballroom) *Harmonic Generation in Silicon Rich Nitride Photonic Crystal Cavities*. Marco Clementi1, Kapil Debnath3, Moise Sotto3, Thalia Dominguez Bucio3, Marco Liscidini1, Daniele Bajoni1, Frederic Gardes3, Matteo Galli1; 1Dipartimento di Fisica, Universita di Pavia, Italy; 3 Univ. of Southampton, UK. (STu3F.2)

14:00 (Theatre II) *The Development of Tailored Supercontinuum Sources in Silica and Non-silica Fibers (Invited)*. Jonathan H. Price1, Sijing Liang1, Lin Xu1, Qiang Fu1, Yongmin Jung1, Krzysztof P. Herdzik1, Sumeet Mahajan1, David Shepherd1, David Richardson1, Shaif-Ul Alam1; 1Univ. of Southampton, UK. (ATu3S.3)

Wednesday 16 May 2018

11:30-13:00 (Exhibit Hall) Poster Session 2:

Plasmonic Tuning of Effective Phase Transition Temperature and Electrical Conductivity. James Frame1, Wanaka Kubo2,3, Xu Fang1; 1Univ. of Southampton, UK; 2Dept. of Electrical and Electronic Engineering, Tokyo Univ. of Agriculture and Technology, Japan; 3Metamaterials Lab, RIKEN, Japan (JW2A.95)

13:15 (Marriott Salon III) *Novel Method for Generating High Purity Vortex Modes*. Robin T. Uren1, Stephen Beecher1, Callum Smith1, William A. Clarkson1; 1Univ. of Southampton, UK. (SW3M.2)

18:00 (Meeting Rm 212 B/D) *110 W High-Efficiency Er-Nanoparticle-Doped Fiber Laser*. Huaiqin Lin1, Colin Baker2, Zhimeng Huang1, Shankar Pidishety1, Yutong Feng1, E. Joseph Friebele3, Ashley Burdett4, Dan Rhonehouse2, Brandon Shaw2, Jas Sanghera2, Johan Nilsson1; 1Univ. of Southampton, UK; 2Naval Research Lab, USA; 3KeyW Corp, USA; 4Univ. Research Foundation, USA. (SW4K.5)

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Thursday 17 May 2018

08:15 (Meeting Rm 211 B/D) *Mid-infrared (MIR) Mach-Zehnder Silicon Modulator at 2microns Wavelength based on Interleaved PN Junction (Invited).* Wanjun Wang1, Zecen Zhang1, Xin Guo1, Jin Zhou1, Sia Jia B. Xu1, Mohamed S. Rouifed1, Chongyang Liu1, Callum Littlejohns1,2, Graham T. Reed2, Hong Wang1; 1Nanyang Technological Univ., Singapore; 2 Univ. of Southampton, UK. (STh1B.1)

08:30 (Meeting Rm 211 B/D) *Silicon and Germanium based Waveguide Platforms for the Long Wave Infrared (Invited).* Milos Nedeljkovic1, Jordi Soler Penades1, Alejandro Sanchez-Postigo2, J. Gonzalo Wanguemert Perez2, Alejandro Ortega-Monux2, Robert Halir2, Pavel Cheben3, Inigo Molina-Fernandez2, Vinita Mittal1, Ganapathy S. Murugan1, Ali Z. Khokhar1, Callum Littlejohns1, Yolanda Xu1, Zhibo Qu1, Ahmed Osman1, Wei Cao1, Lewis G. Carpenter1, Corin Gawith1, James S. Wilkinson1, Goran Mashanovich1; 1Univ. of Southampton, UK; 2Universidad de Malaga, Spain; 3National Research Council of Canada, Canada. (STh1I.3)

09:15 (Executive Ballroom) *Enhanced Luminescence of MoS2, WS2 and WSe2, Direct Band Gap Semiconductor Heterostructures.* Jin-Kyu So1, Shoujun Zheng1, Fucai Liu2, Zheng Liu2, Nikolay I. Zheludev1,3, Hong Jin Fan1,4; 1Centre for Disruptive Photonic Technologies, TPI, SPMS, Nanyang Technological Univ., Singapore; 2School of Materials Science and Engineering, Nanyang Technological Univ., Singapore; 3Optoelectronics Research Centre & Centre for Photonic Metamaterials, Univ. of Southampton, UK; 4Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological Univ., Singapore. (FTh1F.5)

11:30-13:00 (Exhibit Hall) Poster Session 3:

