

ALUMNI Update

SEPTEMBER 2010



SCIENCE TEACHERS WORKSHOPS



For the first time in 2010 the highly successful Science Teachers' Workshop (STW) will be run across multiple science disciplines over a one-week period. The STW is a professional development course suitable for high school science teachers of all levels – whether you're just starting out, teaching in a new area, or have years of experience – our program has something for teachers of biology, chemistry and physics.

The STW Physics, originated by the Science Foundation for Physics, is an accredited program. To register visit: www.science.usyd.edu.au/outreach/teacher_resources/teachers_workshop.shtml



BUYER BE AWARE

Professor Manfred Lenzen, recent Eureka Prize finalist and Director of the Integrated Sustainability Analysis Research Group (ISA) says that many people are not aware of the environmental and social impacts of our consumption – with developing nations paying a high price for Western consumerism. “When consumers reach for a product from the shelf or in a department store they often don't realise the enormous global impact that the product can have,” he says.

Professor Lenzen hopes to change that with funding from a seed grant from the Australian Academy of Science to help develop quantitative research into this area. His project “*From centres of consumption to environmental hot spots: How international trade facilitates pressure on water and resources*” will use supercomputer-aided quantitative modelling of environmentally destructive global supply chains.

“For example, most consumers don't know that a key component in the manufacture of mobile phones is tantalum, an element mined in the Congo, where there is civil war. Revenues derived from the mining of tantalum often end up funding weapons for rebel groups. There are 24 million mobile phones in Australia alone so our consumption indirectly aids armed conflict.”

In addition to conflict, scarce water resources are now a problem affecting many developing countries. Professor Lenzen hopes to highlight such issues in the scope of research, which will be conducted in partnership with the University of Bonn's Centre for Peace and Development and the Australian Academy of Science.

“Here at Sydney we have a lot of experience with the quantitative issues of large-scale modelling of global trade flows, and our German partners have excellent expertise in international policy and developing world issues.”

Professor Lenzen will work at Bonn with German scientists on the project with his visit then reciprocated by a German counterpart. It is hoped that the outcome of this partnered research will enable us to trace the global environmental impact of our consumption habits. For more information on ISA visit: www.isa.org.usyd.edu.au/

ART & SCIENCE

Visual artist, Fiona Davies, is installing within the School of Physics, one of a series of three memorials to her late father, Louis Walter Davies, a 1948 University of Sydney graduate who studied at the School of Physics.

Memorial/Double Pump/Laplace II by Fiona Davies is one of three in a series, loosely based on narratives of the dying and death of Fiona's father in 2001. The installations have been located in sites that were important to her father. The first in Aberdeen, NSW – his hometown; the second in the School of Physics – his undergraduate study and the third in Lincoln College, Oxford University – his postgraduate study.

The installation will be displayed in the foyer and corridor is available for viewing from 9am to 5pm, The School of Physics, Physics Road, Camperdown Campus from Thursday 23 September to Wednesday 20 October 2010. For info on Fiona Davies work visit: fionadavies.com.au/default4.asp



ASTRONOMER AWARDED

Dr Tara Murphy, an astronomer based in the Sydney Institute for Astronomy (SIfA), was jointly awarded with Dr James Curran from the University of Sydney's School of Information Technology Vice-Chancellor's Awards for Outstanding Teaching and Australian Learning and Teaching Council Citation for Outstanding Contributions to Student Learning (*right*).

Dr Murphy told *Alumni Update* she was honoured to receive the awards.

"I started my ARC Australian Postdoctoral Fellowship at the University of Sydney five years ago, I was lucky enough to get the opportunity to develop a new first year course teaching first year IT to advanced science and computer science students.

The idea for this course was developed as I (and my partner James Curran, who is a computer scientist) thought about all the IT skills I needed to be an astronomer. The course encapsulates all of this in one semester, putting IT into a scientific, social, and historical context.

I have loved teaching the course over the last five years, and we have seen some great students go through. Trying to balance the demand to teach 'practical skills' with our belief that University students should consider the deeper philosophical implications of their discipline area is a challenge in the modern University context.

Winning the Vice-Chancellors Award for Teaching Excellence is an honour, and I am very excited about receiving my award in a graduation ceremony later this year, as some of my students graduate."

Dr Murphy is also part of the CAASTRO team - the new Centre of Excellence for All Sky Astrophysics. CAASTRO unites a large group of astronomers from around Australia who are working on large surveys with next generation telescopes.

"Astronomy (in particular radio and optical astronomy) is currently entering a new era in which the next generation telescopes will be able to scan the sky very rapidly, to great sensitivity. This opens up whole new areas of research that weren't previously possible, ultimately giving us insight into fundamental physics."

A full version of Tara's interview will feature in Alumni News Summer 2010/2011 Issue.



Image courtesy of Photo as Image Management

REUNION: ST JOHN'S

Saturday 18 September is reunion time for St John's College Freshers of '5 or '0 years but all Alumni are welcome. Freshers of years 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1980, 1985, 1990, 1995, 2000, 2005 contact your friends and organise your table now!

Catch up with old friends in The Great Dining Hall and see the developments of the College, including the new 'Hintze' Building.

Contact: Jessica Elliott on (02) 9394 5009 for more information. Need to update your details? Email: development@stjohns.usyd.edu.au so you don't miss out on future St John's events.



ST JOHN'S COLLEGE
within the University of Sydney

NEW SCIENTIST SCIENCE STUDENT WRITING PRIZE

Science is everywhere in our society, powering technological innovation and helping us understand the universe. But many people find it too complex to really grasp. Good science writing can change that, bringing it to life and letting the public share in the sense of wonder that scientists experience in their work. With this prize, *New Scientist* is excited to be encouraging quality science writing in the next generation of Australian and New Zealand students.

This competition is for you if any of the following apply: *You're studying science communication, and want to put what you've learned into practice. *You're studying science as an undergraduate, or carrying out postgraduate research, and want to master the vital skill of explaining your work (or someone else's) to the public. *You're interested in scientific issues, and want a shot at one of the major prizes available! There are three fantastic cash prizes on offer: First Prize: \$1,500 + published on NewScientist.com; Second Prize: \$750; Third Prize: \$250.

All three prize winners will also receive a 1-year subscription to *New Scientist* magazine. Plus, your work will be judged by leading science communicators. So pick your favourite area of science and get writing now! Good luck! Visit: newscientistprize.org/

UPDATE YOUR DETAILS!

We love to hear from our alumni and friends and it's great when we reconnect with you but sometimes we lose contact. If you know of any 'lost' alumni or people who might be interested in learning more about the School of Physics' research, achievements and activities we'd love to hear from them.

If you're moving or changing contact details please let us know. It's great to be able to stay in contact! Email: alison.muir@sydney.edu.au to have your details updated or included in our database.