Bioengineering Newsletter

Winter 2013

THE LEADING DEPARTMENT OF BIOENGINEERING IN THE UK

IN THIS ISSUE

Ho Ho Ho Happy Holidays!

by Jenna Stevens-Smith

Another term coming to an end and it's been a great one. Grant success across our research themes including an ERC grant for Dr Niamh Nowlan and BBSRC grant for Dr Tom Ellis. The Department has continued to expand with the addition of Dr Tobias Reichenbach and Dr Claudia Clopath as lecturers and Dr Hari Arora as a Research Fellow in Lung Mechanics. Bioengineering was well represented across the seven new Imperial EPSRC Centres for Doctoral Training, including the CDT for Neurotechnology for life and health which is being led by Dr Simon Schultz.

Our researchers have continued to succeed with Dr Angela Kedgley's Junior Research Fellowship, Dr Sarah Jarvis's Marie Curie Fellowship and Professor James Moore Jnr (our new Director of Research) enthusing and educating a packed auditorium in his inaugural lecture on lymphatic system biomechanics.

We have had a number of high profile visitors this term, most notably Prince Harry and Sir Bobby Charlton for the official opening of the Royal British Legion Centre for Blast Injury Studies. The Department has also attracted high calibre researchers from across the world to deliver seminars as part of the Department Seminar series organized by Dr Chui Fan Lee and promoted by Laura McKay. The Department's excellent research has also attracted a lot of interest outside of academia with Dr Aldo Faisal appearing on BBC Science Club the summer. This exposure and interest is set to grow in 2014 with Bang goes the Theory filming in the Department in January and a number of other high profile events to look forward to in the new year.

The Department's dynamism has spread to social media with more than 1000 followers on Twitter and increasing interest on the Facebook and Pinterest pages. The future continues to get brighter for the Department with some impressive prospective students attending the undergraduate interview days and postgraduate open day.

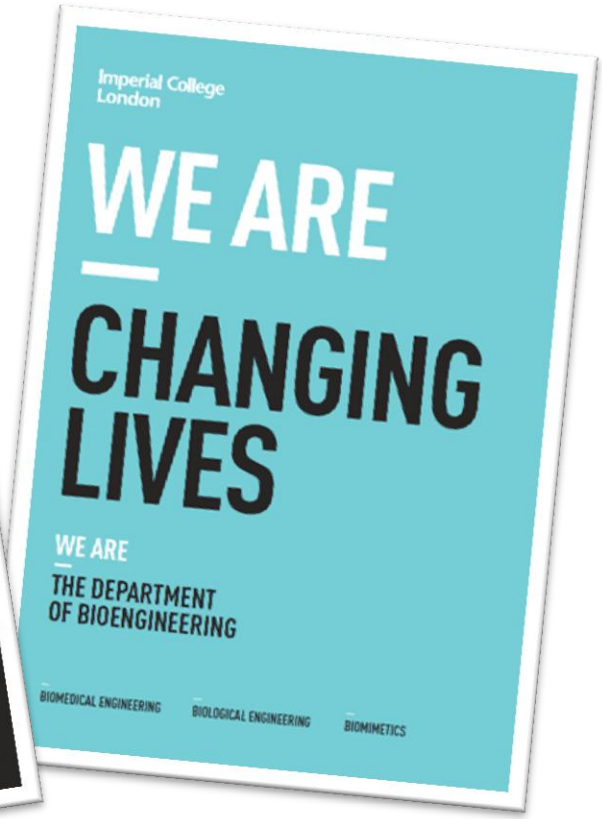
It's been an impressive year, but in my six months in the Department I have come to realise this is only the beginning. After all WE ARE THE DEPARTMENT OF BIOENGINEERING.

