**FACULTY EXECUTIVES**

**Deans Advisory Committee**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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</thead>
<tbody>
<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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<tr>
<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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<tr>
<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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<tr>
<td>Associate Professor Tim Langrish</td>
<td>Head of School Chemical and Biomolecular Engineering</td>
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<tr>
<td>Professor Kim Rasmussen</td>
<td>Head of School Civil Engineering</td>
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<tr>
<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>
</tr>
<tr>
<td>David Cox</td>
<td>Chief Operating Officer</td>
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<tr>
<td>Keiran Passmore</td>
<td>Executive Director, Engineering Sydney™</td>
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<tr>
<td>Eric van Wijk</td>
<td>Faculty Executive Officer</td>
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<tr>
<td>Paul Harvey</td>
<td>HR Manager</td>
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<tr>
<td>Annette Alexander</td>
<td>Faculty Secretary</td>
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</tbody>
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**Presidents and Executive Officers of Foundations and the Warren Centre**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</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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<td>Dianna Alice</td>
<td>Executive Officer Electrical and Information Engineering Foundation</td>
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**Student and Alumni Organisation**

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<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
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<tbody>
<tr>
<td>John Doherty</td>
<td>President Engineering Sydney Alumni Association</td>
</tr>
<tr>
<td>Tom Connell</td>
<td>SUEUA President</td>
</tr>
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Research Conversazione 2009: a view from the ground
Contents

01 Cover: Research Conversazione 2009: a view from the ground
03 Dean’s Opening Message
04-05 Research Conversione 2009 story (cont)
06 Professor Mike Dureau: winner of Chemical Engineer of the Year
07 Profile on Dean Archie Johnston
08 Faculty Executives

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Contact us

If you are interested in our events and exciting initiatives please visit:
Dean’s Opening Message

We are currently developing a new Strategic Plan for the University. Acknowledgement has been given to the achievements of the past but some consideration is being given to the results of the staff surveys, the impact of the GFC and a desire to make us more academically and financially sustainable.

The Faculty has improved its position by one to be 40 in 2009 in the Times Higher Education Index.

I was delighted with the Australian Research Council (ARC) and National Health and Medical Research Council (NHMRC) successes (24 new grants with a value of over $10m) where we improved 15% on last year. Fascinating topics include; modelling disease evolution and emergence; large scale knowledge and image based biomedical modelling; holistic energy aware scheduling for distributed computing systems; computational approach to fracture of quasi brittle materials; topology optimisation of periodic structures for stent design; strontium and zinc to produce biomaterials for orthopaedic applications; and; pathways of biomass decomposition in hot compressed water. An ARC Future Fellowship was won by Dr HY Liu to study Fatigue Life Prediction of Nano-filler Modified Composites. Great achievements by our researchers – well done!

I would to thank all those companies and organisation who responded magnificently to my call for assistance in placing students to gain vacation work experience. The GFC has had a significant impact so this support has been particularly valued – thanks.

The opening of the Sir William Tyree Power Laboratory was inspiring to see how quickly this laboratory has been transformed.

I recently visited China to deliver an invited keynote address (sponsored by Engineers Australia) to the Chinese Academies of Science and Engineering on Industry-University relationships in Australia. I also took the opportunity to visit Tsinghua University and Shanghai Jiao Tong University (I am currently an Advisory Professor) to progress collaborative research relationships.

Attending a Board meeting of the Warren Centre and meeting with the Chairs of the Foundations has been productive and is developing a common strategic vision.

The “Man-Go” electric car designed by our advanced engineering students attracted significant national media coverage and the 2009 Research Conversazione has been a great success again.

Archie Johnston
Research Conversazione 2009: a view from the ground.
The Faculty of Engineering & IT holds its annual Research Conversazione on the last day of the student academic year.

Research Conversazione showcases the high-level research from our Faculty’s final year students: both undergraduate and postgraduate. As Dean Archie Johnston noted in his inaugural Conversazione opening speech, the intention of the event is to stimulate “a flowing dialogue”. This dialogue is sustained by Engineering Sydney, led by Keiran Passmore, with its industry partners, our discernibly high achieving academics and researchers, and the constellation of bright students our Faculty attracts.

Dr Steven Farrugia, Vice President – Technology, of biomedical engineering company, Resmed Ltd commented that there is “very high quality & impressive research from the University of Sydney; it has always been this way.”

Yet, in the pursuit of excellence, one must understand one’s context and adapt to change.

Professor Sanjay Chawla, Head of the School of IT noted that one of the challenges for our Faculty is to develop teaching and learning so that our graduates can understand and be responsive to technological advances in our 21st century context.

To continue on this line, it’s clear that the nature of research has changed in the last 30 years. High level engineering can scare the living bejesus out of the layperson; the Large Hadron Collider case in point. Critics assert that utilizing its full capabilities (yet to be activated) could possible destroy life and the universe as we know it.

The President of the Civil Engineering Foundation and industry heavyweight, Peter Thornton, has this advice to our graduates: First, be passionate about what you do, and be clear about your passions to others as well.

Emeritus Professor Rolf Prince astutely caps this off by emphasizing the importance of effective teach of engineering fundamentals and then assessing “the real performance of our graduates applying these in industry.” To facilitate this process, Research Conversazione is an engaging forum for this flow of dialogue to continue, ascertaining “meaningful feedback from industry as to the technical performance of our graduates” as Emeritus Professor Rolf Prince suggests.

Recently appointed Associate Professor in the School of Aerospace, Mechanical and Mechatronic Engineering, Dr Hala Zreiqat, takes the angle that different influences, in the form of guest lecturers from other universities, offers a broader range of tools to focus on engineering specifics and fundamentals.

