SU2P *[ĕs ū tōō pē]: an innovative bridging project connecting Scottish and Stanford Universities; an industry-academic interaction; entrepreneurial activity in photonics*

The second SU2P Solid-State Lasers and Nonlinear Optics Theme Workshop

Monday 25th June 2012, 9.00 - 15.00

Lecture theatre 408, Rankine Building, School of Engineering,
University of Glasgow, Oakfield Avenue, Glasgow, G12 8LT

Taking the format of short, high-impact talks, this workshop aims to identify critical problems in the area of Solid-State Lasers and Nonlinear Optics which could be addressed by collaborations between SU2P partners. Coffee and lunch breaks are scheduled with ample time to allow networking and follow-up of topics introduced in the presentation sessions.
There will be two forms of presentation

- Academic staff and industrial researchers will deliver 5-minute presentations, with an additional 2-minutes provided for questions. Presentations will highlight a promising scientific or technical capability, or alternatively will define an important unsolved problem in the theme area.
- Students and post-doctoral researchers will display posters during the coffee and lunch breaks

Agenda

9.00	Registration and Coffee	
9.30	Keynote: Professor Majid Ebrahim-Zadeh, ICFO - Institut de Ciències Fotòniques "Nonlinear Photonics: After 50 Years"	
10.00	Session 1: Chair Derryck Reid (7-minute presentations)	
Dr Thorsten Ackemann	University of Strathclyde	Heat sinking of THz emitters
Prof David Hutchings	University of Glasgow	A Semiconductor Laser with Monolithically Integrated Dynamic Polarisation Control
Dr Walter Lubeigt	University of Strathclyde	Multi-beam Q-switched solid-state laser
Dr Tjalling de Boer	Coherent	
Dr Alan Kemp	University of Strathclyde	Towards Diamond Lasers
Prof Derryck Reid	Heriot Watt University	Solid-state, fibre-laser and OPO-based femtosecond sources and applications
Dr Gordon Robertson	Msquared	Hyperspectral Imager based on Periodically Poled Lithium Niobate OPO
11.00	1 minute poster presentations	
11.15	Coffee and posters	
12.00	Session 2/	

12.00 Session 2: Chair Iain Ross (7-minute presentations)		
Prof Howard Baker	Heriot Watt University	Techniques for enhancing the performance of a 600W Yb:YAG planar waveguide laser using custom laser machined optics.
Dr David Stothard	University of St Andrews	Single Frequency, Continuous-Wave Intracavity Optical Parametric Oscillators
Mr David Jackson	Thales	
Prof Richard De La Rue	University of Glasgow	Graphene-based non-linear photonics
Dr Ian Thomson	SELEX	
Prof Charles Ironside	University of Glasgow	Photonic integration for atomic clocks, magnetometers and frequency standards
13.00 Lunch, Networking and posters		
15.00 Close		

Majid Ebrahim-Zadeh
ICFO-Institute of Photonic Sciences, Barcelona, Spain
Nonlinear Photonics: After 50 Years

Since its birth 50 years ago, Nonlinear Optics has had a profound impact on the field of Photonics. The discovery, understanding and manipulation of nonlinear optical phenomena have led to major scientific and technological breakthroughs, and nonlinear processes have become vital enabling tools for a multitude of disciplines, not only in Photonics, but also in the broader fields of knowledge in physics, chemistry, biology, and medicine.

In this talk, I will provide an overview of some of the key advances in Nonlinear Photonics, with emphasis on the latest developments and innovations in parametric frequency conversion technology. I will also briefly address some of the main applications as well as commercial realization of nonlinear frequency conversion and parametric sources.

POSTERS

Mr Gerald Bonner	University of Strathclyde	Thermal lensing in a BaWO4 Raman laser
Miss Cristtel Ramirez	Heriot Watt University	Femtosecond pulses at 50-W average power from an Yb:YAG planar waveguide amplifier seeded by an Yb:KYW oscillator
Miss Teresa Ferreiro	Heriot Watt University	Mode Filtering of a Carrier Envelope Offset Frequency Stabilized Optical Parametric Oscillator
Dr Zhaowei Zhang	Heriot Watt University	Asynchronous mid-infrared broadband optical parametric oscillator for dual-comb spectroscopy
Mr Richard McCracken	Heriot Watt University	Broadband phase coherence between an ultrafast laser and an OPO using lock-to-zero CEO stabilization
Mr Thomas Schratwieser	Heriot Watt University	Supercontinuum Generation with a Highly-Efficient 1-GHz Repetition-Frequency Femtosecond Yb:KYW Laser
Dr Greg Norris	University of Strathclyde	Multiphoton imaging: beyond the capabilities of the Ti:Sapphire laser through nonlinear frequency conversion
Mr Scott Campbell	University of Strathclyde	Characterisation of cw THz emitters
Devnath Dhirhe	University of Glasgow	Polarization control of a quantum cascade laser
Marco Zanola	University of Glasgow	Photonic Integrated devices for tunable mm wave generation