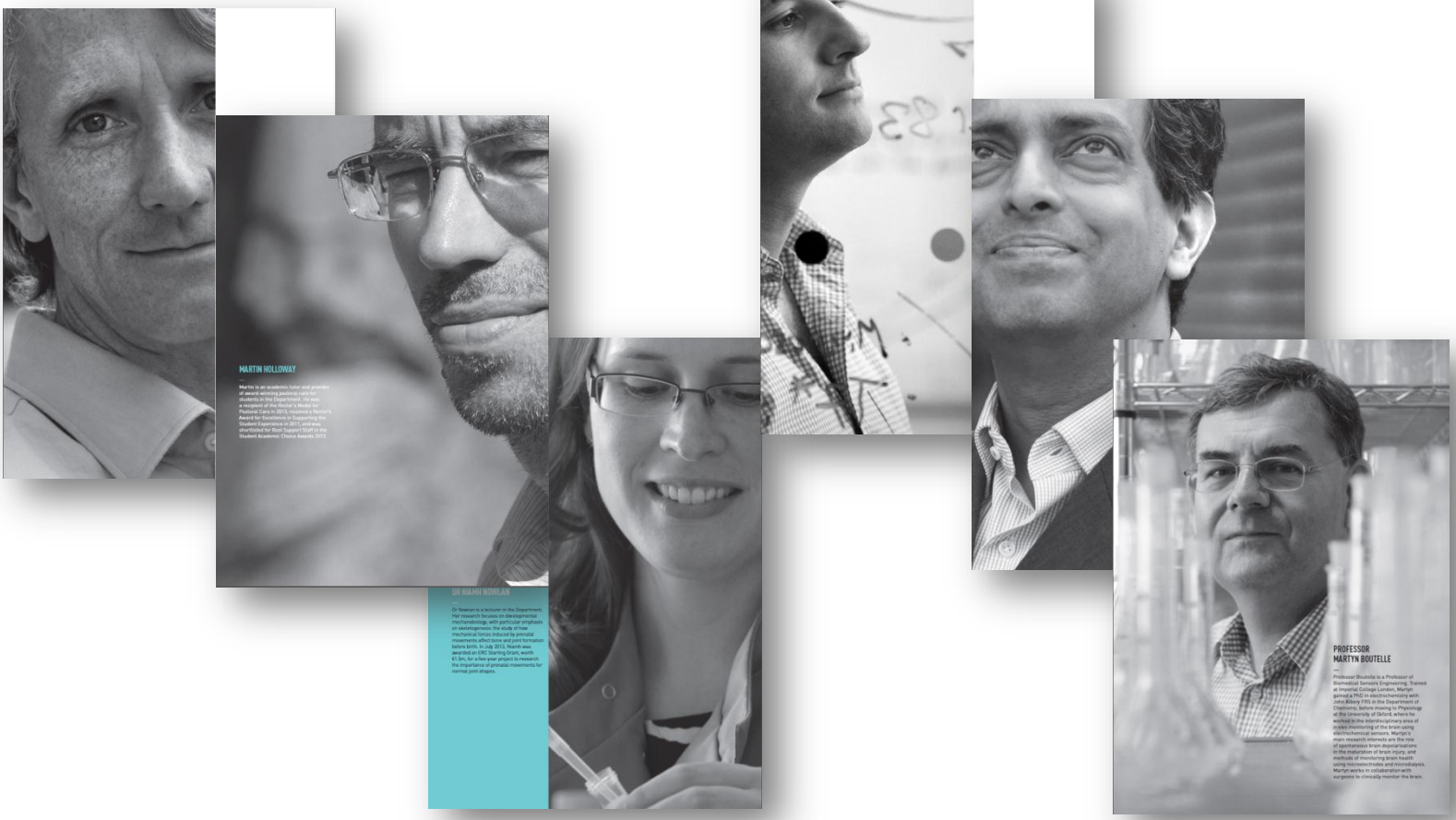
New brochures launched

After a summer of preparation the dramatically different Department Brochures were launched this month at the PG Open Day.

