

UNIVERSITY OF
BIRMINGHAM

School of Electronic, Electrical and Computer Engineering Community

Part of
THE EPS COMMUNITY



Spring 2014

Greetings,

I am delighted to introduce this latest edition of the newsletter, at a very exciting time in the development of your School.

We are about to enter new areas of research, with the appointment of a new Professor in the area of Space Environment and Radio Frequency Engineering, with support from DSTL and the Royal Academy of Engineering. The research will involve studies of solar induced space weather phenomena and methods of mitigating their potentially devastating effects on satellite systems, including communications, navigation and earth observation systems. The work will include satellite payload design incorporating sensors for studies of the sun, magnetosphere and ionosphere. This builds up on the work on space weather by [Professor Paul Cannon](#) and his team in the Poynting Institute and picks up on the theme of "frontiers of science at the extremes of engineering" that was highlighted by the first College of Engineering and Physical Science [Distinguished Lecture, by Professor Sir Martin Sweeting](#) at the beginning of March.

Our long term research effort in automotive radar has also received a new boost with the award of a major EPSRC grant in the area of high resolution THz automotive radar systems.

We are embarking upon a major expansion of the Birmingham Centre for Rail Research and Education, with investment from the Birmingham University Dynamic Investment Fund, which will include the appointment of three new academic staff in EECE. Associated with this expansion is the launch in 2014/15 of a new undergraduate degree programme in Electrical and Railway Engineering. We are also expanding our postgraduate degree programme activity. The MSc in Electrical Power Systems is running for the first time during the current academic year, and a planned expansion of this will happen in 2014/15. Furthermore, in 2014/15 we will be launching an MSc in Electrical Transportation Systems and Infrastructure, a joint enterprise with Nottingham University that will address the increasingly important need in our society for green and effective transportation systems.

We are busy adapting to changing technological needs and challenges, while remaining committed as ever to producing graduate engineers who can make a real difference to the society of the future.

I'd also like to take this opportunity to remind you of your invitation to attend the first [EPS Reunion](#). Similar to that of the previous University Annual Alumni Reunion event, we are inviting all former students of the School to return to campus on Saturday 14th June to reminisce with us.

I hope you enjoy reading the articles in this newsletter, and as ever we wish you

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well in your own endeavours.

With best wishes,

Dr Peter Gardner
Head of School
Electronic, Electrical and Computer Engineering

News from the School of Electronic, Electrical and Computer Engineering

Hurry! Only 24 hours to secure your 'early bird' place at the EPS Reunion 2014!



Do you have fond memories of your time at the University of Birmingham? Do you still keep in touch with those classmates who you pulled all-night study sessions with, to get that last assignment finished? As a graduate of the School of Electronic, Electrical and Computer Engineering, we'd love for you to join us on campus on Saturday 14 June 2014 for a Reunion. [Read more.](#)

10 ways the University of Birmingham has changed the world



Can you help us to celebrate the impact that staff, students, and alumni have had on society?

With eight Nobel Prize winners amongst former staff and students, and world-leading researchers on everything from the Big Bang to Shakespeare, Birmingham research continues to transform lives. The University needs your nominations for a new 'top ten' list of the alumni, staff, and students who have had profound impact through their research. Visit www.birmingham.ac.uk/10ways to cast your vote by **Friday 4 April**. Winners will be announced in May.

EECE academic recognised in New Year's Honours list



Congratulations to Professor Paul Cannon for being awarded an OBE for services to Engineering in the New Year's Honours list. Paul is Professor of Radio Science and Systems in the School of Electronic, Electrical and Computer Engineering and Vice President and Treasurer of the International Union of Radio Science, as well as Editor of the journal Radio Science. [Read more.](#)

A virtual tribute to the crew of Her Majesty's Submarine A7



The University of Birmingham's Human Interface Technologies (HIT) Team has been invited to take part in a unique maritime heritage project, part of which involves the virtual recreation of one of Britain's earliest submarines – a vessel and its crew that, sadly, met an untimely end 100 years ago off the Cornish coast. [Read more.](#)

EECESoc update



EECESoc have just voted in their new committee. Read about them and what they're been up to from incoming Chair, Helen Watson, [here](#).

Early successes in EECE student telerobotics projects



November and December saw a number of successful conclusions to early project research and teaching outcomes for undergraduate and postgraduate students alike. Focusing on the topic of telepresence or telerobotics, the achievements range from the development of a new, very low-cost robot arm and hand to innovative designs for hospital robots! Read more [here](#).

Professor Sir Martin Sweeting delivers the inaugural EPS Distinguished Lecture



On Wednesday 5th March Professor Sir Martin Sweeting, Director of the Surrey Space Centre, delivered the first EPS Distinguished Lecture. Students Ceri Bradshaw, Rob Brennan-Craddock and Graham Kirkby summarise the event. [Read more](#).

EECE students' first submersible dive voted a complete success



EECE Final Year Students have successfully deployed their remotely operated submersible vehicle into the cold waters of a flooded quarry near Tamworth. The culmination of many months of hard work, the vehicle was piloted to depths of over 17m and used to identify a range of underwater structures and wildlife whilst being controlled from an operator station located on the quarry's edge. [Read more](#).

80 school children build robots to tackle global challenges at FIRST LEGO League competition



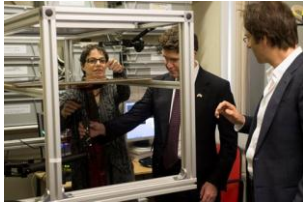
In January EECE hosted the West Midlands regional tournament of this international Lego League competition. Eight teams of up to 10 school children presented their projects on mastering natural disaster and displayed their prowess on designing, building and programming a robot, using lego, to clear-up and make people safe in the aftermath of an earthquake and tsunami. [Read more](#).

