

Workshop on supercontinuum sources and bioimaging applications such as OCT

Venue: Room 110, University of Kent, School of Physical Sciences, Canterbury, UK

Thursday 29th September

TIME	TOPIC	SPEAKER
09:00-09:15	Welcome, Presentation on UBAPHODESA European Industrial Doctorate	Adrian Podoleanu , UoKent, Peter Moselund, NKT, Lasse Leick, NKT
	Master slave OCT	
9:15 – 9:30	Master Slave – a unique modality for real time presentation of images in Optical Coherence Tomography	A. Bradu , S. Rivet, K. Kapinchev, F. Barnes, A. Podoleanu, UoKent
9:30 – 9:45	Software for MS OCT and hand held Master – Slave OCT	Manuel Marques , Ramona Cernat, Adrian Bradu
9:45 – 10:00	Ultra High Resolution using complex Master Slave OCT	Michael Maria , Adrian Bradu, Niels M. Israelsen, Manuel Marques, Sylvain Rivet, Thomas Feuchter, Peter Moselund, Lasse Leick, Adrian Podoleanu, NKT, UoK
10:00- 10.30	Coffee break	
	Imaging the eye 1	
10:30-11:00	Current and future applications of OCT in ophthalmology	Pearse Keane
11:00 – 11:30	Retinal Vessel Architecture and Blood Flow in Multiple Sclerosis	Adam M Dubis ¹ , Ashwini Nandoskar ² , Angelos Kalitzeos ¹ , Paveen Patel ¹ , Joseph Carroll ³ , Alfredo Dubra ³ , Richard Nicholas ² , Jeremy Chataway ² , Michel Michaelides ¹ and John Greenwood ¹ , ¹ Moorfields Eye Hospital and UCL-Institute of Ophthalmology, ² Imperial College NHS Healthcare Trust, ³ Medical College of Wisconsin Departments of Ophthalmology; Cell Biology, Neurobiology and Anatomy; Biophysics
	Optoacoustics	
11:30- 12:00	Biomedical photoacoustic imaging: physics, technology and applications	Paul Beard , Department of Medical Physics and Biomedical Engineering, UCL
12:00- 12:15	All fiber-based supercontinuum source suitable for multispectral photoacoustic microscopy and OCT.	Magalie Bondu , (NKT & UoK), Xiao Shu (Northwestern University), Peter M Moselund (NKT), Lasse Leick (NKT), Hao

		Zhang (Northwestern University) and Adrian Podoleanu (UoK)
12:15 – 12:30	High speed photoacoustic microscopy using a fibre optic sensor	Allen Thomas , Department of Medical Physics and Biomedical Engineering, UCL
12:30-13:45	Lunch break	
	UHR-OCT	
13:45-14:15	Presentation on ShapeOCT and LOUISE projects	Ole Bang , DTU
14:15 – 14:30	Supercontinuum based 1300 nm SD OCT for dermatology	Niels Møller Israelsen , Adrian Podoleanu, Ole Bang, DTU
14:30 – 14:45	Polarisation sensitive OCT and polarisation dependent intensity noise in supercontinuum generation	Catherine Chin , NKT/UoK Rasmus Engelsholm, DTU, Peter Moselund, NKT Thomas Feuchter, NKT Lasse Leick, NKT Ole Bang, DTU, A. Podoleanu, UoKent
	Swept sources	
14:45 – 15:00	Akinetic 1 MHz swept source at 850 nm	Radu Stancu, Florin Toadere, Adrian Podoleanu
15:00 – 15:15	Geometric and Radiometric Vignetting associated with a 72-Facet, off-Axis, Polygon Mirror for Swept Source Optical Coherence Tomography (SS-OCT)	Michael Everson ¹ , Virgil-Florin Duma ² , George Dobre ³ mje23@kent.ac.uk , g.dobre@kent.ac.uk ¹ Applied Optics Group (AOG), School of Physical Sciences (SPS), University of Kent, Canterbury, CT2 7NH, UK ² 3OM Optomechatronics Group, "Aurel Vlaicu" University of Arad, 77 Revolutiei Ave, Arad 310130, Romania. duma.virgil@osamember.org <i>Doctoral School, Polytechnic University of Timisoara, 1 Mihai Viteazu Ave, Timisoara, 300222, Romania</i> <i>School of Physics, West University of Timisoara, 4 Vasile Parvan Ave, Timisoara, 300223, Romania</i>
15:15-16:00	Break	
	Endoscopy and robotics	
16:00 – 16:15	Rebot project	Adrian Bradu, Micahel Hughes, Guang-Zhong Yang, Adrian Podoleanu
16:15 – 16.45	Towards robot-assisted endomicroscopy	M Hughes , Hamlyn Robotics Centre
16:45 – 17:00	Fluorescence endomicroscopy of breast cancer – optical systems and clinical applications	Khushi Vyas ^a , Michael Hughes ^a , Dan Leff ^b and Guang-Zhong Yang ^{a, a} Imperial College London, Hamlyn Centre for Robotic Surgery, Institute of Global Health Innovation, ^b St Mary's Hospital, Academic Surgical Unit

