



## Research School of Physics and Engineering

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### FROM THE DIRECTOR'S OFFICE

Thank you to all those that contributed to the ANU Open Day last Saturday 24 August, it was a huge success! Special thanks go to John Close, Andrew Papworth, Cormac Corr, Vanessa Robins, Adrian Sheppard, Mika Kohonnen, Matt Sellars, Greg Lane, Maarten Vos, Frank Mills, Craig Savage, Joe Hope, and students Daniel, Sara, Ethan and John.

### FOUNDER'S DAY

This year Founder's Day will be held on Friday 18 October – it is Quantum Science's turn to organise the catering.

As is the normal practice, we will be having a BBQ lunch after the morning talks. I would be grateful if you could provide names of two people from your Department to assist with the BBQ and associated tasks. Could you please get the names to Laura Walmsley by Friday 13 September.

Please add this to your diary.

### DIRECTOR'S COLLOQUIUM



At the September Director's Colloquium staff and students were presented with a first-hand experimental perspective of the discovery of the Higgs Boson from **Professor Elisabetta Barberio**. Her talk 'The Higgs Boson at the Large Hadron Collider' attracted a large crowd to hear the critical role played by the ATLAS group in the recent experiments at CERN. These experiments attracted worldwide attention last year when they presented evidence confirming the existence of the Higgs boson. This so-called "God particle" arises out of the Standard Model of particle physics, and is responsible for the mass of fundamental particles.

### SCHOOL SEMINAR

#### Trapping energy traps: mass spectrometry of nuclear isomers

**Dr Matthew Reed**

Nuclear Physics, RSPE, ANU

**4pm, Thursday 19 September**

Leonard Huxley Lecture Theatre

Building 56, Mills Road

*Refreshments will be held in the Tea Room after the Seminar (around 5pm)*

**ALL WELCOME**

### CONGRATULATIONS

The Research School of Physics and Engineering warmly congratulates **Dr Paul Altin** on being awarded the ANU J G Crawford Prize for 2012 in recognition of his outstanding PhD thesis. Paul completed his PhD in the Quantum Sensors group in the Department of Quantum Science under the supervision of Nick Robins.

His thesis '*The role of interactions in interferometry with Bose-condensed atoms*' joins a proud history of RSPE winners of this prize. Congratulations Paul!

### THE DIRECTOR'S AWARD

#### **Applications are now open for the 2013 Director's award for outstanding service to the school**

Each year there are so many people who contribute to RSPE to make it a success. The Director's awards aim to acknowledge and thank those who have gone above and beyond.

All members of RSPE are eligible to be nominated, including staff, students and visiting fellows. Nominations are due to the Director's Office by 5pm **Monday 16 September 2013**. Further information, including the Terms of Reference can be found at <http://physics.anu.edu.au/intranet/directors-award.php>

### PHYSICS EDUCATION CENTRE REPORT

The first year undergraduate text "Physics" published by Cengage Learning Australia has received an Australian Publishers Association Award. In making the award, the judges cited pedagogical structure, design and international and regional case studies that were included in the text. Two of the four authors were **Kate Wilson and Anna Wilson**. Both are well known to the RSPE community and have been strong contributors and leaders of physics education at ANU in recent years. Kate Wilson continues to contribute nationally and internationally to physics education in her position at ADFA. Similarly, **Anna Wilson** continues to make a strong contribution to physics education in her new role at the

University of Oxford. **John Love**, who was instrumental in establishing the photonics program at ANU and who continues to be active in that program, contributed case studies on the application of optical fibres to medicine. I would like to congratulate Kate, Anna, and John on this well-deserved recognition of their work.

