

# Lasers for Science Facility / Artemis User Meeting

St Catherine's College, Oxford  
5<sup>th</sup>-7<sup>th</sup> September 2017

## PROGRAMME

TUESDAY 5<sup>TH</sup> SEPTEMBER

12:00-13:00 **REGISTRATION**

13:00	<b>LUNCH</b>
14:00	<i>Welcome and introduction</i>

**Session 1** Chair: Dr David Clarke (STFC)

14:30	<b>Keynote Lecture – Dr Susan Quinn, University College Dublin</b> <i>Ultrafast infrared studies of DNA, a journey through time</i>
15:15	<b>Coffee and commercial exhibition</b>
16:15	<i>Octopus facility update – Prof Marisa Martin-Fernandez</i>
16:45	<i>Dr Alex Hargreaves – University of Leeds</i> <i>3D confocal imaging of microemulsion droplets deformed by optical traps at Octopus</i>
17:00	<i>Lindsey Bennie &amp; Aaron McCulloch – Queen's University Belfast</i> <i>Using surface plasmon resonance excitation to determine real-time sub-cellular distributions of gold nanoparticles in live cells</i>
17:15	<i>Dr Lin Wang - STFC</i> <i>Super-resolution cryo-correlative light and electron microscopy at the Octopus facility</i>
17:30	<i>Dr William Brocklesby – University of Southampton</i> <i>50 nm resolution coherent ptychographic imaging of mouse neurons in the EUV using a source based on High Harmonic Generation</i>
17:45	<b>SESSION ENDS</b>
19:00	<b>DINNER</b>

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## WEDNESDAY 6<sup>TH</sup> SEPTEMBER

### Session 2 Chair: Dr Will Bryan (Swansea University)

09:00	<b>Keynote Lecture – Dr Ralph Ernstorfer, Fritz Haber Institute, Berlin</b> <b>Ultrafast view of electron and phonon dynamics in momentum space</b>
09:45	Dr Christopher Arrell – EPFL/PSI Ultrafast VUV and soft x-ray user facilities in Switzerland
10:00	Dr Yu Zhang – University College London State resolved transient charge transfer on h-TiO <sub>2</sub> (110) by fs time-resolved photoemission
10:15	Dr Federico Cilento - Sincrotrone Trieste Understanding the ultrafast dynamics in copper oxides
10:30	<b>COFFEE and Exhibition</b>

### Session 3 Chair: Professor Stan Botchway (STFC)

11:30	Artemis and ULTRA facility updates – Prof Mike Towrie and Dr Emma Springate
12:00	Dr Igor Sazanovich – STFC Kerr-gated Raman facility development
12:15	Dr Gaia Neri – University of Liverpool Investigating CO <sub>2</sub> reduction intermediates with in-situ SFG spectroelectrochemistry
12:30	Professor John Kelly – Trinity College Dublin TRIR studies of DNA-binding cationic porphyrins in solution and in HeLa cells
12:45	Dr Alessia Candeo – STFC Light sheet microscopy
13:00	<b>LUNCH</b>

### Session 4 Chair: Professor Mike Towrie (STFC)

14:00	<b>Keynote Lecture - Professor Francis Pope - University of Birmingham</b> <b>Measurement of aerosol viscosity</b>
14:45	Dr Theo Keane – University of Sheffield Ultrafast vibrational control of electron transfer in the excited state
15:00	Dr Jason Lynam – University of York Using ultrafast spectroscopy to unveil the key steps in manganese-promoted carbon-carbon bond formation
15:15	Professor Christine Cardin – University of Reading Exciting results with ruthenium-DNA complexes by combining X-ray crystallography and ultrafast spectroscopy
15:30	<b>COFFEE and Exhibition</b>

16:00	Breakout feedback sessions for PIs Social time for delegates (punting)
19:00	<b>DINNER, Poster Parade and Poster Session</b>

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## THURSDAY 7<sup>th</sup> SEPTEMBER

### Session 5 Chair: Dr Emma Springate (STFC)

09:30	Dr Paul Donaldson – STFC <i>Applying ultrafast vibrational spectroscopy to reveal mechanisms of proton transfer in protic ionic liquids</i>
09:45	Professor John Marangos – Imperial College <i>Soft X-ray isolated sub-fs pulses for attosecond science</i>
10:00	Dr Will Bryan – Swansea University <i>Applications of femtosecond transmission electron microscopy</i>
10:15	Professor Mike George – University of Nottingham <i>Towards Time-resolved XAFS</i>
10:30	<b>COFFEE</b>

### Session 6 Chair: Professor Marisa Martin-Fernandez (STFC)

11:00	<b>Keynote Lecture – Prof Marc Vrakking, Max Born Institute, Berlin</b> <b><i>The many benefits of High-Harmonic Radiation</i></b>
11:45	Dr Joseph McKenna – Oxford Brookes University <i>Connecting the dots: Single molecule imaging of membrane bound plant pathogen receptors and downstream signalling proteins</i>
12:00	Dr Verena Kriechbaumer – Oxford Brookes University <i>Protein-protein interactions in plant auxin biosynthesis</i>
12:15	Dr Natalia Fili – University of Kent <i>Dissecting the Regulation and Function of Myosin VI in the Nucleus</i>
12:30	Dr Yukti Hari-Gupta – University of Kent <i>Superresolution imaging of nuclear actomyosin</i>
12:45	Dr Jorge Bernardino de la Serna – STFC <i>Well-characterised time-gated detector photon flux resolves the ultrastructure of DNA nuclear bodies</i>
13:00	<b>LUNCH</b>

### Session 7

14:00	Lucy Minnes – University of Strathclyde <i>Quantifying protein secondary structure changes with 2DIR spectroscopy and multivariate data analysis</i>
14:15	Robby Fritzsich – University of Strathclyde <i>Utilising Ultrafast 2D-IR Spectroscopy and Multivariate Analysis Tools to Unravel DNA-Ligand Interactions</i>
14:30	William Kendrick – University of Oxford <i>Exploring infra-red active vibrations and anti-resonances in the radical cations of porphyrin oligomer molecular wires</i>
14:45	<b>Prizes and Close of Meeting</b>

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