We are pleased to announce that Professor Archie Johnston has accepted the University's offer of appointment as the next Dean of Engineering and IT.

He joined the University on 3 August as Dean Designate and worked closely with Professor Hancock before taking up the Deanship on 1 September.

Professor Johnston is a Fellow of the Australian Academy of Technological Sciences and Engineering, Engineers Australia, and The Institution of Civil Engineers. He was previously Dean of Engineering and Information Technology at the University of Technology Sydney and is Chair of the Centre for Leadership and Management (CELM) (Engineers Australia), Advisory Professor to Shanghai Jiao Tong University, Advisor to the Associated Chambers of Commerce and Industry of India, Delhi, Advisor to the Reliance Group of India, Director of Insearch and Member of the Australian Institute of Company Directors.

He was Chair of the Judging Panel for the 2009 Australian Construction Achievement Awards. He was the Sir John Holland 2007 Civil Engineer of the Year and 2007 Entrepreneurial Educator of the Year of the Business and Higher Education Roundtable.

Professor Don Nutbeam, Provost and Deputy Vice-Chancellor, welcomed Professor Johnston "The Vice-Chancellor and I are confident of Professor Johnston's ability to lead the Faculty forward. I am sure all of you would like to join me in wishing him the very best in the role."
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Editorial

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CRICOS Provider No. 00026A.
It is with mixed feelings I write this final report, tinged by sadness at leaving such a wonderful Faculty with such outstanding staff and a dedicated team, but with enthusiasm for the next stage of my life.

I have been on the academic staff of the University for over 37 years, 18 as BHP Steel/Bluescope Steel Professor of Steel Structures, and nearly six years as Dean. In that time I have seen significant changes in the Faculty, especially the continuing increase in the range and quality of research, and the teaching programs we deliver.

It is no longer satisfactory to only provide four year Engineering degrees, but we now have up to half our students undertaking combined degrees with Arts, Science, Medical Science, Law, Commerce and recently Architectural Design. The female cohort has continued to increase as well with over 22% women starting first year this year. For the first time, the number of postgraduate students in the Faculty has recently exceeded 1000, and this trend will continue, both with postgraduate coursework and research degrees.

In my time as Dean, we have seen the further consolidation and development of the Graduate School of Engineering and IT, the introduction of the Flexible First Year program as the first in the Sydney region, the development of Engineering Sydney as the Faculty umbrella organisation for industry links and alumni, the introduction of the Master of Professional Engineering (MPE) degree this year, and the integration of the School of IT into the Faculty.

None of this would be possible without a strong Faculty management team in the Dean’s Advisory Committee (DAC). The School Heads and Associate Deans have provided wonderful leadership to their respective Schools and portfolios to allow continuous improvement and development. I must single out Dr Doug Auld who has been Associate Dean Undergraduate throughout my time as Dean and provided sound advice to me as well as support to the undergraduate student cohort and the Faculty office.

(continued page 4)
Within my immediate team, I would like to thank Mr Eric van Wijk, Faculty Manager, and Kay Fielding, my Executive Assistant who have advised and supported my activities and those of the Faculty for the duration of my tenure as Dean. Kay Fielding has also provided significant support to the Advanced Engineering program started by my predecessor Professor Judy Raper. Mr Keiran Passmore came to the Faculty as the Executive Director of Engineering Sydney (ES), and has put ES on the map and defined its role in the Faculty. Annette Alexander has provided excellent support as the Faculty Secretary to the DAC, Faculty Board, and the Faculty academic staff. Professor Hugh Durrant-Whyte has continued to develop the Australian Centre for Field Robotics (ACFR) to be pre-eminent in Australia and arguably in the world in this research area. Hugh has also given advice as a member of the DAC throughout my period as Dean and I thank him for that. I wish my successor Professor Archie Johnston every success leading the Faculty and I look forward to watching it continue to grow and develop in coming years. Best wishes for the future.