17:00 – 17:30	Polarimetric rigid endoscopes for tissue imaging	Ji Qi , Daniel Elson, Hamlyn Centre for Robotic Surgery, Institute of Global Health Innovation, Imperial College London, Exhibition Road, London, SW7 2AZ, UK, Department of Surgery and Cancer, Imperial College London, Exhibition Road, London, SW7 2AZ, UK
18:30	Get together dinner	

Friday 30th September

TIME	TOPIC	SPEAKER
	Signal conditioning	
09:15 – 9:45	Computational Ghost Imaging: Imaging on a Shoestring	Stuart J. Gibson , Fangliang Bai, David M. Pickup, UoKent
9:45 – 10:00	Fractional Fourier Transform for calibration of OCT	Mikkel Jensen , Ole Bang, DTU
10:00 – 10:15	Speckle variance for no dye angiography	Sophie Caujolle , Manuel Marques, Adrian Bradu, Thomas Feuchter, Lasse Leick, Adrian Podoleanu, NKT, UoKent
10:15- 10:45	Coffee break	
10:45 – 11:00	Fibre-compatible time-stretch microscopy using a 45-degree tilted fibre grating	Guoqing Wang , Chao Wang
11:00 – 11:15	Data-compressed time-stretch OCT	Chaitanya K Mididoddi , Chao Wang
	Optical testing and interrogation	
11:15 – 11:30	Spectroscopic AO-SLO	Felix Fleischhauer , Thomas Feuchter, Peter Moselund, UoK/NKT
11:30 – 11:45	Optothermal imaging	Yong Hu , George Dobre, Adrian Bradu, Adrian Podoleanu, UoK
	Microscopy	
11:45 – 12:00	Imaging and manipulating the molecules of life at the molecular level	Jingyu Wang , Jamie Barnett, Alessio Inchingolo, Luke Springall and Neil Kad, UoKent
12:00 - 13:30	Lunch break	
	Imaging the eye 2	
13:30 – 14:00	Adaptive optics – clinical findings	Ranjan Rajendram , Moorfields Eye Hospital and IoO Michael Michaelides, Joseph Carroll, Medical College of Wisconsin, Department of Ophthalmology

14:00 – 14:30	Retinal decoding using a high powered super continuum light source.	Catherine Chin, Lasse Leick, Adrian Podoleanu, Gurprit S Lall
14:30 – 15:00	Watching the retina breath: imaging mitochondria activity and metabolism in vivo	Pardis Kaynezhad, Ilias Tachtsidis and Glen Jeffery , UCL Institute of Ophthalmology and Biomed Engineering
15:00 - 15:30	Coffee Break	
	Imaging the ear	
15:30 – 16:00	From OCTiLarynx to OCTiEar: An Eye in to the Ear.	Taran Tatla , Northwick Park Hospital, London
	General skills	
16:00 – 17:00	Patenting - is it worth it?	Gary Robinson , Senior Commercialisation Manager, University of Kent
	End of the workshop	