



## Volume 38 Number 27

12th-20th July 2012

### FROM THE DIRECTOR'S OFFICE

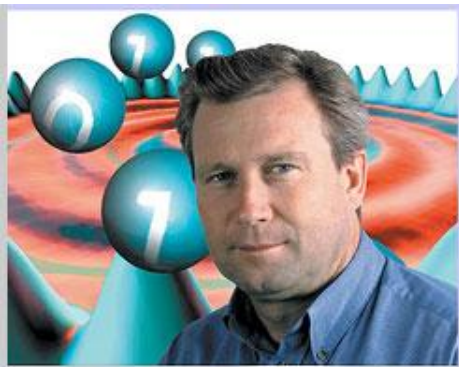
The Director will be Acting College Director for the week beginning 16 July. Please pass all paperwork to Andrea in the Director's Office.

### Deputy Director (Technology Development)

In light of the School's increasing focus on technology development and commercialisation of our fundamental research, we have created a new Deputy Director position to drive these activities. The first DD (TD) will be Professor Tim Senden of Applied Mathematics. Tim, who is Chair of the School's Innovation and Commercialisation Committee has a wealth of experience in commercialisation pathways and his key roles as DD(TD) will be to:

- help researchers to strengthen their sustainable fundamental research basis in step with the School Strategic Plan
- improve funding diversity through deeper industrial relationships and Centres
- help to motivate all staff and students to innovate in non-traditional areas
- initiate cross-School technology development

### DIRECTOR'S COLLOQUIUM



### **Engineered Quantum Systems**

**Professor Gerard Milburn**

*Centre for Engineered Quantum Systems  
The University of Queensland*

Prof. Milburn explored how quantum coherence might be engineered to make new kinds of devices. Interestingly, this exploration gives new urgency to old fundamental questions about physics. For example, the simple distinction between classical objects as "big" and quantum objects as "small", needs refinement as larger objects are engineered to have quantum coherence. For example, that stalwart of engineering, the control system, needs rethinking when the controller is quantum mechanical.

He reminded us that just as there is "plenty of room at the bottom" there is also plenty of energy at the bottom, if we can engineer its capture. He gave the example of photosynthetic energy transport, in which many suspect a key role for quantum coherence. Research on this has already suggested how energy transport might be improved in nano-mechanical devices.

### SCHOOL SEMINAR

***Toward Integrated Mid-infrared Photonic Devices: Material Sciences and Technical Challenges***

**Dr. Khu Vu**

Laser Physics Centre  
RSPE, ANU

**4pm, Thursday 19 July**

Leonard Huxley Lecture Theatre  
Building 56, Mills Road

The event details and abstract can be found on the RSPE website here:

<http://physics.anu.edu.au/events.php?EventID=67>

### DEPARTMENTAL SEMINARS

***NONLINEAR PHYSICS CENTER SEMINAR***

Friday, 27 July at 11am

Oliphant Bldg Seminar Room

**Prof. Andrea Fratolocchi, PhD**

Faculty of Electrical Engineering; Applied Mathematics and Computational Science

King Abdullah University of Science and Technology (KAUST), Kingdom of Saudi Arabia

**PRIMALIGHT: a tribute to disorder**

\*All welcome\*

### WELCOME

Welcome back Martina Landsmann, who will now be working with Applied Maths

### **PRL**

Welcomes back Dr Clive Michael who has taken on a Research Fellowship with Prof John Howard. Clive graduated with a PhD in RSPE back in 2003 and he has returned after 8 years overseas working in Japan, and the UK. Clive's office is OL 4.30

Also welcomes, Dr Stuart Hudson from Princeton Plasma Physics Laboratory who is working with the Plasma Theory and Modelling group from July 13 - August 3

### STAFF MOVEMENTS

### **PRL**

Prof. John Howard will be away from 16 July to 19 July. He will return on 20 July. Dr Boyd Blackwell will be acting Head of Department during Prof. Howard's absence.



## **Facilities and Services Office**

Graeme Cornish is away 9 -20th July, during his absence, Craig Young will be acting in Graeme's position.