- Breaking up the Anapole: or How to Separate Toroidal and Electric Dipole Excitations in Matter. Vassili Savinov1, Wei-Yi Tsai1,2, Din Ping Tsai3,2, Nikolay I. Zheludev1,4; 1Univ. of Southampton, UK; 2Dept. of Physics, National Taiwan Univ., Taiwan; 3Research Center for Applied Sciences, Academia Sinica, Taiwan; 4Centre for Disruptive Photonic Technologies, Nanyang Technological Univ., Singapore. (JTh2A.26)

- Yb-doped Large-Mode-Area Al-P-Silicate Laser Fiber fabricated by MCVD. Vassili Savinov1, Wei-Yi Tsai1,2, Din Ping Tsai3,2, Nikolay I. Zheludev1,4; 1Univ. of Southampton, UK; 2Dept. of Physics, National Taiwan Univ., Taiwan; 3Research Center for Applied Sciences, Academia Sinica, Taiwan; 4Centre for Disruptive Photonic Technologies, Nanyang Technological Univ., Singapore. (JTh2A.26)

- Spatially Gain-Tailored Fiber Raman Laser Cladding-Pumped by Multimode Disk Laser at 1030 nm. Yutong Feng1, Sheng Zhu1, Soonki Hong1, Huaiqin Lin1, Pranabesh Barua1, Jayanta K. Sahu1, Johan Nilsson1; 1Univ. of Southampton, UK. (JTh2A.109)

- Numerical Analysis on the Influence of Photo Darkening Heating Induced Phase Distortion on Fiber Coherent Combining CPA Scheme. Yujun Feng1, Betty M. Zhang1, Johan Nilsson1; 1Univ. of Southampton, UK. (JTh2A.110)

- Simultaneous Identification of Size and Complex Refractive Index of a Single Microbead via Mie Scattering. Benjamin Mills1, James Grant-Jacob1, Bharat Pant1, Daniel Heath1, Peter Horak1, Matthew Loxham1, Robert Eason1; 1Univ. of Southampton, UK. (JTh2A.177)

15:30 (Executive Ballroom 210E) *Launching Electromagnetic Donuts: Non-transverse electromagnetic pulses*. Apostolos Zdagkas1, Parik Moitra1, Oleksander Buchnev1, Nikitas Papasimakis1, Nikolai I. Zheludev1,2; 1Univ. of Southampton, UK; 2Nanyang Technological Univ., Singapore. (FTh3E.7)

15:45 (Executive Ballroom 210E) *Single-Photon-Level Interface for Linking Sr+ Transition at 422nm with The Telecommunications C-band*. Thomas A. Wright1, Robert J. Francis-Jones1, Corin Gawith3, Jonas N. Becker2, Patrick Ledingham2, Ian Walmsley2, Benjamin Brecht2, Joshua Nunn1, Peter J. Mosley1; 1Univ. of Bath, UK; 2Univ. of Oxford, UK; 3Univ. of Southampton, UK. (ATh3H.8)

18:15 (Executive Ballroom 210E) *Extraordinary Properties of Epsilon-Near-Zero and Low-Index Chalcogenide Metamaterials*. Davide Piccinotti1, Behrad Gholipour1, Jin Yao1, Kevin F. MacDonald1, Brian E. Hayden1, Nikolay I. Zheludev1,3; 1Univ. of Southampton, UK; 2Univ. of Glasgow, UK; 3Nanyang Technological Univ., Singapore. (FTh4H.6)

Friday 18 May 2018

08:00 (Executive Ballroom 210H) *New All-optical and Plasmonic Strategies for Controlling Light on a Silicon (Invited)*. Otto L. Muskens1, Bigeng Chen1, Nicholas Dinsdale1, Roman Bruck1, David J. Thomson1, Goran Mashanovich1, GrahamT. Reed1, Kevin Vynck2, Philippe Lalanne2; 1Univ. of Southampton, UK; 2LP2N, Institut Optique d'Aquitaine, France. (FF1H.1)

09:00 (Executive Ballroom 210H) *Coherent Control of Light-matter Interactions in Standing Waves.* Kevin F. MacDonald1, Eric Plum1, Daniele Faccio2, Nikolay I. Zheludev1,3; 1Univ. of Southampton, UK; 2Univ. of Glasgow, UK; 3Nanyang Technological Univ., Singapore. (FF1H.4)

14:15 (Meeting Rm 211 B/D) *Novel Fabrication Technique for Highly Efficient Tm-doped Fibers.* Norberto J. Ramirez-Martinez1, Martin M. Nunez-Velazquez1, Andrey A. Umnikov1, Jayanta K. Sahu1; 1Optoelectronics Research Centre, Univ. of Southampton, UK. (SF3I.2)

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Visit our website: www.orc.soton.ac.uk
Email: light@orc.soton.ac.uk
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