

DES News

September 2010 | Alumni and Friends quarterly newsletter | Number 08

Dear Alumni and Friends

The 2010 version of the "NZ's Next Top Engineering Scientist" competition was run on Saturday September 18th. This is the second year this competition has run, and we attracted over 100 teams of high school students, with 99 actually submitting answers. The aim of this competition is to improve brand recognition for the Department in and around NZ, and we believe the competition is achieving this. The question that each team had to answer was "How much fuel is required for a manned mission to Mars?" I have yet to begin marking the answers (which are in the form of a report of up to 15 pages long) but I have heard there are some impressive entries. It will be interesting to see if they all thought about the need to get the astronauts home again! For those interested, full details of the competition can be found on our website at <http://www.des.auckland.ac.nz/uoahome/for/secondarystudentsandschools-6/nzntescompetition>.

We are again nearing the end of the teaching year. In particular, the Part IV students are in the final throes of completing their project, with written reports, posters and oral presentations all due soon. It is always a stressful time of year for the students, but I am always impressed by the high quality of the final products that get turned in each year.

As always, please feel free to provide feedback, using the email below, on this newsletter. In particular, if there is some aspect of the Department that you would like to hear about in this newsletter, please let me know.

Professor Andrew Pullan, Head of Department hod_des@auckland.ac.nz

Triple 70 Celebrations

Mike O'Sullivan and Ian Collins, who have long been synonymous with the Department, celebrated both their 70th birthdays and a combined 70 years of service. Two separate events were held to recognise this achievement. The first was a lunch for all the staff and students of the Department, held in



Prof Michael O'Sullivan, Prof Ian Collins

our Department common room. The second event was a dinner at Old Government House, which was attended by the staff, partners, family and some close friends of the "birthday boys". Both events went off very well and it was a privilege to be able to celebrate such a unique set of milestones. Ian and Mike gave wonderful speeches, reminiscing of days past, and some very unique stories were told. The photos above are taken from the dinner. Two cakes were specially ordered for the event. The cake Ian is cutting had a 3-sided pyramid on top, with each side representing one aspect of the "Triple 70th". The other cake contained an image of Statlor and Waldorf from the muppet show. To quote Wikipedia, Statlor and Waldorf are the "two ornery disagreeable old men" who like to heckle the rest of the cast from their balcony seats in the muppet show. Much discussion was had as to who was Ian and who was Mike. Congratulations to Mike and Ian!

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Backissues

Available at
<http://www.des.auckland.ac.nz/uoahome/for/alumniandfriends/des-news>

For future editions

Do you have news to share? News on current Department members is easy to include, because they're right here. News on wider family members - alumni and former staff - doesn't necessarily reach us. If you have something to share, email it to desnewsletter@auckland.ac.nz



Ex DES Staff

Frances Billot, 1989

Frances Billot joined the Department of Engineering Science in September 1989 as a Senior Secretary. Family circumstances had prevented her going to university from school but she was persuaded by her fellow secretary, Angela Pearson, to enroll in university courses while working at Auckland. At the time, Frances considered the idea as no more than an interesting perk of the job: to be allowed 3 hours a week off work to listen to someone talk about a subject completely unrelated to her 'real world,' but once she embarked on study it didn't take long for that attitude to change.

The staff in Engineering Science took a friendly interest in Frances' progress over the years, and in 1996 there was a turning point when she applied for, and was offered, a part-time tutorship in Roman History to commence in the second semester. As the position in Engineering Science was full-time, her challenge was to find another position to fit around the tutorship, and as luck would have it, the Planning Department advertised for a part-time Manager and offered her the job. While her administration career took a different route within the Faculty of Architecture, Property, Planning & Fine Arts, later known as NICA, Frances continued studying as well as tutoring for a number of courses in Classics & Ancient History.

It was always going to be a long haul for a working mother of four to complete a BA, let alone MA and PhD. Frances graduated with a BA in 1999, majoring in Ancient History, she completed a Master of Arts degree with First Class Honours in 2002; submitted her PhD thesis in June 2009 and will graduate in September 2010. Fortunately Frances' husband, Brian Donovan, was supportive and happily spent many lunch-hours caring for their daughters during the time that the girls were denizens of crèche 2 while Frances attended

Looking into the lining of the aorta

Dr David Long has been awarded \$10 000 to support a Masters of Engineering student to work on a project with him.

It is a 'Fast Start award' from the Faculty of Engineering Research Development Fund (FRDF). The purpose of the award is to assist emerging researchers establish an independent research programme by providing support for a postgraduate student.



