The Future Photonics Hub combines the expertise of researchers from the University of Southampton’s Optoelectronics Research Centre and the National Epitaxy Facility at the University of Sheffield. This schedule outlines the papers and posters (co-)authored by our researchers at the forthcoming SPIE Photonics West 2019 conference (San Francisco, USA)*.

*Authors from these institutions are shown in italics.

Saturday February 2, 2019

BIOS - Colloidal Nanoparticles for Biomedical Applications XIII (10892)

Session 3: Nano-Bio Complexes and Assemblies (Room 305, South Level Three):

Session 3: Multifunctional Nanoparticles for Biomedical Applications (Room 305, South Level Three):

Sunday February 3, 2019

BIOS – Fiber Lasers XV: Technology and Systems (10875)

Session 4: Microfluidic Devices II (Room 156, South Upper Mezzanine)
11:00 Multiplexed detection of CRP-SAA1 by laser direct-write-fab’ed multiple flow-path lateral flow devices, #10875-17. He, Katis, Galanis, Teeling, Holmes.

Course - Laser Sources: High-Power Fiber Sources (SC748). Instructor: Prof. Johan Nilsson

Monday February 4, 2019

OPTO - Plenary Session (10520)

08:00 Welcome and opening remarks. Prof. Graham Reed, OPTO Symposium Chair (207/215, South Level Two)

OPTO - Silicon Photonics XIV (10923)

Session 1: Fabrication Technology (Room 153, South Upper Mezzanine)
11:00 Rapid device prototyping using the CORNERSTONE platform (Invited Paper), #10923-2. Littlejohns, Tran, Du, Stankovic, Yan, Sharp.

Session 2: Silicon Waveguides I (Room 153, South Upper Mezzanine)
14:00 Engineering sub-wavelength silicon waveguides for sensing applications in the near-infrared and mid-infrared band (Invited Paper), #10923-6. Perez et al including Soler-Penades, Nedeljkovic, Mashanovich.
14:30 Suspended low-loss germanium waveguides for the mid-infrared, #10923-7. Osman, Nedeljkovic, Penades, Wu, Qu, Khokhar, Mashanovich.

BIOS - Microfluidics, BioMEMS, and Medical Microsystems XVII (10875)

Session 5: Manufacturing III (Room 156, South Upper Mezzanine)

Session 10: Applications (Room 156, South Upper Mezzanine)
16:10 Laser direct-write patterned paper-based devices for detection of bacterial pathogens, #10875-44. He, Katis, Bryant, Keevil, Somani.

BIOS - Poster session (Intercontinental Hotel, Grand Ballroom (3rd Floor) and Intercontinental Ballroom (5th Floor))

17:30-19:00 Swept-source optical coherence tomography using pulsed mid-infrared light. #10890-84. Lin, Revin, Groom, Matcher.

Tuesday February 5, 2019

OPTO - Optical Components and Materials XVI (10914)

Session 4: Sensors (Room 313, South Level Three)

OPTO - Silicon Photonics XIV (10923)

Session 5: Silicon Photonic Sensors (Room 153, South Upper Mezzanine)
09:50 Integration of mid-infrared silicon-on-insulator photonics with microfluidics, #10923-18. Qi, Rowe, Mittal, Banakar, Wu, Nedeljkovic, Wilkinson, Mashanovich.

Continues over next page
Variable index silicon nitride for CMOS photonics applications (Invited Paper), #10922-59. Gardes et al.

Neural networks for predictive laser machining capabilities, #10932-7. Mills, Heath, Grant-Jacob, Xie, Mackay, Eason.

Germanium ion implantation for trimming the coupling efficiency of silicon racetrack resonators, #10923-25. Milosevic, Yu, Chen, Aktas, Khokar, Mailis, Thomson, Peacock, Reed.

Wide-field multiphoton imaging in scattering media (TRAFIX), #10882-49. Escobet-Montalban et al. including Andrews.


A quantum light-emitting diode for the standard telecom window around 1550 nm, #10933-16. Müller et al. including Heffernan.

UV laser-written waveguide devices for all optical quantum information processing (Invited Paper), #10923-61. Smith.


Generation and amplification of an LG01 laser with a thermally-guiding fiber-rod, #10896-44. Jefferson-Brain, Liu, Shardlow, Clarkson.

High power 1726 nm operation of a thulium fiber laser pumped in-band by an erbium-only fiber laser, #10896-23. Burns, Shardlow, Barua, Jefferson-Brain, Sahu, Clarkson.

Image-based monitoring of high-precision laser machining via a convolutional neural network, #10906-35. Mills, Heath, Grant-Jacob, Xie, Mackay, Eason.