## **Electronic Materials Engineering**

Mark Ridgway is absent until 30 July and Dr Hoe Tan will be Acting Head of Department during his absence.

## **Department Nuclear Physics**

Prof Keith Fifield will be overseas from 7 July to 28 August. He will attend the 21<sup>st</sup> Radiocarbon Conference, and act as a consultant for establishing a plutonium AMS capability at the new AMS facility at the University of Cologne, France. In addition, he will visit the University of Vienna, ETH – Zurich, the University of Naples, and the University of Washington for collaborative research and discussions.

Dr Anton Wallner will overseas 5 – 27 July. He will also be attending the 21<sup>st</sup> Radiocarbon Conference, University of Cologne, France. He will then visit the University of Vienna, Austria, for AMS measurements/collaborative research.

## **EDUCATION REPORT**

Semester 2 starts on Monday 23rd July. Lecturers are reminded that Wattle sites need to be prepared using the new version of Moodle (accessed via <http://wattle.anu.edu.au> as usual). Sites will be available to students from next week so please make sure they're ready!

## **OHS**

### **Personal Protective Equipment - PPE**

Where a University OHS Procedure, Risk Assessment, Safe Work Method Statement or Job Safety Analysis requires a staff member to wear personal protective equipment, the Budget Unit of the University will supply the equipment. That equipment must be fit for purpose.

Staff members should consult their supervisor if the protective equipment or clothing is uncomfortable or does not fit properly.

For more information on PPE, please consult the ANU procedure.

### **PRIVATELY-OWNED ELECTRICAL APPLIANCES**

The use of privately-owned electrical appliances at the ANU is discouraged. Any personal electrical equipment brought to the ANU needs to be inspected, tested and tagged. The School Electronics Unit can assist if appliances are taken to them, and will advise the time interval for re-testing.

**Note: This applies to personal heaters.**

## **Australian Institute of Physics Congress**

The 20th Australian Institute of Physics Congress will be held at the University of New South Wales, 9-13 December 2012. <http://www.aip2012.org.au/>

The Australian Institute of Physics Congress incorporating the 37th Australian Conference on Optical Fibre Technology

will be the biggest and most diverse scientific meeting of the Australian physics calendar in 2012. The AIP/ACOFT Congress attracts many of Australia's finest physicists plus a number of prominent overseas attendees.

The four day program includes plenary lectures, parallel sessions, an exhibition, public lecture, industry forum, welcome reception and the option of attending the Congress dinner, all of which provide a variety of settings for delegates to increase and update their knowledge, catch up with old friends and colleagues and create valuable networks.

## **Extended Abstract AIP Submissions**

**CALL FOR ABSTRACT SUBMISSIONS CLOSING NOW  
EXTENDED TO 16 JULY 2012**

Submissions are invited for Poster Presentations and Contributed Talks for the 20th Australian Institute of Physics Congress incorporating the 37th Australian Conference on Optical Fibre Technology.

The Program Committee solicits extended abstracts and papers reporting new research findings in any area of Physics. This may include fundamental or applied discoveries, or applications of new technology to physics problems. The ACOFT Program Committee solicits papers in any area of guided wave optics.

Extended abstracts and papers should be submitted by the presenting author. Only one author per submission can be nominated as the 'presenting author'.

Please note that all presenters (Oral and Poster) must register for the Congress and pay the appropriate registration fee by the early bird deadline 12 October 2012. Extended abstracts and papers will be withdrawn if the authors are not registered by this time.

AIP Congress authors have the option of submitting a full paper for peer review following the acceptance of their extended abstract.

### **Registration and abstract submission is now open.**

Please support this major event of the Australian Physics community.

Your local Scientific Program Committee representatives are: Steve Gibson (Atomic and Molecular Physics) and Tibor Kibedi (Nuclear).

## **Accommodation needed for visiting Student.**

EME has a visiting student that needs accommodation from 19/7/12 to 25/8/12. If anyone has a room available to rent can you please contact Julie Arnold - X50020.

## **From the Friday Night Social Club**

Volunteers are wanted to help run, support and coordinate the Social Club. Please contact Patrick Parkinson if you can help.