

Vacation students enjoy a Big Day In

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After humble beginnings in 1997, the CSIRO Big Day In has grown, with 101 undergraduate students attending this year from the Divisions of Mathematics Informatics and Statistics (CMIS) (16), Materials Science and Engineering (16), ICT Centre (52) and the Australian Mathematical Sciences Institute (17). We even had two student presenters from CSIRO Astronomy and Space Science (CASS) this year.

Over two packed days on 11 and 12 February, the vacation students came together in Sydney at Macquarie University to present the results of their summer's work.



The 2009/2010 cohort of CMIS vacation students.

The CMIS vacation students covered a range of interesting project topics this year including:

- Automating high resolution, multiview, multi-spectral digital image capture of insects
- Abundance estimation of marine projected species (birds, snakes and turtles) from limited data
- High performance computing for gemstone image analysis
- Early detection of spatio-temporal disease outbreaks
- Ultra jamming in grains
- Approximation algorithms for scheduling problems in bulk materials supply chain

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- Spontaneous segregation in granular mixtures
- Using smooth particle hydrodynamics to model human skeletal interactions
- Statistical genetics for MAGIC wheat crosses.

The wonderful Chris Krishna-Pillay (CSIRO Education) was the MC once again, providing comic relief throughout the program. CSIRO Mathematics, Informatics and Statistics Chief Louise Ryan opened the event with Ian Oppermann (new CSIRO ICT Centre Director), followed by talks from Elizabeth Dennis (CSIRO Fellow) and John O'Sullivan (Research Engineer and inventor of Wi-Fi) about their remarkable achievements. The Science Career Panel included the former CSIRO Chief Murray Cameron, whose theme was the great social life a science career has produced, in the name of potential collaborations of course!

The students, having attended some presentation skills training in January, gave excellent talks on the projects they had worked on over the summer. The ICT Centre even set up a mobile-phone voting system 'Voteapedia' for the best presentation.

The comedy debate topic this year was that 'Australia would be better off if it were run by scientists'. The affirmative team were strong, consisting of CMIS research scientists Emma Huang, Paul Jackway and Geoff Prince (AMSI Director), however the crazy wigs and white coats of the negative team, as well as their reference to both Margaret Thatcher (ex-chemist) and Stephen Fielding (ex-engineer), seemed to be enough to sway the 'clapometer' voting system.



Paul Jackway and Marnie Lamprecht working on an automated system for imaging insects.

This year, ten specially selected vacation students were also given the opportunity to take part in media training with CSIRO communication staff. Some even had a chance to put their new-found skills straight into action. CMIS student Marnie Lamprecht was interviewed by *The Sydney Morning Herald* about her project developing an automated insect-imaging device with supervisor Paul Jackway.

Applications for the positions are advertised on the CSIRO careers website in September each year, so please let your students know. To find out more about the CSIRO vacation students program, visit www.csiro.au/resources/Vacation-Students-CMIS.html.

Check out some of the photos of CSIRO vacation students working on their projects at CSIRO's facebook page.