

Department of Electronic, Electrical and Systems Engineering Community

Part of
THE EPS COMMUNITY



Spring 2018

Welcome to the Spring 2018 Alumni Newsletter from the Department of Electronic, Electrical and Systems Engineering. It has been another busy and exciting year in the Department. In the features that follow this introduction you can find, amongst many other things, the latest on the plans for the [new School of Engineering building](#), news of the recent award of the prestigious [Queen's Anniversary Prize](#) to the Birmingham Centre for Rail Research and Education, and further news about the work of the Human Interface Technologies Team in [helping hospital patients](#).

On the taught programme side we have carried out further developments of the degree programme structures, following on from the recent introduction of the shared first year now taken by undergraduates from all three disciplines in the School of Engineering: EESE, Civil Engineering and Mechanical Engineering. A key new feature introduced into the degree programmes since the formation of the School of Engineering has been the integrated design projects (IDP), where students from EESE, Civil and Mechanical Engineering work together on a more wide-ranging project idea than they could within their individual disciplines. This year the IDP has been introduced into year 2 for the first time, with the theme of "Kinetic Architecture through Structural Mechatronics" or, to put it more colloquially, making big things move. With requirements for control circuit design and programming, sensors, electromagnetic actuators and motors, and the supply of electrical power our EESE students are vital experts at the heart of these projects. Students worked together in multidisciplinary teams to produce reference designs for large moving structures across the world, with each team focussed on a specific country with its unique requirements and constraints. Challenges have been developed in conjunction with Arup and every project explicitly aligned to the United Nations

Sustainable Development Goals and carried a business plan. The culmination of the project was a very successful Integrated Design Showcase event on 22 March 2018 in the Great Hall, where the student groups displayed posters showing the outcomes of their projects. A team of academic staff and representatives from Arup assessed the projects and awarded prizes.

Another key development is our introduction of a new undergraduate degree programme for 2018/19 entry onwards, in [Mechatronic and Robotic Engineering](#). It will run alongside the existing Electronic and Electrical Engineering programmes, sharing some core material but also highlighting the increasing importance of the integration of sensors, electromechanical energy conversion, intelligent control and virtual, augmented and mixed reality approaches into user friendly autonomous systems.

I hope you find the snapshot of some of the activities in the Department, School and College in the rest of this newsletter interesting. As always, we are keen to hear from you with comments, reactions or suggestions, or with your own news stories that you might like to share in future alumni newsletters. I would also draw your attention to the “We Are Birmingham” project highlighted below, which provides an opportunity for you to [share your career story](#) for the benefit of those who are following in your footsteps.

With best wishes

Professor Peter Gardner
Head of Department



New Engineering Building

Work has begun on a new School of Engineering building, due for completion in 2020. It will bring together many engineering disciplines into one state-of-the-art building. The new building will provide different and more flexible ways of working that will use the space to its best advantage.

[WATCH THE FLY-THROUGH >](#)



Queen's Anniversary Prize for railways research

Birmingham Centre for Railways Research and Education has been awarded a Queen's Anniversary Prize for Higher Education for its contribution to making our railways safer and more efficient.

[FIND OUT MORE >](#)



Virtual Reality helps intensive care patient

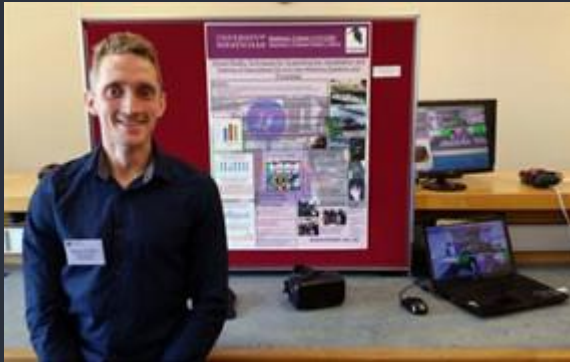
Torbay and South Devon NHS Foundation Trust has teamed up with the Human Interface Technologies Team to trial their "Virtual Reality Wembury" project to improve patient rehabilitation.

[FIND OUT MORE >](#)

WE ARE BIRMINGHAM

Our 300,000 alumni all share one thing in common: the University of Birmingham. From recent graduates to industry leaders, you are making important things happen. Join the "We Are Birmingham" project and share your story with those following in your footsteps. You can inspire our students and offer an insight into the vast array of opportunities waiting for them; whatever you're doing, they want to hear from you. Plus, anyone who submits a profile before 1 July will be entered into a draw to win a hoard of University merchandise. Share your Birmingham story and help shape their future.

[SHARE YOUR CAREER STORY >](#)



Alumni spotlight

In December, MEng Electrical and Electronic Engineering graduate Matthew Cottrell delivered an innovative VR-based training for the Shell Prelude floating liquefied natural gas platform in Western Australia.

Share your [career](#) or [email us](#) your story. We'd love to hear from you.

[FIND OUT MORE >](#)

**GIVE.
VOLUNTEER.
CHANGE
10,000 LIVES.**

Get involved

Since the 10,000 Lives campaign launched in September, alumni and friends of the University have changed the lives of 1,062 young people. 200 of these are students in the College of Engineering and Physical Sciences!

Will you step forward and change a life?

[FIND OUT MORE >](#)

University Reunion 2018

The Alumni Reunion 2018 is a great opportunity to rediscover what made Birmingham "home" for you and renew your lifelong connection to this special place. Reconnect with friends and classmates and see how Birmingham has grown into the university it is today. Join us for a day of celebrations including campus tours, stress-free lectures, a chance to visit some of the latest additions to campus such as the new Library, Sports Centre and

Collaborative Teaching Laboratories, and plenty of time to reminisce. In the morning you will visit us in our department and hear how we have changed since you were last with us. You never know there may be some familiar faces there with you!