Gregory Hancock, August 2009
Lecturer in Space: Astronaut Greg Chamitoff live

Dr Greg Chamitoff, a NASA astronaut and former University of Sydney lecturer, presented the Dean's Lecture for Faculty of Engineering and IT entitled "Living and Working on the International Space Station", at the University's Seymour Theatre on Wednesday 3 June.

Dr Chamitoff recently returned from the International Space Station where he served a 179 day tour of duty as Expedition 17-18 ISS Flight Engineer and Science Officer. While on the International Space Station, he teamed up with other scientists and performed a set of important experiments that were designed on Earth but could only be conducted in zero-g environment. Those included medical experiments, fluid-physics experiments, Earth and solar observations, and robotics.

During the lecture, Dr Chamitoff played a video which had captured many stages of his NASA mission. Those varied from taking off in the shuttle, to docking onto the ISS, to performing daily routines such as moving about, working and eating. At the end of the lecture, after sharing some of his funny anecdotes about life in space, he answered all the questions posed by his audience.

As an undergraduate student at California Polytechnic, Dr Chamitoff taught lab courses in circuit design and worked summer internships at both Atari Computers and IBM. While at MIT and Draper Labs, he worked on several NASA projects and performed stability analysis for the deployment of the Hubble Space Telescope, designed flight control upgrades for the Space Shuttle autopilot, and developed attitude control system software for the Space Station.

From 1993 to 1995, Dr Chamitoff was a visiting professor at the University, where he led a research group in the development of autonomous flight vehicles, and taught classes in flight dynamics and control in the School of Aeronautical Engineering.

In 1995 Chamitoff joined Mission Operations at the Johnson Centre, where he developed software applications for spacecraft attitude control monitoring, prediction, analysis, and manoeuvring optimisation. One of the applications is the "big screen" display of the Station and Shuttle used by Mission Control.

Selected by NASA for the Astronaut Class of 1998, Dr Chamitoff started training in August 1998 and qualified for flight assignment as a Mission Specialist in 2000. His assignments within the astronaut office have included Space Station procedure and display development, crew support and Space Station robotics.
Student in Profile: Moses Bangura

ED: What do you study?
MB: Aeronautical and Aerospace Engineering.
ED: Where do you come from?
MB: I come from a small west African country called Sierra Leone.
ED: What is it like there?
MB: It’s a bit different to Australia because there is widespread poverty and the country is coming out of a brutal civil war which has left many people homeless. It’s very bad. It doesn’t provide any opportunities for young people to go to good universities or being to be able to explore the things you want to do things in life.
ED: What suburb do you live in?
MB: I live in Marrickville
ED: Why are you interested in Aerospace Engineering?
MB: I became fascinated in high school about the work of NASA and SETI about the origins of the universe and realized the best degree I could do was aeronautical space engineering at the University of Sydney.
ED: How are you finding your time at the University?
MB: I am finding my time at the University marvelous! I have met with great friends, they’ve been really helpful. Also I’ve realized there are great lecturers like Doug Auld and the tutors are also great. I’ve developed a lot of interest in my degree which has led me to put in a lot of effort.
MB: What do you do outside of your studies? I do a lot of things. I play soccer on Wednesdays and Saturdays. I go clubbing or partying on Saturday nights, I do a lot of social activities.
Also, I’m part of a union known as the Sierra Leone-Australian Students Union and I’m currently the Secretary. I help people apply for university in Australia.
I enjoy helping out the community. I do mentoring at Canterbury Boys High School and Marrickville High School. I like helping out disadvantaged kids especially kids with refugee backgrounds.
ED: Thank you, Moses.
(Editor’s Note: Thank you to Bronwyn Sexton from School of AMME for interviewing Moses)
Development and Disaster Relief: a humanitarian career path

In only the second week of classes this year many students from the University of Sydney heard for the first time what it would be like to follow a career in development and disaster relief work with Engineers Without Borders (EWB), the Australian Youth Ambassador for Development (AYAD) program and Registered Engineers for Disaster Relief (RedR).