As I walked around the Engineering & IT precinct amidst the buzz of animated chatter, happy faces and thought provoking projects, I wandered into the School of Chemical and Biomolecular Engineering. I was warmly greeted by the administrative staff who were in good spirits.

I walked around the research presentation room, intent on catching the attention of a motivated student eager to discuss their project. I preface all this with the fact that my father was an electrical engineer, who guided me on the use of a soldering iron, basic components and finishing off circuits, when I was younger, much younger. This condition is known as “I have no idea about engineering or information technologies” but I am nothing if not curious.

I noticed a student, dressed professionally, engaging freely in discussion with an air of vibrancy in her gait and manner. So, I introduced myself and prepared for a barrage of quantum and string esoterica.

I was pleasantly surprised.

Erin McMullen, a 4th year graduand in Chemical and Biomolecular Engineering, explained clearly her project “Rheology of Concentrated Particulate Suspension: ‘memory’ phenomenon of suspension.” By respecting my limited knowledge of the topic (!) and communicating in common language, we actually started conversing, exchanging ideas, exploring the permutations of her methodology in her research, which she had already diligently explored and tested.

With this flow of ideas I asked her whether this rheological research could be applied to blood (a Newtonian fluid as I found out from Erin.) She paused, smiled and acknowledged that our conversation showed an opening to further research and practical application.

Erin confidently said that her learning experience at our Faculty was wonderful stating that her supervisor, Associate Professor Howard See “was a joy to learn with. His guidance was great and supportive.” Then I asked the cliché question: what are your aspirations? Erin has already garnered a graduate position at Unilever. I wished her a happy last day of her undergraduate studies.

I was illuminated by such diligence, willingness to communicate with the layperson, such respect and confidence: an openness to intellectual and technical collaboration.

Our Faculty has a solid tradition in research excellence. Research Conversazione is a glowing testament to the tradition. But does it stop there?

I conclude with a simple and powerful statement Dr Rafael Calvo from the School of Electrical and Information Engineering that offers a focus for now and the future:

“The keyword is conviviality…developing graduate attributes, particularly writing and communication skills. The idea is to develop an intimate Sydney experience.”

Keep the conversation going I say.
Professor Mike Dureau wins Chemical Engineer of the Year 2009

Chemical Engineer of the Year Professor Michael Dureau

Professor Michael Dureau has been awarded highly prestigious recognition for his outstanding achievements and service in the chemical engineering profession in Australia and New Zealand, as well as for his passion for humanitarian issues and mentoring of young engineers.

The 2009 Chemeca Medal was awarded to Professor Dureau at the recent Chemeca annual engineering conference in Perth, that was hosted by Engineers Australia, the Institution of Chemical Engineers, the Royal Australian Chemical Institute and the Society of Chemical Engineers New Zealand.

After graduating as chemical engineer from Sydney University, and attaining a Master of Applied Science from the University of New South Wales, Michael’s highly successful career in the chemical, water, controls and power industries included his appointment as the CEO of ALSTOM Power from which he retired in 2003.

He current roles include Adjunct Professor of Engineering at Sydney University, the Executive Director of the Warren Centre for Advanced Engineering, a member of the Industry Advisory Network of the University of Technology Sydney and also as a Fellow of the Institute of Company Directors.

While Michael’s career has constantly involved high demands on his time, he has always had a passion for mentoring and promoting the interests of young engineers. He has initiated and always supports programs designed to enhance the development of young engineers. Michael also has maintained his strong humanitarian concerns and is the Chairman of RedR Australia. RedR Australia offers a specialist register that enables aid agencies to find volunteer professionals in water and sanitation, shelter, logistics, public health, surveying, project management and social work to assist with international disaster relief.

- courtesy of Engineers Australia
Profile on Dean Archie Johnston

Full name: Archie James Johnston

Born: Montrose, Scotland.

Education: Early education in Montrose, continuing to the Heriot-Watt University, Edinburgh.

PhD in Civil Engineering, Heriot-Watt University, Edinburgh, 1978.

BSc (Hons) in Civil Engineering, Heriot-Watt University, 1974.

Archie comes to us with many achievements, accolades and titles. In his early industrial experience he worked as a design engineer on oilrigs in the UK and Scotland.

Archie arrived in Australia in the late 70’s working in Northern Queensland and then moving to Port Hedland in Western Australia soon after. In that time Archie had consulted for Woodside Petroleum and Newman Mining.

In a short time Archie attained the position Research Fellow at the University of Western Australia. In 1984 Archie was appointed as Lecturer at James Cook University and rose through the hierarchy to Head of Department and ultimately Acting PVC (Academic Support) in 1997.

He was the appointed the title of Dean at the University of South Australia. Archie held this post from 1997 to 1999. In 1999 he made his move to the University of Technology, Sydney and stayed for 10 years.

Today, Archie is at the helm of our Faculty, aware of the Faculty’s overarching strengths, exciting challenges, our solid tradition and is setting out to strategically develop our Faculty with these cornerstones in mind.

Archie sees the strengths of our Faculty as our reputation, a strong tradition of research excellence that is continued to this day with our Faculty’s recent ARC successes. His vision is to capitalize on these strengths, maintaining them and develop them further.

Archie foresee the challenges to Engineering & IT as optimising our Teaching & Learning, as well as ramping up our local, national and international marketing.

Archie played amateur football in Scotland & UK. When he worked in Western Australia Archie played first division football in WA for Morley Windmills Soccer Club. Another personal achievement is that he completed the Boston Marathon in his 40s in around 2hrs 30 minutes.

Today Archie looks after his five daughters and one son who are between the ages of 6 and 13.

Engineering Sydney, the staff and students of the Faculty of Engineering and Information Technologies and our loyal esteemed alumni warmly welcome Dean Archie Johnston.