[FIND OUT MORE >](#)



Society news: two new student groups

There are now seven student groups in our Department: [EESE Soc](#), [DroneSoc](#), [WISE](#), [oSTEM](#), [SATNAV](#) and the brand new [RailSoc](#) and [UBeRacing](#).

The College of Engineering and Physics Sciences is home to 29 societies. It's been an amazing year of careers activities, volunteering,



EPS Societies' Awards 2018

Were you a member of a society? Wish you had been? Or have you been impressed reading about our [student groups](#)? Why not nominate them for an EPS Societies' Award.

These Awards celebrate the lengths our students go to make the University a better place. Join our celebrations by nominating your

competitions and, of course, social events so there's plenty to tell you.

[FIND OUT MORE >](#)

society; maybe they'll win the much coveted *Society of the Year* trophy.

[NOMINATE >](#)

News Round-Up

Professor David Phillips, alumnus and Past President of the Royal Society of Chemistry, delivered the latest [EPS Distinguished Lecture entitled "Light Up Your Life"](#).

After a generous donation from a University of Birmingham alumnus we are delighted to announce the [T.E.H. Scholarship](#), a new postgraduate award for 2018 entry.

Professor Bob Stone, Director of the Human Interface Technologies (HIT) Team recently won a [LiveWire Global Award for his team's contribution to medical creativity](#), vision and ethical practice.

Population growth, sustainable energy, healthcare, urban migration and an ageing population are some of the biggest challenges facing society today. Our academics are [helping to tackle these global issues](#).

UK Rail sector launches ground-breaking partnership between industry and universities to deliver [£92m Centres of Excellence](#).

Population growth, sustainable energy, healthcare, urban migration and an ageing population are some of the biggest challenges facing society today. Our academics are [helping to tackle these global issues](#).

[New scholarships](#) available for Masters of Railway Systems Integration.

The University has signed an agreement with the University of Science and Technology Beijing to create [new education programmes for Chinese students](#).

[Two researchers have been recognised for teaching excellence](#) at the Engineering Impact Awards 2017 organised by National Instruments.

Research has identified new ways of [reducing noise, vibration](#) and other environmental impacts associated with railway systems.

School children have fun and learn new skills at [First Lego competition](#).

Professor Costas Constantinou discusses the [magic of radio](#) at his recent inaugural lecture.

EESE researchers deliver a [unique workshop for Brownies and Guides](#) focusing on virtual and augmented reality.

Five PhD students from the Birmingham Centre for Railway Research and Education spent the evening [celebrating Chinese New Year with British Prime Minister](#), Theresa May, at 10 Downing Street.

Broadcaster, journalist and University honorary graduate [Simon Singh delivered the 2017 EPS Christmas Lecture](#). Our scientific journalistic society SATNAV interviewed him during his visit.

From the many inspiring research projects across the University, we've selected three that have the potential to change lives. Which one is your favourite? [Vote for the project you're passionate about](#) and the University will fundraise for the winner over the next year.

Events

A full list of alumni events, including Reunions and Global Gatherings, is available [online](#). Here are just a few events coming up in EESE and the College of Engineering and Physical Sciences:

Wednesday 6 June

[EPS Societies' Awards](#)

Celebrate with your student society as we recognise their extraordinary achievements with a gala, black-tie evening.

Time: 7pm-11pm

Venue: Great Hall, University of Birmingham

Wednesday 4 - Saturday 7 July

[5th UK-CN Steel Research Forum](#)

The UK-China Steel Research Forum is a well-established biennial academic conference for steel researchers across the UK and China, with support from major steel-making companies, steel research institutions and research funding bodies from both countries.

This year's conference will be held in conjunction with the 16th Conference of Chinese Materials Association in the UK on Materials Science and Engineering.

Wednesday 19 September

[London Mathematical Society Popular Lectures](#)

We are proud to begin the 2018/19 Birmingham Popular Mathematics Lecture series with the London Mathematical Society Popular Lectures, which are suitable for all who have an interest in Mathematics, presenting exciting topics in mathematics and its applications.

This year Katie Steckles (Maths's Greatest Unsolved Puzzles) and Jennifer Rogers (Risky Business) will be speaking

Time: 6:30-9pm

Venue: Bramall Music Building, University of Birmingham

Saturday 29 September

[University of Birmingham Alumni Reunion](#)

Join us for the big Anniversary Reunion on Saturday 29 September 2018. Whether you're celebrating your 50th anniversary or your 5th anniversary, come back to the Edgbaston campus and celebrate your University with staff, students and fellow alumni.

Time: 10am-5pm

Venue: University of Birmingham, Edgbaston Campus



You are in control of your data. We want to stay in touch with you and keep your information in accordance with your wishes. You will be kept updated with news from our campus, including research, educational activities and courses, events, alumni activities, and opportunities to support our fundraising and volunteering programmes. Depending on [your preferences](#), you will receive communications via post, email, telephone, SMS text messages, and social media. We would like to ensure that our interactions with you are appropriate and cost-effective. We will pay attention to your responses (including e-tracking) and, from time to time, may use your data for profiling, wealth screening, targeting, and research purposes. Your information will be [held securely](#) by the University of Birmingham and will only be made available to our academic & administrative departments, recognised alumni groups, and trusted agents acting on behalf of the University. We will never sell your personal data or share it for non-University of Birmingham programmes. If you decide to donate to the University, you can choose whether to give anonymously or be recognised on our Donor Rolle of Honour. Information on how your data is held and used is set out in our Data Protection Statement at www.birmingham.ac.uk/dataprotection. If you wish to opt-out of any contact or have any

questions about your personal data, please contact Luke McGarrity on L.McGarrity@bham.ac.uk. Our Inland Revenue Charities reference number is X7237.