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Message from the Dean



Welcome to the April edition of the Graduate Research Student News. It was a pleasure to meet many new students at the Orientation event hosted by the Graduate Research School on Tuesday 18 March 2008. If you were unable to attend the UNSW Orientation to Postgraduate Research function, please ensure that you collect an information pack from the Graduate Research School and visit www.grs.unsw.edu.au for latest information.

Two excellent student speakers, Tim Bourke and Ulli Stahl, provided tips and advice to new students – both had the very important advice of “Start writing your thesis tomorrow”. This advice is very timely as the Graduate Research School is hosting the Thesis Submission and Examination Seminar on Tuesday 22 April. This seminar is designed to assist completing students who are planning to submit theses this year. The seminar provides a summary of the key steps in the submission and examination process, appointment of examiners, the length of the examination period, and steps you can take to ensure that your thesis is examined

in the minimum time. I will also provide you with feedback as an examiner of PhD theses and as a supervisor, and Sue Starfield from the Learning Centre will provide an overview of what examiners look for in a thesis, and how they examine. It is never too early to start writing your thesis. Joe Wolfe from the School of Physics has written an excellent guide “How to write a PhD Thesis” (www.phys.unsw.edu.au/~jw/thesis.html) and I encourage you to have a look at this document as well as other resources available in the Learning Centre Resource Library.

Margaret M Harding
Dean of Graduate Research

Important Dates & Upcoming Events

- 9 April - Writing Literature Reviews & Thesis Writing Support Group (Learning Centre)
- 16 April - Networking for Postgraduates (Careers & Employment)
- 16 April - International Researchers U-Nite (International Student Services)
- 22 April - Thesis Submission Seminar (Graduate Research School)
- 25 April - Anzac Day Public Holiday
- 29 April - Tips for Taming Your PhD (Learning Centre)

2007 Bragg Gold Medal Won by UNSW Physics PhD Student

by Dan Gaffney

UNSW's Dr Frank Ruess has been awarded the 2007 Bragg Gold Medal by the Australian Institute of Physics. This is the first time a UNSW candidate has won the prestigious award, which honours the best physics PhD thesis nationally each year.

Before 2003 there was no known technology to make electronic devices in silicon at the level of single atoms. Indeed, the only tools that have allowed the manipulation of matter at the atomic level are scanning probe microscopes, which are typically used to observe atomic-scale features rather than fabricate devices.

Dr Ruess is pioneering a new way to make atomic-scale electronic devices using the atomic resolution capability of the scanning tunnelling microscope. Based at UNSW's Centre for Quantum Computer Technology, he is working with colleagues in the Atomic Fabrication Facility under the supervision of Federation Fellow, Michelle Simmons.

The success of Dr Ruess' PhD work has been highlighted by his subsequent demonstrations of very narrow conducting wires in silicon and the smallest silicon quantum dots, where the active components of the device were related directly to device characteristics.

This is a unique ability internationally and means UNSW researchers are now making the smallest transistors and interconnects. The technology allows a fundamental understanding



Dr Ruess at UNSW's Atomic Fabrication Facility

of the crossover between classical and quantum electronics. It paves the way for unprecedented miniaturisation of electronic devices and the goal of creating silicon-based quantum computers.

"I'm overwhelmed and delighted to have been given this award," said Dr Ruess. "My PhD was a very challenging yet extremely rewarding experience and to receive such acknowledgement on a national level is the icing on the cake."

Commenting on the announcement, Professor Simmons said, "Frank has been an outstanding student and I congratulate him heartily. It is a real pleasure to work with international students of this calibre and we thank both the University and the Australian Research Council for supporting this research".

The Bragg Medal was instituted by the AIP to commemorate Sir Lawrence Bragg and his father Sir William Bragg. The pair received the Nobel Prize for Physics in 1915 for their analysis of crystal structures using X-rays

Dr Ruess is now working as a Senior Research Fellow in the Centre for Quantum Computer Technology.

Best Paper at the 14th Pacific Rim Real Estate Society Conference Awarded to UNSW Student



Congratulations to Built Environment PhD student Ting Xu, supervised by Prof Peter Murphy and Prof Bill Randolph, who won the Best Paper Award by International Journal of Housing Markets and Analysis, for her paper presented at the 14th Pacific Rim Real Estate Society Conference January 2008 in Malaysia.

Her paper title is "Heterogeneity in Housing Attribute Prices: An interaction approach between housing attributes, absolute location and household characteristics".

Chemistry High Achievers

Congratulations to Thi Oanh Nguyen and Guan Bin from the School of Chemistry, who were recently awarded the Paddon-Row PhD Scholarship and Black PhD Scholarship at an awards ceremony in March.



These prestigious scholarships, named in honour of two of the School of Chemistry's most eminent Chemists, are awarded to the top ranked local and international student commencing their PhDs in Semester 1 in the School of Chemistry.