Hydrogen could save regional railways



There is increasing talk of electrification of the UK's railway network. But electrification is an expensive business, requiring much new hardware including masts, wiring, substations and so on. Such an investment can be justified for heavily used lines such as urban metro systems and inter-city routes, but not on less used lines such as regional routes. Railways will continue to need an energy supply system that does not rely on electrification for the foreseeable future. [Read more](#).

US Ambassador to the UK, Matthew Barzun, visits Birmingham



The College of Engineering and Physical Sciences was honoured to welcome Matthew W. Barzun, Ambassador of the United States of America to the United Kingdom of Great Britain and Northern Ireland as well as Christine Prince, US Embassy Second Secretary, in February as part of a visit to the city of Birmingham. [Read more.](#)

EECE Project Open Day



The School is delighted to invite you to the annual Project Open Day event on Thursday 1st May. Final year MEng and BEng students will be presenting the results of their projects along with the 3rd year MEng students who have worked on group projects. There will be opportunities to speak to students, see their projects and also watch the Robot Race. [Read more.](#)

National Women in Engineering Day



Monday 23 June marks the first National Women in Engineering Day launched by the Women's Engineering Society. It is intended as a day dedicated to raising the profile and celebrating the achievements of women in engineering. We are looking for women with a story to tell. Do you work in science or engineering and would like to get involved? The programme is being developed as we speak so if you would like more information or want to take part please [email us](#) or keep an eye on [our website](#).

New staff in 2013/14

There have been a number of appointments in the School this term. [Read a summary of our new staff online here.](#)

Your School needs you...

Would you be able to share some of your time, expertise or connections to help our students to succeed?

We're currently looking for help and support from alumni with the following:

- EPS Open Days, 26-27 June. Could you donate a couple of hours of your time to pop back to your old school and speak to our prospective students about your time at Birmingham? For more information and to get involved [email us](#)
- All women in science and engineering. As part of National Women in Engineering Day, 23 June, the EPS Community is hosting a number of activities, conversations and events designed to celebrate women in engineering and scientific careers. If you work in science or engineering and would like to sit on our panel, get involved in the conversation on twitter, or come along to our evening event, please get in touch by [emailing us](#)

There are many ways in which you can give a little back, from providing a career profile, to mentoring a student. **Details can be found [online](#) and [email us](#) if you would like to get involved.**

Events taking place shortly...

School events

[Electronic, Electrical and Computer Engineering project open day](#)

01/05/2014, 10:30am-4:30pm

Gisbert Kapp Building (G8), University of Birmingham

College events

EPS Inaugural Lecture Series

Professor James Tucker – “Going beyond the Molecule: The Chemistry of Connections”

10/04/2014, 5:15-7:30pm

Lecture Theatre 203, Haworth Building (Y2), University of Birmingham

The lecture will describe and focus on an area of science called supramolecular chemistry, which is often described as "chemistry beyond the molecule". Supramolecular chemistry goes beyond traditional molecular chemistry, which largely focuses on how individual molecules are made, to focus on what a molecule can do once it is made. In particular it concerns how molecules interact with one another and how an understanding of these so-called intermolecular interactions can lead to ordered assemblies, controllable functionality and the mimicry of biological systems.

For more information on other lectures in the EPS Inaugural Lecture Series please visit www.birmingham.ac.uk/eps/inaugural

British Science Festival Event

Details to be confirmed

Keep a look-out here as for more information on how we'll be celebrating the British Science Festival at the university. More information to follow soon!

National Women in Engineering Day

23/06/2014

Details to be confirmed

On 23rd June the EPS Community will be celebrating the achievements of women in the field of engineering as part of the first National Women in Engineering Day (NWED). Keep a look-out here as for more information on our plans for the day!

EPS reunion

14/06/2014

College of Engineering & Physical Sciences, Edgbaston Campus

As a graduate of one of the nine schools in the [College of Engineering & Physical Sciences](#) (EPS), you are invited back to campus on 14 June 2014 for a Summer Reunion to get together with your fellow alumni to celebrate your experiences, accomplishments and friendships at the University of Birmingham.

To book your place, please follow the online registration link below or download the appropriate booking form and return by post, fax or email. <http://bhamalumni.org/eventregistration>

University events

Hong Kong Alumni Gathering

02/04/2014, 7-9pm

Shore 3rd Floor, The L Place, 137-141 Queens's Road, Central Hong Kong

[Melbourne Alumni Gathering](#)

10/04/2014, 6:30-9pm

Seasons Botanic Gardens Hotel, Orient East Bar and Restaurant, 348 St Kilda Road, Melbourne VIC 3004

[Fab 'n' Refresh](#)

26/04/2014, 10pm

Joe's Bar, Guild of Students, University of Birmingham

[Sydney Alumni Gathering](#)

29/04/2014, 7-9pm

The Zeta Br, Level 4, 488 George Street, Hilton, Sydney, Australia

[Brisbane Alumni Gathering](#)

Pig 'N' Whistle Riverside, 123 Eagle Street, Brisbane, Australia

[Alumni Sports Day](#)

14/06/2014, 9am-5pm

University of Birmingham

Do we have the right details for you?

please visit your.bham or email alumnioffice@contacts.bham.ac.uk.

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