

Chairman's Report

Dear Member

Welcome to latest ISAT Newsletter. It is my pleasant duty to record our thanks to outgoing committee members, which on this occasion includes Prof Danny McStay as well as to welcome a new member, Dr Sillas Hadjiloucas of Reading University, who has long supported the ISAT group through meeting and conference attendance, as well as a co-opted student member, Mr Andrew Tickle from Liverpool University.

Since our last Newsletter, we have continued to maintain and indeed expand our programme of meetings, putting on two successful half-day meetings: a new meeting last June in the area of Terahertz Technology, organised by Dr Hadjiloucas, which drew nearly 40 participants, as well as the latest meeting in our annual series on Biophotonics: Technology and Applications, organised by our Honorary Secretary Dr Gail McConnell in early December. We are very pleased to note the sponsorship received for the latter meeting, with the same exhibitors from last year, indicating substantial satisfaction with this programme, venue and arrangements. The group was heavily involved in Photon08 at Heriot-Watt University in August, contributing several sessions and invited speakers to the overall programme, as well as participation in charring several sessions throughout the conference.

The coming year sees a further widening of our programme, with new meetings planned in the area of Astronomical Instrumentation and Subsea Instrumentation, along with the latest meeting in our annual series on Optical Sensors for Physiological Measurement. If you have any ideas for meetings that you would like to see, then please contact either Gail or me to discuss this. Planning for our biennial conference, Sensors and Their Applications, is in an advanced stage, and please reserve the dates 5-8th October 2009 in your diary. The conference will be co-located with Optical Fiber Sensors 20, at Heriot-Watt University, and this already promises to be an excellent combined event.

I am also pleased to announce that Dr Thangavel Thevar has taken over as Editor of the Newsletter, and our thanks go to him for production of this issue.

Prof. Andy Augousti
Chair, ISAT Group

Honorary Secretary's Report

The previous few months have been extremely successful and productive and it has been enjoyable to meet with so many of our members at ISAT events.

Meetings and conferences

Since our last newsletter, the ISAT group has held and contributed towards a number of meetings and conferences. Recent meetings have included:

- Optical Sensors in Physiological Measurements, IOP, London, 19th May 2008
- Terahertz Sensing, IOP, London, 30th June 2008
- Biophotonics: Technology & Applications III, IOP, London, 8th December 2008.

We also have plans for future meetings that include

- Subsea Instrumentation (6th March 2009)
- Astronomical Instrumentation (22nd April 2009)
- Optical Sensors in Physiological Measurements (scheduled May 2009)
- Terahertz Sensing (scheduled June 2009)
- Sensors & their Applications (co-localised with the Optical Fiber Sensors Conference, October 2009)
- Biophotonics: Technology & Applications (scheduled November 2009).

If you have any ideas for future meetings that would be of interest to the members of ISAT, please contact myself or Andy.

MyIOP

The IOP has recently launched MyIOP, which is a networking site aimed at providing an up-to-the-minute means for all those interested in physics to communicate with one another. The new network allows members to interact with one another instantly and easily via the internet across all areas of interest on any topic that they choose, whether it is news from the Large Hadron Collider or the outcome of the Wakeham Report – or activities within the ISAT Group! Members can upload messages, links and documents as well as videos and audio recordings to build a library of information and a valuable shared resource on physics topics, career development, conferences and events. Members of the ISAT Group are already members of the ISAT group within MyIOP and can login through the IOP portal at <http://members.iop.org/login.asp>. We therefore look forward to engaging with you through MyIOP in the

future and Andy and I would welcome any comments or suggestions on the ISAT Group resources within MyIOP.

Research student conference fund (RSCF)

For 2009, the IOP has continued the centralised bursary process for students to apply for funding to attend research conferences. Research students who are members of the IOP may apply for up to £250 during the course of their PhD to cover part of the expenses incurred in attending a conference with the remainder to be covered by other sources. Applications are considered on a quarterly basis and should reach the IOP by: 1 March, 1 June, 1 September or 1 December. A decision will be made within eight weeks of the closing date, so the deadline chosen should be at least *three months before your event*. More details on how to apply and an application form are available at <http://www.iop.org/> following the links:- About Us → The Institute of Physics → Support and Grants → Research Student Conference Fund.

Newsletter contributions

The ISAT newsletter serves to communicate research ideas, events and activities within the broad remit of ISAT and this reflects the interests of the ISAT Group members. If you wish to contribute towards the newsletter, or you have interests that you would like to have covered in forthcoming issues, please contact myself or Andy.

Dr Gail McConnell

Hon Sec and Treasurer, ISAT Group

Recent Events

Terahertz Sensing meeting

This half-day meeting organised by Dr Hadjiloucas took place on 30th June 2008 at the Institute of Physics, London. It was attended by about 40 delegates presenting THz activities across the UK. The afternoon was packed with 13 presentations ranging from finite element analysis on low loss THz waveguides using a vectorial H-field formulation to surface plasma probes for determining the THz optical properties of simple semiconductor structures.

Following the huge success of this inaugural meeting, the ISAT committee has decided to make this meeting a yearly event. The next meeting is scheduled for June 2009.

Photon 08

Photon 08 took place from 26th-29th August 2008 at the Edinburgh Conference Centre, Heriot-Watt University. This meeting, attended by over 500 participants, incorporated two stand-alone ISAT sessions, three joint sessions between the ISAT and Optical Groups and ISAT also contributed 3 invited speakers. The session involving Optical Fibre Sensors included presentations from Heriot-Watt University and University of Manchester on gas sensing and novel optical approaches to sensing and spectroscopy by the University of Strathclyde and University of Southampton. Fibre-optic systems were also described by a number of groups, with innovations in high density optical interconnects presented by Qinetiq and studies of optical fibre types for laser-induced ignition provided by the University of Liverpool.



The first ISAT session during Photon 08.

3rd Annual meeting - Biophotonics: Technology and Applications

On 8th December 2008, Dr Gail McConnell and Professor Andy Augousti organised the 3rd Biophotonics: Technology and Applications meeting held at the Institute of Physics, London. The meeting was organised on behalf of the IOP Instrument Science and Technology Group and was co-sponsored by the IOP Optical Group and IOP Medical Physics Group. Furthermore, Elforlight, Olympus UK, Coherent, Spectra-Physics and Michelson Diagnostics provided financial support for the meeting and table-top demonstrations on the latest biophotonics instrumentation.

Around 50 participants enjoyed 12 presentations on a diverse range of topics including optical coherence tomography, Raman spectroscopy and optical transfection.

The contents of this newsletter do not necessarily represent the views or policies of the Institute of Physics, except where explicitly stated.

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