WE ARE
THE DEPARTMENT OF BIOENGINEERING

After a summer spent writing, editing and finalising content. The Department is pleased to announce that we have new Department and Undergraduate brochures. We are keen for these brochures to be promoted far and wide, so if you are going on a visit, conference or have visitors please feel free to pop down to 3.08 RSM to pick up some of the brochures.





Department Christmas Party 2013











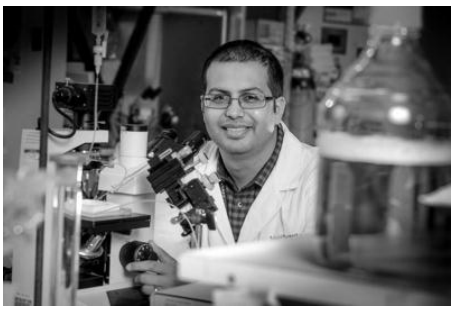

NEWS IN BRIEF

Chartered Engineer

Congratulations to Dr Theofano Eftaxiopoulou CEng MIMechE who has achieved chartered engineering status with the Institution of Mechanical Engineers.

Present around the World

Present around the World (PATW) is the IET's presentation competition for young engineers and technicians, aged 18 to 26. For more information go to http://conferences.theiet.org/patw/about/index.cfm



Department Alumnus wins global pharmaceutical award

Former PhD student Dr Bhavik Patel (PhD 2002-5, then EPRSC International Fellow under Danny O'Hare's supervision) has been awarded GSK Emerging Scientist of the Year 2013. He is now senior lecturer at the University of Brighton, School of Pharmacy.

FOR MORE INFORMATION

Have news about your research, an event or just want to write for the newsletter?

CONTACT JENNA STEVENS-SMITH

Fellowship funding

by Jenna Stevens-Smith

On 5th December the Women in Bioengineering network met to discuss fellowship funding. These events are specifically for women but many of the topics discussed will be of interest to all researchers in the Department.

There were a number of issues and considerations raised through the course of the session and I have expanded on the key ones are below.

1. Skills required for the application

In addition to the time taken to compile a successful Fellowship application one of the key areas which postdocs may not have experience is compiling a budget. We have expertise in the Department for this and if a number of postdocs are interested we could put on a workshop and circulate some top tips.

2. Do your research

Who has ben successful in getting the Fellowship you are applying to before? Do you know any successful applicants? If so talk to them about their experience of applying and any top tips they can give you.

3. Peer review

Get fellow researchers to peer review your application. In particular get your peer reviewers to comment on how accessible your application is, as the academics reviewing your application will be busy and the clearer you can make your science and the aims of your Fellowship the better.

4. Timing

When does your contract run out? How long will the application take and if successful when would the Fellowship begin? When you consider these questions the time that you begin looking and applying for Fellowships may lengthen considerably. It is also worth considering that for some Fellowship applications that letters of support are looked upon favourably, do not underestimate how long these will take to acquire.

5. Good luck…literally

Competition is high and therefore success rate for Fellowships are not, so do not be disheartened if you are unsuccessful. Ask for feedback and implement this into your next application. Some individuals find knowing the application success rate for Fellowships useful prior to applying, if you are one of these people you can request this information, although it may not always be provided.

Applying for Fellowships and grants can be incredibly frustrating sometimes especially if you receive a number of rejections. But if you are keen to develop your academic career it is part of the journey. Here in the Department of Bioengineering there are a number of people who can help. To capitalise on the support available approach individuals far in advance of the deadline and if need be follow up closer to the deadline.

Publications

Departmental publications are reported in the newsletter every quarter. This information is drawn from Symplectic.

Journal articles

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AROUND TOWN

Young Lecturer's get into the Christmas spirit

Young Lecturers meet for lunch every month and the December meet up had a festive theme. Thanks to Niamh for supplying the photo.

SET for BRITAIN will be held in the House of Commons on Monday, 17th March 2014 between 12.15pm and 9.15pm during National Science and Engineering Week 2014.

