Australian National University

Event Horizon

Research School of Physics and Engineering

Weekly newsletter | Volume 39 Number 31 | 9 - 15 August 2013

SCHOOL SEMINAR

Harnessing collective behaviour of half-light half-matter

Dr Elena Ostrovskaya

Nonlinear Physics Centre, RSPE, ANU

4pm, Thursday 15 August

Leonard Huxley Lecture Theatre, Building 56, Mills Road

For further information please visit the website: http://physics.anu.edu.au/events.php?EventID=117

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

ALL WELCOME

CONGRATULATIONS

Congratulations to PhD student Sam Turner who won the $250 Australian Nanotechnology Network (ANN) Early Career workshop poster prize at Flinders University 29 July.

PHYSICS PROJECT MARKET DAY

On Tuesday 13th August 2013 (11.30am to 2pm) there will be an opportunity for staff to showcase their research and potential projects in Melville Hall to both undergraduate students at all levels as well as graduate students. The event is being held during Science Week and will be heavily promoted by undergraduate lecturers. Hence a strong participation of the undergraduate student cohort is expected. Academics are strongly encouraged to participate in this event by preparing a poster summarizing their research projects on offer and personally attending Market Day to speak with potential students. This day has been organised in recognition of the challenges faced in attracting students to different research groups across the school.

- RSVP for your attendance at Market Day (market.day.rspe@anu.edu.au) by August 1st
- Prepare a poster or other material to display at Market Day. Posters must be printed **by August 9th** to assist the SCU in managing the printing load.
- We are happy to discuss individual requirements for displays or demonstrations to make this a fun event during Science Week.

PHYSICS EDUCATION CENTRE REPORT

ANU Open Day, Saturday 31 August. A free t-shirt for those that attend! Please see your Head of Department if you are interested.

Spring Education Planning Day, 12 September

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 will be circulated early next week.

DEPARTMENTAL SEMINARS

Nuclear Physics Department

Quantum mechanics and reality

Associate Professor Margaret Reid

Swinburne University of Technology, Melbourne

11:00am, Monday 12 August

Nuclear Physics Seminar Room

Department of Quantum Science

Quantum simulation: from ion-traps to the early universe

Professor Peter Drummond

Swinburne University

11:00am Wednesday 14 August

CQC2T seminar room in DQS.

Theoretical Physics

Rogue waves in various models

Professor Nail Akhmediev

Theoretical Physics/OSG

11:00am Wednesday 14 August

Theoretical Physics Seminar Room

Le Couteur Building L.3.17

Applied Mathematics

Shape statistics via the persistent homology transform

Ms Katharine Turner

Mathematics, University of Chicago

3:17pm, Thursday 15 August

Le Couteur Building Room 3.17

STAFF MOVEMENTS

Theoretical Physics

Professor Mukunda Das is invited to give a series of 7 lectures on 'Physics at the nano-scale' at the Vietnam School of Physics-19 to be held at Quy Nhon from 4-15 August.

Electronic Materials Engineering

Dr Felipe Kremer and PhD students Ruixing (Andy) Feng and Sahar Mirzaei will be attending Synchrotron in Melbourne to conduct experiments 7-12 August.

Nuclear Physics Department

Dr Tibor Kibédi and Dr Gregory Lane, will be overseas in the period 4 - 14 August. They will be visiting the Accelerator Laboratory of University of Jyväskylä, Finland to participate in a PAC-approved experiment "Probing the E0 transitions in 186Pb using the SAGE spectrometer".

FRAME YOUR PHYSICS

Following on from last year "Frame your Physics" competition, the ACT branch of the AIP will again run the competition in 2013 to promote the communication of physics to a general audience.

The idea is to make a video of up to 3 minutes presenting a topic in physics in an entertaining and informative way. There will be various prizes up for grabs including for high school students, schools and also for university students. We have been advertising the competition in our undergraduate courses and we encourage supervisors to promote the competition with their Honours and PhD students as well.

Entries must be submitted by August 19. Further information can be obtained from the "Frame Your Physics" website at www.act.aip.org.au/Frame_Your_Physics or contact us: Andre Carvalho (andre.carvalho@anu.edu.au) and Cormac Corr (cormac.corr@anu.edu.au)

OHS BULLETIN

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

Compressed gas and Cryogenic safety - Thursday 8 August

Corrosives-Monday 2 September

Manual Handling - Wednesday 4 September

Laser Safety - Tuesday 17 September

2013 NATIONAL SCIENCE WEEK: RSPE'S ROLE

Computer tomography—from evolution, to medicine, to oil exploration

Professor Tim Senden is associated with scientific research on eyes in fish, petrology, nano-particles, rocks and live birth in early vertebrates. His work is linked with research using cutting edge high-resolution computer tomography scanning. Join Professor Senden as he explains how he is discovering new ways to uncover the hidden world with high resolution computer tomography scanning, and its many applications—from evolution, medicine to oil exploration. **Questacon, Saturday 10th August 2013, 2-3pm** W: http://www.questacon.edu.au/node/972

LIVING DATA: ART FROM CLIMATE SCIENCE

Animation using X-Ray microCT scan (from Applied Mathematics) shows threat faced by marine creatures

An X-Ray microCT scan of the shell of a pteropod - Limacina helicina antarctica (sea butterfly) - is animated to represent the threat faced by these marine creatures due to ocean acidification. As the seas absorb more carbon dioxide their chemistry changes. Carbonate ion levels decline and this element is an important building block for the pteropod's shell. As a vital link in the marine food chain the demise of the pteropod will have a compounding effect on the web of life. To view animation see link:
http://www.livingdata.net.au/content/presentations/LivingDataAtrium/LivingDataAtrium.php

Exhibition at Atrium, Level 3, Building 4 (Science), University of Technology Sydney

SCIENCE FICTION EXHIBITION

Ms Erica Seccombe, ANU PhD student at the School of Arts, combines her work with the Department of Applied Mathematics to showcase an exhibition at Manuka.

Canberra Contemporary Art Space, 16 August-28 September 2013. W: http://www.ccas.com.au