**On Thursday 12th of September**, we will be holding the Spring Physics Education Planning Day at Mt Stromlo. This will be an all-day event where we will discuss the future of physics education at ANU. Please put this date in your calendar. The aim of the planning day is to discuss big issues facing physics education at all levels and to set direction for the coming years. The discussions will build on the discussions we held in the Autumn Planning Day in April this year. A detailed itinerary for the day has been sent to Education Coordinators in each department. Please RSVP to Laura Walmsley no later than **Thursday 5th of September** and please indicate any dietary requirements for catering purposes.

#### DEPARTMENTAL SEMINARS

##### **Nonlinear Physics Center and OSA Student Chapter Seminar**

##### **Nonlinear Waveguide Optics: Theory versus Experiment**

**Professor Roland Schiek**

University of Applied Science, Regensburg Germany

**Monday, 9 September 11:00am**

Oliphant Building Seminar Room

##### **Nuclear Physics Department**

##### **Study of reactions with the bound projectile**

**9Be**

**Dr C. Palshetkar**

Postdoctoral Fellow, Nuclear Physics Department

**11:00am Monday 16 September**

Nuclear Physics Seminar Room

#### STAFF MOVEMENTS

##### **Applied Mathematics**

**Vanessa Robins** is giving an invited talk at the Geometry and Physics of Spatially Random Systems International Conference, in Germany between 6- 16 September.

**Michael Turner** is travelling to Madrid, Paris and Doha to engage in collaborative efforts with the oil companies Repsol and Total between 7- 22 September.

**Erica Seccombe and Tim Senden** will be at the 1st annual Tomography for Scientific Advancement (ToScA) Symposium held at London's Natural History Museum. Tim will be presenting a session on the CT Lab, while Erica is a finalist in the image competition. **Vince Craig** will be acting Head while Tim is travelling.

##### **Space Plasma, Power and Propulsion Division**

**Professor Christine Charles** is an invited speaker at the AEPSE Conference in Jeju 25-30 August and at the IVC conference in Paris 8-13 September. In September she is also attending meetings at the Surrey Space Centre in Guilford, at EADS-Astrium Portsmouth in the UK and visiting collaborators at Ecole Polytechnique in Paris and at the University of Orleans.

##### **Plasma Research Laboratory**

**Dr Cormac Corr** will be away from 8 – 14 September. He will present at the 4th IEA International Workshop on Plasma Material Interaction Facilities for Fusion Research (PMIF 013), Oak Ridge National Labs, Tennessee (US).

##### **Electronic Materials Engineering**

**Dr Sudha Mokkalapati** will be attending the IEEE Photonics Conference 8-12 September in Bellevue, Seattle

**Professor Hoe Tan** will be attending the 6th International Conference on Advanced Optoelectronics and Lasers at Sudak Ukraine 8-13 September where he is an Invited Speaker. He will go onto collaboration meetings with Petronas University of Technology in Tronoh, Perak Malaysia and University of Science in Penang Malaysia, 17-22 September.

**Professor Mark Ridgway** will be absent 26-30 October. **Professor Hoe Tan** will be Acting Head in his absence.

##### **Theoretical Physics**

**Professor Mukunda Das** is invited to participate in the 17th International Conference on Recent Progress in Many-Body Theories to be held at Rostock in Germany during 9-13 September. He will give an invited talk on the Kohn Anomaly in phonon driven conventional superconductors.

##### **OHS Manager**

**Mr Anthony Hyde** will be away on LSL from 5 September -1 October. The next OHS committee meeting is being organised by Horst who will set up a Doodle calendar to determine best available date with you all in early October.

Our two HSR Reps (**Jessica Bell and Steven Marshall**) are attending their HSR training during Sept. and will report on their experiences at the meeting. In my absence, Horst Punzman and Graeme Cornish will be attending to OHS matters.

#### OHS BULLETIN

OHS training courses now at 5 Liversidge St, Building 69.

**Laser Safety** (OHS A11) - Tuesday 17 September  
**Electrical Appliance testing** (OHS A11) 18 September  
**Flammable Liquids** (OHS A11) 24 September  
**Ionizing Radiation Safety** (OHS A18) 22 October.