The day will be divided into four subject categories over three sessions. Applications are invited from early-career research scientists, engineers, mathematicians and technologists who wish to exhibit posters in one of the following areas:

- Engineering
- Mathematics
- Biological and Biomedical Science
- Physical Sciences (Chemistry and Physics)

Medals and cash prizes will be awarded for the best scientific posters presented in each discipline, and the presenter of the poster judged to be the overall winner will receive the Westminster Medal, in memory of the late Dr Eric Wharton, who did so much to establish SET for BRITAIN as a regular event in the Parliamentary calendar. Full details of the competition and exhibition including the application form can be found on the SET for BRITAIN website at: http://www.setforbritain.org.uk.

Applicants should prepare material aimed at communicating high level science to a lay audience.

Imperial College London

WE ARE

THE DEPARTMENT

OF BIOENGINEERING

SEMINAR SERIES

16 Jan 2014 13.00-14.00 RSM 2.28

Dr Margarita Kotti, Research Associate,
Department of Surgery and Cancer

Title: TBC

23 Jan 2014 13.00-14.00 RSM 2. 28

Dr Tobias Reichenbach,
Department of Bioengineering

Title: Neurobiology of hearing

30 Jan 2014 13.00-14.00 RSM 2.28

Amanda Wilson,
High Throughput Histology Technician,
Department of Bioengineering

Title: The Histocutter: A revolution in 3D imaging

Training and Development opportunities

Are you interested in using your scientific/ engineering knowledge to make science and engineering more accessible to others? There are many ways you can do this from bespoke talks or demos directly linked to your research to collaborations with artists or talking to journalists or politicians about your work.

Here are a few opportunities, suitable for all levels from undergraduates to professors. If these opportunities are not for you then do talk to Jenna about what you are interested in doing.

Science meets Art

Who: PhDs, Postdocs, Lecturers

What: Understanding Science through Art is a project funded by the Mayor of London. The exhibition, once developed will open at the Pump House Gallery and then tour London galleries.

Why: The exhibition will look at traditionally 'tricky' areas of the curriculum; Light, Forces and Magnets, Electricity and Sound. It will be targeted at years 3 and 4 (7-9 year olds.)

How: The process of this project will be:

- May 2014-September 20-14: 3 artists, 3 scientists and 3 teachers will work together over 6 twilight sessions to discuss the curriculum area, and their interests, challenges, opportunities- view points about it.
- Jan 2015 – April 2015: Artists to develop work for exhibition, linking to the curriculum consultant who will develop resources. There will be links with the teachers and schools.
- May –July 2015: Exhibition opens in Pump House Gallery
- Sept onwards: Exhibition tours London schools.

Interested?
Contact Emma Robertson, from the Reach Out Lab.

E-mentors needed

Who: Enthusiastic students

What: E-mentoring scheme that has been running at Imperial since 2003. You will be paired to a Year 12 pupil who is considering a career in a STEM subject but lacks the support and knowledge to carry out their dream.

Why: Your role is give them advice, tell them what it's like to study at university, what you can do with a degree at the end of the course and how much you enjoy your course.

How: Through the Imperial College London bespoke **Imperial Mentoring** platform. Attracting 250 mentee applications from Year 12 pupils around the country since January there are still more applications from new Year 12 students for this academic year and so we are looking for current students to mentor them.

How much time will it take:
Time commitment is minimal - you just log onto the Imperial Mentoring website and check your messages or post a reply. You can write a little journal about what you've been up to and keep your mentee updated about how you are getting on with your course, what's new in your research area and what stories hit the headlines as you learn it. Mentees in the past have all said how important and helpful their mentors have been to them, so by just contributing an hour or less of your time a week, you can make a huge difference to a school pupil's future. The website has a huge resources and knowledge section too so you can guide your mentee to the right areas to help them and you can even set them little tasks!

Interested?
Please **download and complete an Mentor Application form** and then e-mail it to Paul Lockwood the E-mentoring coordinator within the Outreach office.

