

Head of School of Physics Newsletter - October 2010

Thanks - The School would like to acknowledge the service of Jim McCaughan who is stepping down from teaching in the School after "35 years of running things, 38 years of demonstrating, 46 years of lecturing and 49 years of tutoring". Physics has been taught in the University for more or less 158 years. Jim has taught in the School for almost 1/3 of that time. Jim has taught, tutored and demonstrated to over 25,000 students, including 3,300 in the last 11 years since formal retirement from the School! Jim, we owe you a debt of gratitude for your long service to and constant enthusiasm for the School.

Graduations - The following students of the School will be graduating on Friday 5 November 2010. Congratulations to all and our best wishes for the future:

Sarah Cooper PhD
Paul Hancock PhD
Erin Jolley PhD
Christine Lindstrom PhD
James Roberts PhD
Eugene Tam PhD
Natasa Vranesevic PhD
David Odgers MMedPhys
Azuhar Ripin MMedPhys
Matthew Sobolewski MMedPhys
John Holik GradDipSc - Hons equivalent
Vicente Araullo-Peters BSc (Hons)

Future Leader - Selected as one of the most outstanding young scientists under the age of 40 by an international panel, Professor Ben Eggleton represented Australia at the Science and Technology in Society forum in Kyoto, Japan. Ben was one of only ten young scientists from around the world chosen by the New York Academy of Sciences to present at the three-day forum in Kyoto, held from 3 to 5 October 2010. The Science and Technology in Society forum, held annually, brings together key players in the academic, scientific, political and business arenas to discuss the promises and risks of science and technology, and how they impact on society. Further details:

<http://www.usyd.edu.au/news/physics/1737.html?newsstoryid=5850>

China - Sydney Astronomers recently met with colleagues in China during a week-long visit, covering four cities including Beijing, Nanjing, Shanghai, and Hong Kong. Professors Bryan Gaensler, Geraint Lewis, Peter Tuthill and Dick Manchester, discussed current and future research opportunities with counterparts from prestigious institutions including the Kavli Institute for Astronomy & Astrophysics at Peking University; Nanjing University and Purple Mountain Observatory; the Shanghai Astronomical Observatory; and Hong Kong University. Professor John Storey from the University of New South Wales joined the delegation in Nanjing to discuss the opportunities for Australia-China collaboration on Antarctic Astronomy. During the visit to Shanghai, Bryan Gaensler, Geraint Lewis Peter performed Music & the Cosmos with the Sydney Conservatorium of Music and the Shanghai Conservatory of Music. Master of Ceremonies was Dr Karl Kruszelnicki. Further details:

<http://www.usyd.edu.au/news/science/397.html?newsstoryid=5911>

New Building / AIN - The School has engaged two expert consultants to assist us in scoping and developing the design brief for the new building and the AIN. Professor Charles Marcus, a Professor at Harvard University and Mr Mark Reed, Principal of Kobus Tsoi and Associates, will visit us on November 4, 5, and 8. Both Charles Marcus and Mark Reed have unique skills and experience highly relevant to our needs through their work on similar buildings at Harvard and other nanoscience laboratories elsewhere in the USA.

ARC Success - In the recently announced ARC Discovery Projects & Fellowships, School of Physics staff were recipients of 8 successful Discovery Projects and 1 Fellowship. Of 37 submitted applications from the School, this amounted to a 22% success rate compared with previous years of 41% (2009) and 30%

(2008). For the School this represents a total funding in 2011 of \$890,000 from \$4,249,435 in total for the Faculty of Science and \$10,667,185 for the University of Sydney. Success rates this year for the Faculty, University of Sydney and the Group of Eight universities were 28%, 25% and 26% respectively and for all Australian universities 22%. Staff are to be congratulated on their ARC successes as follows:

Prof Marcela M Bilek, Prof Dougal G McCulloch, Dr Martina Lattemann, Prof Ulf Helmersson for "New generation pulsed magnetron sputtering for the synthesis of advanced materials". \$160,000 (2011), \$160,000 (2012), \$160,000 (2013).

Prof Iver H Cairns, Prof Peter A Robinson for "Integrated data-tested theory and modelling of type three solar radio emissions". 2011 \$110,000 (2011), 2012 \$110,000 (2012), 2013 \$110,000 (2013).

Dr Sean A Farrell for "Hyper-luminous X-ray sources as the missing link in black hole evolution". \$100,000 (2011), \$90,000 (2012), \$90,000 (2013) + APD

Prof Geraint F Lewis, Prof Michael J Irwin, Dr Alan W McConnachie for "Caught in the act: an unparalleled view of galaxy evolution". \$100,000 (2011), \$80,000 (2012), \$90,000 (2013).

Prof Ross C McPhedran, Dr Christopher G Poulton, Prof Lindsay C Botten for "Beyond metamaterials: new composites for transforming photonics". \$100,000 (2011), \$100,000 (2012), \$100,000 (2013)

A/Prof David J Moss, Dr Christelle Monat, Prof Yeshaiahu Fainman for "Breaking the glass ceiling: silicon-nitride (SiN) and doped silica glass for ultra high speed Complementary metal-oxide-semiconductor (CMOS) compatible optical processing and measurement chips". \$110,000 (2011), \$110,000 (2012), \$110,000 (2013)

Dr Tara Murphy, Prof Bryan M Gaensler for "Extreme events: mining the radio sky for gamma-ray bursts with intelligent algorithms". \$130,000 (2011), \$100,000 (2012), \$120,000 (2013), \$130,000 (2014).

Prof Serguei V Vladimirov, Dr Roman Kompaneets "Nonlinear surface waves and processes in quantum plasma as future technique for Nanoelectronics". \$80,000 (2011), \$70,000 (2012), \$80,000 (2013).

For academic staff who were unfortunately unsuccessful in seeking ARC funding to support their positions should give consideration to submitting an application, where appropriate, to the University of Sydney Bridging Support Fellowship Scheme. The Bridging Support Fellowship Scheme is available to employees of The University of Sydney and is designed to offer applicants a continuation of salary for a period of up to one year at the end of a Fellowship funded by the ARC or NHMRC. It is expected that recipients of a Bridging Support Fellowship will, during the tenure of the Fellowship, maintain an active research program and submit an application for an externally funded fellowship. The number of fellowships awarded will depend on the funding available. Further details:

http://sydney.edu.au/ro/applications/bridging_support.shtml

Grant Writing Mentorship - All potential 2011 ARC applicants for DP grants will have the opportunity to discuss their draft applications with Professor Don Melrose and Dr Andrew Black on Thursday 11 November. If you want to be interviewed by Don and Andrew on that date then email Don and Chindy Praseuthsouk to book a time slot.

End of Year Party - The End of Year Party will be held at The Grandstand on Wednesday 15 December from 1pm-5pm. This is an excellent opportunity to join colleagues in celebrating the many successes in the School in 2010. The cost is \$30 per head for staff and \$25 per head for students. There will however be a bar tab. For further details contact Alison Muir.