In a small lecture theatre tucked away in the Wilkinson Building, Jonathan Bruck - a third year biomedical student and the current president of the Sydney Uni chapter of EWB - explains how the seminar was designed to introduce students and professionals to the concept that engineering in development work is more than just the equations. "Development is about people and that is precisely what makes it challenging and exciting."

As MC for the evening, Jonathan introduced the speakers, Mike Dureau - the immediate past chairman of RedR International and Australia, Jim Fraser - a past Youth Ambassador, and lastly Francis Anatacio and Anne Trinh who were with Jonathan on the most recent Philippines Development Education Experience in January.

Francis presented a few short stories from the trip in January, "It's a really great experience because I'm a civil engineering student myself." He showed a picture of a small shelter held up by some bamboo poles representing an entire brick factory for the Habitat for Humanity charity in Bohol, a central island in the Philippines.

At the end of the month long educational/fun-packed, snorkeling filled trip, Anne, a biomedical and chemistry student came to the realization that "all you really need to help these people is a little bit of inspiration, it doesn't really matter what your background is."

Jim Fraser also worked in Bohol during his 2004 placement as an AYAD developing awareness and an education program that concerned the health impacts of waste disposal. "Most of the island’s waste was dumped into a sink hole in the central part of the island; however all of the island’s drinking supplies are from ground water." Jim started with an environmental engineering degree

He now works with the Ryde Council as sustainability programs coordinator which draws upon the community education skills he developed during his times in the Philippines and in rural and remote Australia.

Mike Dureau explained that RedR Australia receives over one million dollars per year from AusAid to train and deploy experts to assist communities who have experienced a natural or manmade disaster. It does this through the UN and other humanitarian agencies.

RedR Australia was established in 1992 and maintains a register of technical personnel who could be deployed at a moment’s notice to disaster areas around the world. Before being considered for deployment all those on the Register must undergo two residential training courses to help them understand working in the international environment and to provide them with some basic personal security and emergency response skills.

The standard tools of a RedR engineer in the field are a satellite-phone and a computer which can help to deliver 750,000 tons of food to distressed people in war torn Iraq in one month (the largest food delivery ever), rebuild 35,000 homes after the Indonesia tsunami, provide water, sanitation and humanitarian protection to some of the 1.8 million displaced Sudanese and much more.

“What we consider in RedR is that the people of EWB, a sort of younger brother to us, are 8 or so years later going to look at RedR and say: we want to be a part of that.”

Mike Dureau explained why anyone would want to get involved with RedR - “you can build a bridge, a road, you can work in water and sanitation, in air operations, in logistics, and education, all to help people rebuild their lives.”

An alumna of the Faculty, Davina Rooney, was trained by RedR and spent two weeks working for AusAid in Pakistan after the 2005 earthquake, completing structural assessments of medical facilities with the National Engineering Services of Pakistan.

Engineers Without Borders at the University of Sydney is working to improve the awareness of disaster relief and development work as a realistic career path for current and young engineers and is always looking for keen volunteers of any age or profession who can help.

We can be contacted at usyd@ewb.org.au

Article by Jonathan Bruck
Research Conversazione 2009

The annual Research Conversazione is the Faculty of Engineering and Information Technologies’ premiere annual event to showcase the research undertaken by students over the past year.

It is an ideal opportunity for industry representatives and alumni to network and make contact with the engineers of the future.

The Research Conversazione 2009 will take place on Friday October 30 between 12 noon and 4.30pm. The event will commence with a welcome address that includes drinks and cocktail food in the Seymour Centre followed by poster displays and prize presentations in the Schools of Civil Engineering, Chemical and Biomolecular Engineering, Aerospace, Mechanical and Mechatronic Engineering, Electrical and Information Engineering, and Information Technologies.