2008 Riversymposium Young Water Scientist Award

Applications are closing soon for the 2008 Award. This award promotes excellence in the development of young scientists who are capable researchers, communicators and innovative thinkers.

Postgraduate research students (PhD) who are either in the final stages of their projects or who have submitted their theses since 1 March 2007 on research topics relating to water are invited to apply to the International Riversymposium organisers NOW!

Full details of the symposium, the award application process and eligibility and the exciting program for 2008 are available from the Symposium website:

Close of entries is April 15, 2008

www.riversymposium.com



RIVERSYMPOSIUM

Australian Museum Eureka Prizes



Presented annually by the Australian Museum, the Australian Museum Eureka Prizes reward excellence in the fields of research & innovation, science leadership, school science and science journalism & communication.

Entries are now open in the 2008 Australian Museum Eureka Prizes. Entries close on Friday 2 May 2008. Prize details and entry forms are available on the Australian Museum website:

www.australianmuseum.net.au/eureka

In 2006 & 2007 three UNSW PhD students won Eureka Prizes as part of a team of researchers!

A wide range of prizes are available, for example the Eureka Prize for Science Photography, sponsored by New Scientist. This Prize is awarded to an Australian/s over the age of 17 for a single photograph taken in the past 2 years that most effectively communicates an aspect of science. First, second and third prize winners will win a share of \$10,000!

For further information, including criteria and conditions of entry, please visit the Eureka Prizes website

www.australianmuseum.net.au/eureka

Inaugural Minoru Hokari Memorial Scholarship - Call For Applications

The Australian Centre for Indigenous History, the Australian National University, wishes to invite applications for the Inaugural Minoru Hokari Memorial Scholarship. The \$5,000 scholarship is intended to support historical fieldwork in any Australian

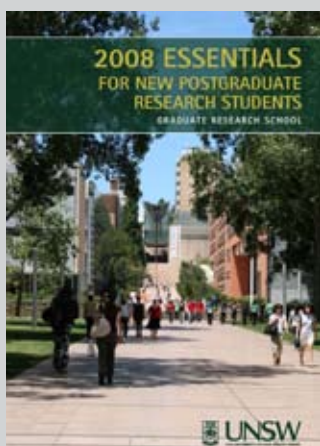
Indigenous community. Postgraduate students and scholars recently awarded PhDs are invited to apply. Full information is posted at <http://histrsss.anu.edu.au/>

Closing Date for Applications is 1 May 08

Important Research Student Publications

Are you a new student?
Do you have a copy of the below publication?

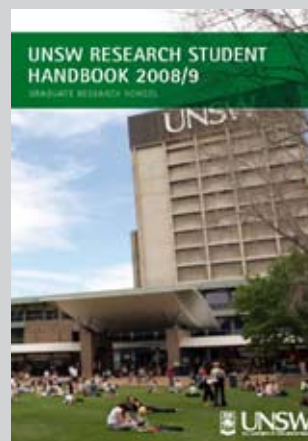
Are you a current student?
Do you have a copy of the below publication?



NO?

Pick up your copy today from the Graduate Research School reception, Mon - Fri 9am - 5pm Ground Floor, South Wing, Rupert Myers Building or email

i.reid@unsw.edu.au



Submitting Your Thesis in 2008 or Early 2009?

The Graduate Research School is hosting the Thesis Submission Seminar in April. This seminar will also be repeated in Semester 2.

This seminar is highly recommended for students submitting their thesis in the next year. It will provide information on the thesis submission and examination process, important dates and provide further tips and hints from the examiners perspective. Graduate Research School



staff will also be available to answer any questions you may have regarding thesis submission.

When: Tuesday 22 April, 12 - 1.30

Where: Biomed Theatre C (E27)

RSVP: rsvp.grs@unsw.edu.au

International Researchers U-Nite

International Student Services (ISS) is holding Researchers U-Nite on Wednesday 16 April, 3pm - 5pm.

Researchers U-Nite is an event held by the international office every 2 months. It is intended as an informal social support network for all UNSW international research students to meet,

mingle and discuss any issues of concern. ISS provides refreshments and snacks during the gathering held in the ISS Student Lounge. For more information email ISS at:

international.student@unsw.edu.au

Free Movie Tickets For Research Participation

- Are you over 18?
- Do you have good eye sight and hearing?
- Can you spare 2 -3 hours of time at UNSW?

A PhD student is looking for people to participate in a study investigating the effects of train automation on human factors. Participants will be required to learn how to drive a simulated train, stop at stations and obey signals and speed signs.

For your participation we will give you: **2 free movie tickets.** Applications close 11/04/08

For further information, please contact:
 Experimenter: Mr Peter Spring
 Ph: 93854776
 Email: p.spring@student.unsw.edu.au



Please advise Iona Reid, Student Liaison Manager, in the Graduate Research School of upcoming events including seminars, conferences and any research student achievements or awards for incorporation into 'Graduate Research Student News' and our News and Events website listing.

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