Dr David Long

2010 Spark Ideas - Winners in the category Social Entrepreneurship

CycleBest

The provision of transportation alternatives has become more and more important to the modern city. Cycling is one of the major alternatives. However, safety concerns as well as finding adequate short routes has left many people not taking on cycling as an alternative. CycleBest is an online application that allows users to find multiple best routes to get from A to B. The application is based on multi-objective optimisation techniques that take into account more than just the length of the route. Factors such as distance, travel time, road safety and road steepness are considered in the determination process which leaves users with better choices than other online applications.



Left to Right: Dr Andrea Raith, Asso Prof Matthias Ehrgott, Denis Helm and Simon Bull

Juliet Newson elected to the board for International Geothermal Association

Juliet Newson (Senior Tutor) has recently been elected to the board for the International Geothermal Association (IGA). This is quite an honour as the IGA is the world geothermal umbrella group and the board is made up of many significant people worldwide.



Juliet Newson

Ex DES Staff contd...

Frances Billot, 1989

lectures or went to the library. Her PhD thesis was a study of the Roman manipulation of their history through a comparative study of the differing representations of Hannibal, the Carthaginian general who almost destroyed Roman civilisation through a series of battles culminating in Cannae in 216BC.

Frances also offers regular courses in the Continuing Education programme, and is one of the founders of Proxima Veritati, a University of Auckland 'virtual reality' resource for recording Greek and Roman archaeological sites. Currently she is employed as Registrar of the New Zealand Tertiary College.

News in brief...

Baby girl for Nicola Kovacevich

Nicola Kovacevich had a beautiful baby girl. Sofia arrived on July 26th weighed 2.8kg, and was 50cm long.

Baby girl for Andrew Mason

Andrew and Catherine's new daughter is called Constance Mason, 3.775 kg. Born at 6.10am on the 19th of August.

Grant success for Andrew Pullan

Prof. Andrew Pullan has had further grant success with the Health Research Council (HRC). He has recently received more than \$1 million dollars for "New clinical tools for diagnosing gastric dysfunction". This work complements the HRC grant he received last year, also for around \$1 million.

Jon Pearce and Eylem Kaya submits thesis

Jon Pearce has submitted his PhD thesis 'Numerical methods for parameter continuation', which was concerned with algorithms for approximating equilibrium branches & bifurcation points of fluid dynamic systems.

"Eylem Kaya has submitted her PhD thesis. The thesis was on "Computer Modelling of Reinjection in Geothermal Fields" and was supervised by Professor Michael J. O'Sullivan.

Michelle Deacon - Our Own Resident Photographer

Michelle Deacon is an Engineering Science 4th year student. She is a very talented photographer. She has taken a lot of the photos that we have used in our past Newsletters. She also has taken photos for our graduation. We have some of her photography framed and displayed outside the Part IV room.

Changes to Department IT

Percy joined the IT team in September 2002 and has left to join 2 degree. His last day with us was on September 10th. Percy has been a valuable member of our IT team for the past 8 years. We all thank Percy for his help during his time within DES and offer him and his family our best wishes for the future.

We would also like to welcome two new IT members to the department. Johny Lu and Laxman have currently joined Rao to assist with the departments IT needs. Laxman is currently on loan from Mechanical department for two months.



Percy Barboza

Biomimetics lab

Iain Anderson

Last month a pre-recorded interview about the Biomimetics Lab was broadcast. The principal feature was the Cell Gym and this was described by my PhD Casey Jowers. I also talked about some of the other developments in the lab including our motor and generator. You can find it on the list of programmes under Bioengineering at:

<http://www.radionz.co.nz/national/programmes/afternoons/20100712>

Our Biomimetics lab also featured on the TVNZ show "Ever Wondered" on Saturday 4th September evening. The show focused on our artificial muscle research. They have produced some great graphics to illustrate how artificial muscle works. To view it go to:

<http://tvnz.co.nz/ever-wondered/s1-e5-video-3759240> (Chapter-3)

Nic Smith

Nic Smith has recently left his post as Professor of Computational Physiology at the University of Oxford to take up a new role as Head of Biomedical Engineering at Kings College London where he will lead a new department of 18 academics and over 75 graduate students and post-doctoral fellows embedded in St Thomas' Hospital.

"There is a close and vital relationship in our work between problem solving in clinical environments and biomedical engineering technologies. The exciting aspect of this move is going to be working in one of the leading cardiology centres in the world to apply computational models directly in a clinical context. The research goal of the department will be to contribute to the extraction of information from imaging and measurement tools. Through translation of these technologies we will aim to support a paradigm shift away from predefined clinical indices determining treatment options and a move towards true personalisation of care based on quantitation and an individual's specific physiology. Key to this goal will be the mathematical modelling techniques which I first learned and practiced as an Engineering Science undergraduate. Our next challenge will be to demonstrate their potential for improving healthcare and quality of life in the new department"

Some more photos from the 70th Dinner taken by Gottfried Boehnke