The Research Conversazione is a key pillar of the Engineering Sydney objective to bring industry and students together. It is also an opportunity for guests to view the state of the art facilities of the Faculty and to speak to key members of research teams.

The Research Conversazione 2009 will also include the Engineering Sydney Alumni of the Year awards.

Engineering Sydney invite anyone interested in the research produced by the Faculty to register to attend the Research Conversazione 2009. To register online go to http://www.eng.usyd.edu.au/engineeringsydney/conversazione.shtml or contact Ariel Riveros, Project Officer, Engineering Sydney on ariveros@uyd.edu.au or telephone 02 9036 6571.

We look forward to seeing you at the Research Conversazione 2009!
Engineering Sydney Alumni of the Year Awards

Engineering Sydney warmly invite nominations to the Engineering Alumni of the Year Awards. There are two broad categories: Engineering Sydney Alumni of the Year and Engineering Sydney Young Alumni of the Year (awarded to a person aged 35 and under by the end of the calendar year). The awards, will be presented at Research Conversazione at the Seymour Centre on October 30 2009.

PREAMBLE:
The awards are intended to recognize alumni of the Faculty of Engineering who have shown exceptional dedication, creativity or leadership in their field of professional endeavour which may include outstanding contributions to the community

ELIGIBILITY:
A person is eligible to be considered for an Engineering Sydney Alumni Award if:
1. The person is an alumnus of the Faculty of Engineering at the University of Sydney
2. Nominations may be self nominations or independent nominations
3. Nominations must be submitted in accordance with the procedures below.

NOMINATION PROCEDURE:
1. Fill out the online nomination form at:
2. Self nomination must contain the names and contact details of three referees.
3. Send a curriculum vitae or summary of the professional and personal achievements of the person nominated to Ariel Riveros: ariveros@usyd.edu.au
4. Provide a supporting statement of up to 500 words by the nominator that addresses the following matters in relation to the person nominated on the Alumni of the Year nomination website above. The statement must address the criteria listed in the preamble above

DETERMINATION OF AWARDS:
The Engineering Sydney Alumni Awards Committee shall, from among nominations received, determine the persons who should receive awards.

Email Ariel Riveros, Project Officer, Engineering Sydney: ariveros@usyd.edu.au or fax 02 9351 4654
Vale Harold Naunton Davies

Article by Ian Bowie

It is with regret that we record the passing, at the age of 105, of Harold Davies who graduated from the University of Sydney as Bachelor of Engineering in Civil Engineering with first class honours in 1927. We believe Harold may be the longest lived alumnus of the Faculty.

During the first years of his undergraduate course, Harold was taught by Professor W. H. Warren before the appointment of Professor W.A. Miller in January 1926. Harold’s fellow students included Bob McMillan and Sandy Britton, soon to be eminent engineers in Sydney and with whose company there was to be a later link.

After graduation Harold joined the New South Wales Department of Public Works team under J.J.C. Bradfield that worked on the Sydney Harbour Bridge project. In this capacity he designed the 67-metre steel arch bridge, well known to many Sydney commuters, that carried the tram lines from what are now known as Lanes 7 and 8, over the Bradfield Highway to Blue Street in front of North Sydney station (lower photograph). The design of this bridge was submitted as a thesis to the University of Sydney in 1930 and this resulted in Harold being awarded the degree of Master of Engineering with first class honours and a University Medal. Tram services over this bridge ended in 1958 and the structure was demolished several years later to make way for the Warringah Expressway.

During the Second World War, Harold went on to head the Design Office of the Australian Base Command of the United States Army, working as the senior engineer in Macarthur’s headquarters in Brisbane.

After the war, he founded the Brisbane-based consulting engineering organisation Cardno and Davies. In Sydney, the similarly large consultants McMillan and Britton became McMillan, Britton and Kell, later MBK. In 1999 the Brisbane-Sydney reunion of graduates was in effect completed with the formation of Cardno MBK, now Cardno.

