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60 Years of Chemical Engineering at the University

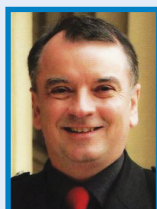
The appointment of Professor Kenneth G. Denbigh to the Chair of Chemical Technology, in the academic year 1955-1956, marks the beginning of Chemical Engineering at the University of Edinburgh. 60 years later, the discipline continues to grow with currently 408 undergraduate students and 20 academics.

The formal inauguration of the Jubilee event was on the 15th October with the Chemical Engineering Diamond Jubilee Keynote Lecture delivered by Professor Geoff Maitland, immediate past president of the IChemE, on "Avoiding major climate change in a cleaner fossil fuels world: the challenges and opportunities for (chemical) engineers and governments". A Jubilee Alumni event has been organised for 20th February 2016. For further details please either visit <http://edin.ac/1lcMdzB> or contact tim.Krueger@ed.ac.uk.

The School of Engineering continues to invest in the discipline with 3 further academic appointments underway and the complete refurbishment of the teaching laboratories, with an investment of over £0.5M. The inauguration of the laboratory will take place in February 2016 as part of the Jubilee Celebration.

The Research Powerhouse in UK Engineering

Our research leads the UK, jointly with Heriot Watt university, as judged by the Research Excellence Framework (REF) expert sub-panel in General Engineering. The two universities form the Edinburgh Research Partnership in Engineering (ERPE), which exploits our combined research strength to advance fundamental knowledge and its application, with emphasis on challenges of global importance. In our joint submission to REF2014, 94% of our overall research activity was ranked as world-leading or internationally excellent. Combining this with the number of academic staff submitted to give Research Power (quality multiplied by volume), ours was the top Engineering submission in REF2014. This provides a strong platform to further develop our research, and to ensure that all of our degree programmes are up to date with the state-of-the-art in engineering practice.



New Chair in Future Infrastructure

An eminent engineer has been appointed to a new post that will help policymakers address large-scale challenges in transport and utilities. Professor Gordon Masterton will seek to work with industry and government in his new role as Chair of Future Infrastructure at the School of Engineering.

His arrival coincides with the UK Government's appointment of Lord Adonis to Chair the UK Infrastructure Commission.

Maria-Chiara Ferrari shortlisted for Women of the Future Awards

Dr Maria-Chiara Ferrari, a Lecturer in Membranes for Carbon Capture, has been shortlisted for the Women of the Future Awards, the movement recognising and nurturing young female talent in the UK. The Awards are open to women aged 35 or under and celebrate rising talent across business, culture, media and more. Since 2011 she has established the research and the experimental facilities for membranes for gas separation in the Institute for Materials and Processes.

School Development

The School code word in the last 3 years has been "GROW". Our academic staff number is up to 112 with 17 more appointments planned. Our taught student number has increased year on year to more than 1,600, the largest in the College of Science and Engineering. In parallel with this growth, the School has been tackling the difficult issues of capacity and quality of space to accommodate and provide services for this burgeoning population.

Taught students are now enjoying a modern classroom experience after extensive refurbishment of Classrooms, Lecture Theatre 2 (the 'mushroom'), Computing Laboratories and the main teaching laboratories. A major reconfiguration of the ground floor classrooms in the Sanderson building provides a new suite of ground floor rooms and a much-needed event space. We are looking forward to welcoming alumni, industrialists, and others to events in this suite.

We have sought out opportunities to increase efficiencies in the use of space and this has resulted in the Head of School and School Administration relocating to the first floor of the Sanderson Building in a redeveloped suite of offices. Other efficiency gains include the relocation of Stores to the erstwhile Classroom D/E in Alrick and the repurposing of the vacated space as a state-of-the-art laboratory for Materials Engineering. Former 'mothballed space' in the Fleeming Jenkin Building will be reincarnated as three new research laboratories in the areas of Agile Tomography, High Temperature Superconductivity, and Engine Combustion. These will be neighbours to a new laboratory for Chemical Reaction Engineering / Catalysis.

The School and the University have further estates plans to accommodate our expanded community, and we look forward to welcoming visitors, new staff and students.

Artemis Intelligent Power wins MacRobert Award - UK's premier engineering prize

HRH The Prince Philip, Duke of Edinburgh, presented the UK's longest running and most prestigious prize for engineering innovation to a team from Artemis Intelligent Power. Professors Win Rampen and Stephen Salter of the School of Engineering founded the company in 1994, to exploit their world-leading technology in computer-controlled hydraulic power transmission, which has many benefits, including very high efficiency. Artemis now employs 50 people and plays the key role in enabling the 7 MW offshore wind power generation technology now deployed offshore in Scotland and Japan by Mitsubishi Heavy Industries of Japan. The Artemis story was an important part of the REF2014 submission by the School of Engineering, which was the highest-rated submission in all of UK engineering (by Research Power, with HWU).



Professor Win Rampen, Professor Stephen Salter and Niall Caldwell collect the prestigious MacRobert Award

Delight as University of Edinburgh Start-up Crowned Converge Challenge 2015 Winner

Photon Force Ltd, founded by Richard Walker, a Post Doctoral Research Fellow at the School of Engineering, has won the 2015 Converge Challenge Award. Richard beat strong competition from five other finalists to win the £60,000 prize which includes £35,000 cash to start his business plus a further £25,000 in business support from a number of commercial and professional services organisations. Photon Force Ltd designs, builds and supplies scientific sensors that can detect and measure single photons precisely. While this technology is in high demand for many applications such as biomedical imaging, Richard identified that current systems are bulky, slow and restrictive. Photon Force has developed an integrated image sensor solution which will deliver significant competitive advantage with respect to current systems - a technology idea which impressed the distinguished Converge Challenge judging panel.



