



THE UNIVERSITY of EDINBURGH School of Engineering



Employ.Eng Newsletter

Issue 4: July 2021

Welcome

Welcome to this issue of the School of Engineering Employer Engagement (Employ.Eng) newsletter! The newsletter is produced by the School of Engineering Placement Team three times a year with the aim to keep our employer partners informed about placements and other student focussed activities that might be of interest.



A digital version of the School of Engineering buildings for our online graduation event.

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How to get involved

Placements

We are currently looking for companies interested in hosting placements starting in 2022 for the following disciplines:

- Chemical Engineering
- Electronics & Electrical Engineering
- Mechanical Engineering

More information on page 2.

Offer to be interviewed by our 1st year students

See our LinkedIn post for more information.

- <https://edin.ac/3kT3Rjz>

Attend the Engineering day at Careers Week

- See page 7

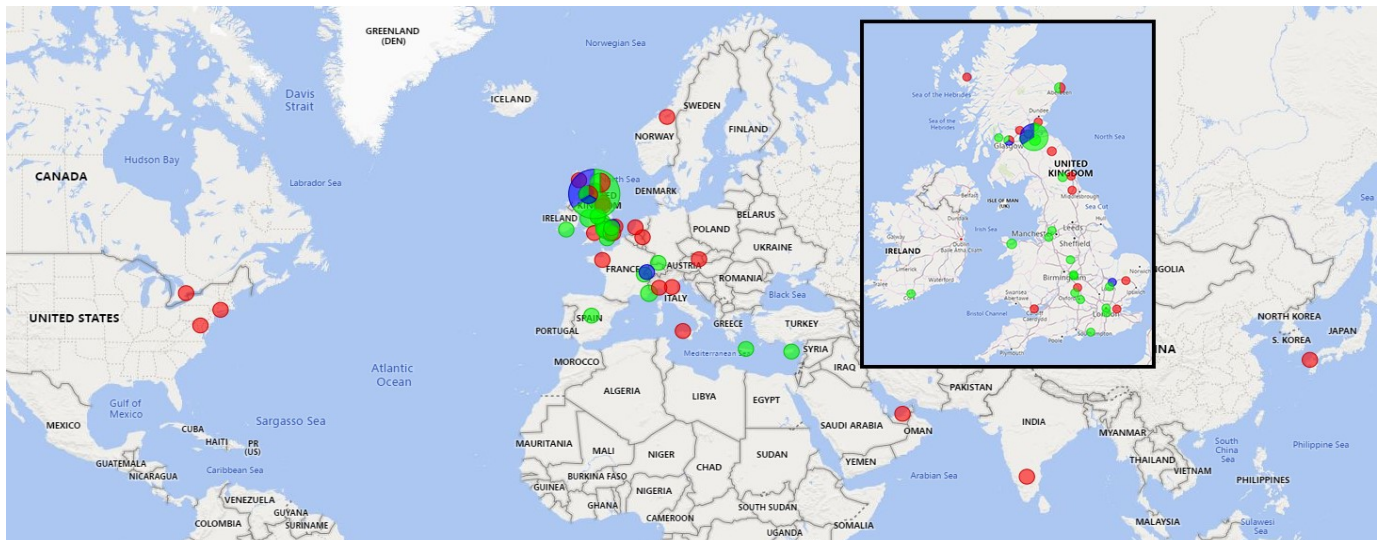
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Industrial and Overseas Placements



Location of School of Engineering credit bearing Industrial and Overseas Placements in academic year 2020/21. Red - Chemical Engineering, Blue - Electronics & Electrical Engineering, Green - Mechanical Engineering. Due to travel restrictions, placements outside the UK were either run remotely or were in the student's home country.

As for so much of our lives, the story of the 20/21 placements has been one of lockdowns and travel restrictions. For the entirety of the academic year the University was unable to approve student travel for placements outside of the UK and our Mechanical Engineering students were just starting as the UK went back into lockdown after Christmas. However, we were delighted that 93 students were able to undertake a placement, working with 75 different host organisations across 17 countries. Due to the travel restrictions, the international placements were run remotely or were in the student's home country. It was great to be able to maintain those international links but our students are keen to start travelling again. Thank you once again to all our host organisations who have supported our students through these unusual times.

For academic year 21/22, 42 placements have started this summer and, with the University now approving international travel, many of the students with remote placements are hoping to spend at least some time with their host organisation. We will begin recruiting for the Mechanical engineering cohort in September as well as looking forward to next summer when the Chemical Engineering and Electronics and Electrical Engineering students start their placement.

We will be emailing all our placement partners in August to enquire if you are interested in hosting a placement starting in 2022. If you haven't previously offered a placement and would be interested in finding out more please email Engineering.Placements@ed.ac.uk and we'd be happy to talk to you about it.

First year team reach Grand Final of Engineering for People Design Challenge

A group of first year engineering students have made it through to the Grand Final of the Engineering for People Design Challenge, a national competition run by Engineers without Borders. The annual competition challenges student teams to design engineering solutions to real-world problems, taking into account the complex economic, legal, social, ethical and environmental contexts in which their solution would be implemented. The team won praise from the judges for their idea for a solar-powered desalination plant to provide clean drinking water for residents in the coastal towns of Lobitos and Piedritas in northern Peru. Find out more about the team's success [here](#).