The Cardno and Davies firm, with particular direction from Harold, was responsible for much of the engineering for the Gold Coast development, a great many bridges and the transformation of the City of Brisbane sewerage system from a primitive state to one worthy of a modern city.

After a distinguished engineering career, the Institution of Engineers, Australia made Harold a Life Fellow at the age of 100 and he was awarded the Institution’s prestigious Peter Nicol Russell Medal in 2002. It would be an understatement that his work has been a credit to the profession and an inspiration for young engineers.
Spring Back to Sydney 2009

Saturday 19 September 2009
9.00am - 3.00pm

Spring Back to Sydney
A reunion for all alumni

For further information contact Sarah Portelli
Events Office | 02 9036 9278 | rsvp@usyd.edu.au

www.usyd.edu.au/spring_back
# FACULTY EXECUTIVES

## Deans Advisory Committee

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<thead>
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<tr>
<td>Professor Archie Johnston</td>
<td>Dean</td>
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<tr>
<td>Professor Liyong Tong</td>
<td>Pro Dean, Associate Dean International</td>
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<td>Professor Assaad Masri</td>
<td>Associate Dean Research and Research Training</td>
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<td>Associate Professor Fariba Dehghani</td>
<td>Associate Dean Postgraduate</td>
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<td>Dr Doug Auld</td>
<td>Associate Dean Undergraduate</td>
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<td>Associate Professor Marjorie Valix</td>
<td>Associate Dean Flexible First Year Teaching</td>
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<tr>
<td>Dr Tim Wilkinson</td>
<td>Associate Dean Information Technology</td>
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<td>Dr Irena Koprinska</td>
<td>Associate Dean Learning and Teaching</td>
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<tr>
<td>Professor Steve Armfield</td>
<td>Head of School Aerospace, Mechanical and Mechatronic Engineering</td>
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<td>Associate Professor Tim Langrish</td>
<td>Head of School Chemical and Biomolecular Engineering</td>
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<td>Professor Kim Rasmussen</td>
<td>Head of School Civil Engineering</td>
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<td>Professor Branka Vucetic</td>
<td>Head of School Electrical and Information Engineering</td>
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<td>Associate Professor Sanjay Chawla</td>
<td>Head of School Information Technologies</td>
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<td>Professor Hugh Durrant Whyte</td>
<td>Director Australian Centre for Field Robotics</td>
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<td>Professor Simon Fleming</td>
<td>Director Optical Fibre Technology Centre</td>
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<tr>
<td>David Cox</td>
<td>Chief Operating Officer</td>
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<td>Keiran Passmore</td>
<td>Executive Director, Engineering Sydney™</td>
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<td>Eric van Wijk</td>
<td>Faculty Executive Officer</td>
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<td>Paul Harvey</td>
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<td>Annette Alexander</td>
<td>Faculty Secretary</td>
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## Presidents and Executive Officers of Foundations and the Warren Centre

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<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Professor Michael Dureau</td>
<td>Chairman and Executive Director of the Warren Centre for Advanced Engineering</td>
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<td>James Allen</td>
<td>President Chemical and Biomolecular Engineering Foundation</td>
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<td>Skender Bregu</td>
<td>Executive Officer Chemical and Biomolecular Engineering Foundation</td>
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<td>Peter Thornton</td>
<td>President Civil Engineering Foundation</td>
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<td>George Maltabarow</td>
<td>President Electrical and Information Engineering Foundation</td>
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<td>Professor Vassilios Agelidis</td>
<td>Executive Director Electrical and Information Engineering Foundation</td>
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<tr>
<td>John Young</td>
<td>President Aerospace, Mechanical and Mechatronic Engineering Foundation</td>
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## Student and Alumni Organisation

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<tr>
<td>John Doherty</td>
<td>President Engineering Sydney Alumni Association</td>
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<tr>
<td>Patrick James</td>
<td>SUEUA President</td>
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