Dr Richard Walker of Photon Force collecting the 2015 Converge Challenge award

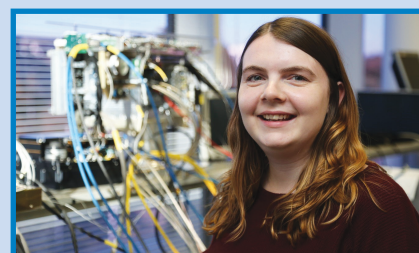
Student Awards Our students have had another very successful year winning prizes in various categories including:

Engineering/Clinical PhD Student Wins Prestigious Award: Mark Hughes, a student funded by the Edinburgh Clinical Academic Training scheme, has won the 2015 RCSE (Royal College of Surgeons of Edinburgh) Syme Medal for his PhD thesis on cell guidance on silicon. Mark is a trainee neurosurgeon, now returned to his clinical training after this "intercalated" PhD between 2011-2014. Mark was supervised by Professors Alan Murray (Engineering) and Mike Shipston (Biomedical Sciences).

Fiona Muirhead wins 1851 Royal Commission Industrial Fellowship: Fiona, who is supervised by Professor Bernie Mulgrew, School of Engineering and Professor Ian Woodhouse, School of Geosciences, was awarded the fellowship for her proposal for Synthetic Aperture Radar Interferometry (InSAR). Fiona has been developing this project at Selex ES under the supervision of David Greig, Lead Systems Engineer. The project will help geoscientists and environmental monitoring agencies working in areas affected by landslides, flooding, earthquakes and deforestation.

MEng Graduate Wins Award: Mrs Louise Williamson, a 2015 Civil Engineering MEng graduate, has won the Institutes of Asphalt Technology Golden Branch award of the Scottish Branch. This award accompanied by a prize of £500, was given for her final year dissertation "Using ground penetrating radar to assess the condition of bridge deck surfacing".

Chloe Scott awarded Fellowship: Chloe Scott, a current MD (Medicine) student supervised by Dr Pankaj, has been awarded a British Orthopaedic Association Hip and Knee Reconstruction Fellowship. Chloe is currently visiting centres of excellence in the U.S. to gain knowledge, experience and cultural perspectives associated with hip and knee reconstruction.



Fiona Muirhead



Professor Jason Reese awarded Lord Kelvin Medal

Professor Jason Reese, Regius Professor of Engineering, and Director of Research in the School of Engineering, has been awarded the 2015 Lord Kelvin Medal by the Royal Society of Edinburgh.

The award is for his "outstanding contribution to the field of Engineering both within the UK and internationally and for his commitment to the public engagement of science".

New Fellows in the Royal Society of Edinburgh

Professors Hugh McCann and Alistair Borthwick have been named as Royal Society of Edinburgh Fellows, which reflects both their excellent and active careers. Professor Alistair Borthwick, the Director of Discipline in Mechanical Engineering, was also recently elected as a Fellow of the Royal Academy of Engineering as an authority on environmental fluid mechanics, in particular for his contributions to computational hydraulics.

LinkedIn groups for Alumni, Staff and Students

The School now has 4 LinkedIn groups which we hope will grow into useful networks of current students, staff and alumni. We anticipate the groups being used to assist with alumni engagement and as a networking tool for students seeking Industrial placements. The groups, split by discipline, are available at:

Chemical Engineering: <http://bit.ly/UoEChemEngLinkedIn>

Civil & Environmental Engineering: <http://bit.ly/UoECivilEngLinkedIn>

Electronics & Electrical Engineering: <http://bit.ly/UoEElecEngLinkedIn>

Mechanical Engineering: <http://bit.ly/UoEMechEngLinkedIn>

Internet Giant Tencent Strikes Strategic Partnership With School Startup Sensewhere

Chinese Internet giant Tencent, the maker of WeChat, has pinned down a significant and strategic investment with indoor mapping School startup Sensewhere (www.sensewhere.com). Sensewhere is a spinout company co-founded by Professor Tughrul Arslan, and emerged from his research in the Research Institute for Integrated Micro and Nano Systems at the School of Engineering. Sensewhere's technology provides location information in areas where there is little access to satellite GPS data. Instead, Sensewhere's patented technology uses a small footprint and low power software that runs on smart phones and wearable devices to map Radio Frequency signals automatically like Wi-Fi, Bluetooth, and any signals from IoT (Internet of Things) devices in a dynamic database on the cloud.

Alumni News

Edinburgh engineer crowned Young Woman Engineer of the Year

Senior hardware engineer Naomi Mitchison, who graduated with an MEng in Electronic and Electrical Engineering in 2009, has been named the Institution of Engineering and Technology's (IET) Young Woman Engineer of the Year for her inspirational work with laser warning systems for military aircraft.



Naomi Mitchison receiving her Award from Steph McGovern

Engaging Alumni

The School of Engineering now has an Alumni Relations and Outreach Committee, chaired by Professor Alistair Borthwick. If you would like to become involved in School events and activities for you and your fellow alumni, please get in touch by emailing Eng.Alumni@ed.ac.uk