Interview with Sara Pelligrini from STMicroelectronics: the longer term benefits of taking on placement students



One of the STMicroelectronics placement students during the poster session that is hosted every summer.

When STMicroelectronics initially started engaging with the University of Edinburgh in 1999 after the company acquired university-created VLSI Vision Limited, it would have been hard to envision the strength of collaboration that would have developed over 20 years down the line. Alongside her role as a Pixel Architect, Sara Pellegrini is also involved in student recruitment at undergraduate and postgraduate level for STMicroelectronics, whilst championing the PhD programmes across the UK and France to develop the research and development arm of the company. It is the strength of our students, she tells us, that makes this cross-sector collaboration successful.

“We really value UoE student’s ability to solve problems and their fundamental knowledge of Analogue and Digital design especially” she commented: “We value their ability to adapt to challenges and their capacity to gain the transferrable skills necessary to the workplace very quickly.” Taking part in the Industrial Liaison Board allows the company to keep track of these valuable skills and to articulate the qualities needed in the next generation of engineers and ensure all students, regardless of where they are in their academic journey, are learning industry-relevant skills.

Once students have used tools outside of a university environment and have had the experience of working to different time scales, Sara tells me, there is far less training to be done and therefore more incentive to hire. Out of the 13 students STMicroelectronics take on, when possible, 1 or 2 are hired each year.

Part of the success behind the numbers, according to Sara, comes from the fact that STMicroelectronics engages with placement students at various stages in the process from a summer internship in third year to a six-month placement a year later. “This is a good way to get to know the student’s strength and train them on all the tools they will be using during their six months placement” she explains. Adopting this tailored approach also allows the company to cater the longer placement project to the student.

One way to promote adaptability in incoming placement cohorts, she suggests, is to encourage students at different points in their placement journeys to collaborate as a team. By working together, they can help to collectively foster a reassuring work environment and this alleviates the fear of entering the workplace.

Engaging with students is also an important way to explore the next generation of ideas. “At the moment, we have four PhD placement students”, she explains. “They are important to us because they allow us to explore new

avenues and keep an eye on what's coming next. In a similar way, collaborating with the University on various European projects allows us to explore important R&D concepts and sometimes leads to very successful products further down the line."

When asked what additional advice she would give companies thinking about taking on a placement student, Sara explains that placements are a great opportunity for companies to build a workforce which is tailored to their needs. "It is a lot easier than hiring a stranger. Our Analogue and Digital teams are composed mainly of former students we have engaged with early on in their career. Even for the students we do not hire, it is always a fruitful experience for them, and a lot of students are hired soon after graduation." she adds. As Sara concludes, this engagement is the secret to fostering a successful relationship 20 years down the line: one we hope will keep going for (at least) 20 more.

"Being close to completing my six-month project I have worked for STMicroelectronics for almost nine months in total. I started as a summer intern last year and returned to the company in January to complete my MEng placement.

Working for ST has given me the sense of working for a large company with many different branches spread across the world. However, at the same time it was very easy for me to get to know people from the company despite working remotely.

I also find the help I have received from my industrial supervisor invaluable. They made certain I understood the design and manufacturing process of semiconductors and how the work our team did fit into this chain. During my time at ST I have also been exposed to project planning and progress monitoring methods used in a professional environment, where learning from prior experience is crucial for the success of the company. I am sure the experience I gained during my placement is applicable in a variety of engineering fields.

In addition to developing my technical skills, I also feel that I have become a more aware student, which has already helped me in class. Knowing that there is a market with a real demand for high quality products outside the classroom makes me think how I could apply what I am taught in a real-world project."

Marek Munko, 4th year MEng Electrical and Mechanical Engineering student

"My MEng internship at STMicroelectronics has been quite pleasant so far. I enjoy the online work environment and spirit of my supervisors and colleagues. They are very supportive and understanding, and clarify any and all questions I have. Moreover, the project that I'm working on is quite challenging but it takes off right after where my lab courses in UoE have ended. So all the knowledge gained in academia has translated very well into an industrial context. The project involves working on technology that will have an impact within the company and possibly in the semiconductor industry. Overall, I am very glad and thankful to have gained this opportunity and I am quite hopeful for a chance in the next few months to work on-site and meet my team in person!"

Tej Bhatti, 4th year MEng Electronics and Electrical Engineering student

Spotlight on Student Societies

The School of Engineering is home to many innovative student societies. In this edition we will focus on our Energy & Sustainability and our Engineering for Change society.

The Energy Society



The Edinburgh University Energy and Sustainability Society (ESS, previously known as Energy Society) aims to educate students from all disciplines about the energy sector in an effort to bridge the gap between academia and industry. This society seeks to create awareness about issues relating to climate and future energy systems as well as act as a useful stepping stone for those aiming to build careers in this all-important field.