There is no real deadline for applications; we can take on mentors and mentees throughout the year. But we do currently have quite a few mentees in need of a mentor right now, so please apply as soon as you can and we will match you as and when a suitable mentee applies.

Media skills workshop

Who: All researchers

What: The Society of Biology runs a regular training programme, which includes a range of training opportunities. The next course coming up in January is on media skills and will be hosted by Sue Nelson. Sue Nelson is a freelance journalist who has reported on science for BBC Radio4 and many other print, TV and radio channels for a number of years.

Why: The course is designed to provide scientists with an insight into print, radio and television science journalism from a number of experienced professionals in the field. The aim is to give people an appreciation and understanding of each different media, as well as what makes a good interview and why it makes sense to speak to a journalist and communicate with the media.

Interested?
For more information about this event please go to the **Society of Biology website.**

Attendees can obtain CPD points simply by attending this event.

New Centre for Doctoral Training in Neurotechnology

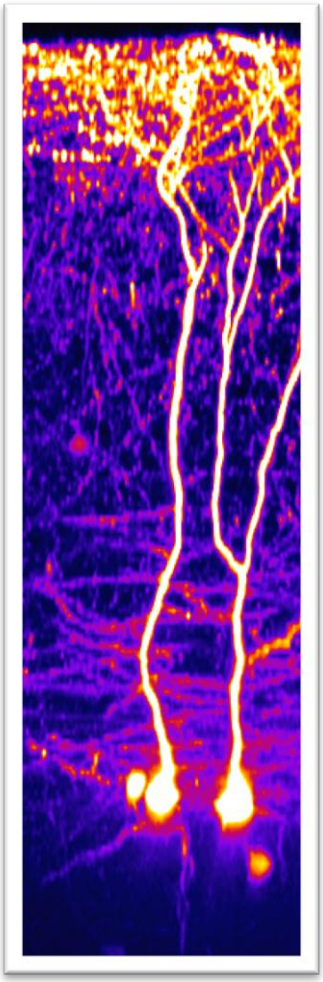
EPSRC has announced the award of a Centre for Doctoral Training (CDT) in "Neurotechnology for Life and Health" at Imperial College London.

Neurotechnology is the use of insights and tools from mathematics, physics, chemistry, biology and engineering to investigate neural function and treat dysfunction. Brain-related illnesses affect more than two billion people worldwide, and the numbers are growing. Reducing this burden is a major challenge for society. The Centre will train a new generation of multidisciplinary researchers at the interface of neuroscience and engineering, to address this challenge.

The Centre spans the Faculties of Engineering, Natural Sciences and Medicine at Imperial, with investigators from the Departments of Bioengineering, Mechanical Engineering, Electrical and Electronic Engineering, Computing, Chemistry, Physics, Life Sciences, and the Division of Brain Sciences. Directed by Dr Simon Schultz, Prof Bill Wisden and Prof Paul Matthews, it intends to admit 14 students per year.

The research training programme is unique. Students accepted onto the programme will begin by taking an MRes in Neurotechnology. During the MRes year, students will take 3 months of courses, including Introduction to Neuroscience (a Masters level course specially developed to provide physical scientists and engineers with a thorough grounding in neuroscience) and Neurotechnology Entrepreneurship. The MRes year will also involve a single 9 month research project, in which students will spend time in a number of laboratories learning the technical skills needed for the specific PhD project. Years 2-4 will then comprise a three-year PhD, augmented by fun training activities. All research projects will involve a team of supervisors, each of whom will bring complementary expertise to the project. In addition to researchers from across Imperial College, the Centre involves twenty industry and charity partners, as well as satellite research groups at the Crick Institute and the University of Oxford.

Further information can be obtained from **Dr Simon Schultz.** A call for project proposals from research supervision teams is currently open, and we expect to open PhD Applications in **January 2014.**



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Department of Bioengineering
Imperial College London
SW7 2AZ
+44(0)20 7594 5179

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