Hybrid Conference
Canterbury
18-19 September 2024

Programme

Wednesday 18th September

Opening Ceremony:

9.00 -9.15 Prof. Adrian Podoleanu

Chair: Prof. Adrian Podoleanu	
9.15-10.00	**Stuart Gibson, Fangliang Bai, University of Kent, Invited** *"AI-Driven Raman Spectrum Analysis for Database Matching and Prospects for OCT Data Fusion"* Fangliang Bai (Visionmetric Ltd), Jon Tandy (School of Chemistry and Forensic Science, University of Kent), Stuart Gibson (School of Physics and Astronomy, University of Kent).
10.00-10.15	**ESR 12 Sacha Grelet** "*Shot-noise limited, 10 MHz swept-source optical coherence tomography for retinal imaging*" Authors: Sacha Grelet, Alejandro Martinez Jimenez, Patrick B. Montague, Adrian Podoleanu
10.15-10.30	**ESR 13 Alejandro Martinez Jimenez** " *Downconversion master slave OCT with a bidirectional sweeping laser*" Authors: Alejandro Martínez Jiménez, Ramona Cernat, Adrian Bradu, Rene Riha, Esteban Andres Proano Grijalva, Bjorn Ole Meyer, Thor Ansbaek, Kresten Yvind, Adrian Podoleanu

10.30 – 11.00

Chair: Dr Manuel Marques	
11.00-11.45	**Dr Chao Wang, Invited** "*Data Efficient Ultrafast Single-Pixel Optical Imaging*"
11.45-12.00	**ESR 9 Marie Klufts** “1.7 MHz Fourier domain mode locked laser at 840 nm for retinal imaging” Authors: Marie Klufts, Wolfgang Draxinger, Simon Lotz, Robert Huber
12.00-12.15	**Dr Samuel Choi, Niigata University, Japan** *"Master/slave polarization-sensitive optical coherence tomography for biological birefringence measurement"*

12.15 – 13.30

Chair: Dr Adrian Bradu	
13.30-14.30	**Dr Donna Arnold, University of Kent, Invited** "*Considering Research Ethics in Project Development, Delivery and Dissemination*"
14.30-14.45	**RA1: Dixon Sajan** *'SOA designs for MEMS-VCSEL based swept sources'* Authors: Dixon Sajan, Alexander Chamorovskiy, and Kresten Yvind
14.45-15.00	**ESR5 Masoud Payandeh** *''Long wavelength MEMS VCSEL for Swept Source OCT''*. Authors: Masoud Payandeh, Hitesh Kumar Sahoo, Arnhold Simonsen, Marika Janka, Jukka Viheriälä, Mircea Guina, Elizaveta Semenova, and Kresten Yvind
15.00-15.15	**ESR 14 Rene Riha** *"Dispersion-tuned mode-locked swept lasers and multi-harmonic mode-locking"* Authors: Rene Riha and Adrian Podoleanu
15.15-15.30	**ESR2 Ifte Khairul Alam Bhuiyan** *"Development of superluminescent diodes emitting around 2 μm wavelength"* Ifte Khairul Alam Bhuiyan*, Jukka Viheriäla, Mircea Guina

15.30 – 16.00

Chair: Prof. Adrian Podoleanu	
16.00-16.30	**Radu Boitor, Nottingham University, UK, invited** *"Selective-sampling Raman spectroscopy for ex vivo assessment of surgical margins in cancer surgery"*
16.30-16.45	**ESR 10 Muhammad Asim Bashir** "Expanding the Wavelength Range of FDML lasers: Recent developments and challenges" Authors: A. Bashir, S. Lotz, M. Klufts, and R. Huber
16.45-17.00	**RA2: Syed Ameer Hamza Zaidi** '*Investigating Phase and Amplitude Noise in OCT A-Scans of MEMS VCSEL-Based OCT Systems*' Authors: Syed Ameer Hamza Zaidi ,Thor Ansbæk and Kresten Yvind
17.00-17.15	**RA3: Syed Farhan Ali Naqvi** *"Material parameters study of InGaAs/GaAs-based 1060nm SG-DBR laser for optical coherence tomography"* Authors : Syed Farhan Ali Naqvi, Konstantin Morozov, Alexey Gubenko
17.15-17.30	**ESR 7 Irene Lamoso** *"Optimisation of MEMS Fabry-Pérot filters for SS-OCT at 1550 nm"* Authors: Irene Rodriguez Lamoso and Sascha Preu

Thursday 19th September

Chair: Dr Michael Hughes	
9.00-9.45	**Danielle Harper, Cambridge University, Invited** "*Finding Wally: Uncovering tissue microstructure with polarisation-sensitive optical coherence tomography*"
9.45-10.00	**ESR 8 Mojdeh Vakili** *" Electrically Tunable Free Space Lithium Niobate Optical Filters"* Authors: Mojdeh Vakili, Prof. Sascha Preu
10.00-10.15	**Hal Dorrington** *"Miniature optical assembly solutions for fibre-bundle OCT"*
10.15-10.30	**Lucy Abbott** "*Developing Balanced Detection Visible-Light OCT"* Authors: Lucy Abbott, Adrian Bradu, Adrian Podoleanu

10.30 – 11.00

Chair: Dr Adrian Bradu	
11.00-11.45	**Marco Santopietro, University of Kent, Invited** *"AI applications for OCT images processing and classification"*
11.45-12.00	**Dr Radu-Florin Stancu:** **"***Ultra-small Diameter Fibre Based Sensor for Robotic Surgery"*
12.00-12.15	**ESR15 Gopika Venugopal** "*Full Field Swept Source OCT with a Commercial Grade Camera and an In-House Developed Swept Source"* Authors: Gopika Venugopal, Adrian Fernandez Uceda, Manuel Marques, George Dobre, Adrian Podoleanu

12.15 – 13.30

Chair: Dr Michael Hughes	
13.30-14.15	**Prof. Gurprit Lall, University of Kent, Invited** *"Developing your career in research and beyond"*
14.15-15.00	**Manuel Marques, University of Kent, Invited** *"Questioned document examination using optical coherence tomography, and other forensic science applications"*
15.00-15.15	**Mr. Yuanli Yue** *"Photonic Time-stretched Reservoir Computing using an All-optical Input Mask"*
15.15-15.30	**Mr. Shouju Liu** *"Small displacements sensing via enhanced temporal measurement"*

15.30 – 16.00

Chair: Dr Manuel Marques	
16.00-16.45	**Bettina Heise, RECENDT Research Center for Non Destructive Testing GmbH, Austria, Invited** *"Subsurface imaging and sensing by OCT and THz – perspectives at RECENDT"*
16.45-17.00	**ESR 4: Esteban Andres Proano Grijalva** *"High Contrast Grating Optimization for Electrically Pumped 1060 nm MEMS-VCSELs"* Authors: E.A. Proano Grijalva*a, M. Mikulicz b, A. Jensenc, E. Semenovaa, T. Ansbækc, K. Yvinda,c
17.00-17.15	**ESR 1 Andrei Anikeev** **"***Master Oscillator Power Amplifier (MOPA) devices based on 1060 nm SLD: past, present and future ideas".* Authors: Andrei Anikeev, Alexander Chamorovskiy, Vladimir Shidlovski.
17.15-17.30	**Julien Camard** *"Dynamic OCT imaging of early-stage embryos"*

Closing Ceremony:

17.30 Prof. Adrian Podoleanu