In previous years, the society has organised talks and networking events with company representatives and CEOs, leisurely meet-ups and discussions on pressing matters surrounding the sustainability conversation. Our flagship event last year was a talk with the CEO of Ovo Energy, Stephen Fitzpatrick in a jointly hosted event with the Edinburgh Entrepreneurs. This year, we aim to diversify our operations by launching our own fortnightly publication, The Grid. This will be centered on the Energy Industry, relevant developments and information on career paths for our student members and sponsoring companies to profit from. Also, we aim to start student-led energy consultancy services in addition to company events and discussions from previous years. We are on the lookout for students who would be interested in helping us out with writing, marketing, web development and company relations.

Drastic changes that humanity is currently making to its energy systems -- and changes that it will soon need to make -- have heralded a host of new technologies, research interests and debates. Unfortunately, there are few forums for students to gain a first-hand appreciation of many of these developments let alone interact with industry leaders or policy makers. This is what makes the ESS unique. As the only society of its kind in the University of Edinburgh, ESS hopes to spread awareness in an erudite manner and forge lasting relationships with industry.

If you are an industry representative keen to get in touch, contact us at euesociety@gmail.com and follow us on [Facebook](#) and [LinkedIn](#) page.

Raafey Andrabi, ESS President 2021-22

Engineering for Change



Photo - The solar panel installation on an Engineering for Change trip to Cambodia

Engineering for Change (E4C), really, is how students can start to tackle climate change at University. Society as a whole has become more conscious of the need to change the way in which we view the planet and our priorities - not only for humanity, but for the ecosystem as a whole. Engineering, therefore, has seen a large shift in more sustainable and ethical practises across the board and for more than just energy.

It's becoming increasingly apparent that to survive in the future market as a business, sustainable practises are a must. Engineering for Change gives a great opportunity for students to expand their knowledge and apply techniques spoken about in literature practically. Lectures and courses can only cover so much material and E4C facilitates learning in a different environment, therefore expanding both our knowledge and tangible experience that can be shown to employers. This is done through laboratory and on site work where we, as students, have full responsibility for the projects often in a short time frame with expectations from local communities and partners.

Given that our mission is to raise awareness for sustainability should we not complete the work to a high standard then this could be damaging for the image of sustainable engineering. As such we spend months preparing and thinking through our projects and developing our skills; however, we also realise that there is always an aspect of uncertainty within practical engineering so a lot of the time we have to take initiative and work around scenarios that would otherwise set us back. For example in the Winds of Change project where we've experienced sudden mechanical faults or Project DIEM (a project where we go into local schools to raise awareness of STEM) where we've had to completely change our lesson plans. This has helped a lot of our members now in their internships and graduate jobs as it has enabled them to be more confident in taking on responsibility, managing sudden changes in projects and communicating any changes efficiently.

Ultimately, E4C is a society that focusses on trying to help communities. Internationally we've built aquaponics systems and helped with STEM education in Romania and Cambodia – and locally we've helped raise awareness for sustainability and built machines to make a direct impact. In Edinburgh, our focus has been on both raising awareness for sustainability as well as helping out charities, such as the Cyrenians (a charity that helps tackle homelessness) both through engineering and general support. We may not produce the sleekest and best machines out there, however that's not the goal. The goal is to make change and that, putting aside our biases, we hit the nail on the head every time. If you are an industry representative keen to get in touch, please email engineering4change.ed@gmail.com.

Careers Service Update: Engineering in Careers Week 2021

Careers Week is our flagship event for semester 1 and the is designed to help you raise your profile and promote your graduate positions, industrial placements, internships and other paid opportunities.

To accommodate a focus on careers in sustainability around the time of COP26 in November, we are not running a separate Engineering Fair this year. Please be assured that you will still be able to have quality 1 to 1 conversations with our Engineering students and graduates. To facilitate this, we are creating a pathway through Careers Week for our chemical, civil, electrical, electronic, and mechanical engineers. Clear messaging, filters and preparation events will ensure that the right students find you and your opportunities.

Careers Week is an online event which offers our students a combination of live sessions, recorded content, signposting to resources and guidance, access to browse Careers Fair Online throughout the week, plus the opportunity to have live chats with exhibitors.

Booking an exhibition stand at Careers Fair Online means students attending Careers Week will be able to browse your stand throughout the week, plus have live text, audio or video chat with you on one of two days. To meet engineering students, we recommend you book to be available for live chats on Thursday 14th October.

When: 11th - 15th October, with live chat on either Tuesday 12th or Thursday 14th (recommended) October 2021, 11:00am - 4:00pm

Cost: Given your track record of engaging with our engineering students, we will discount the rate for you attend our Career Fair Online this year to the same rate as the Engineering Careers Fair Online last year; £145 +VAT. Please use discount code ENG CW2021 on booking form.

We do not want price to be barrier - if your business has been badly affected by COVID 19 or you are unable to afford £145 + VAT for another reason but would still like to attend, please get in touch with our team at employers@ed.ac.uk.

Find out more about Engineering in Careers Week and how to book on our website: <https://www.ed.ac.uk/careers/employers/raise-awareness/attendafair/engineering>

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