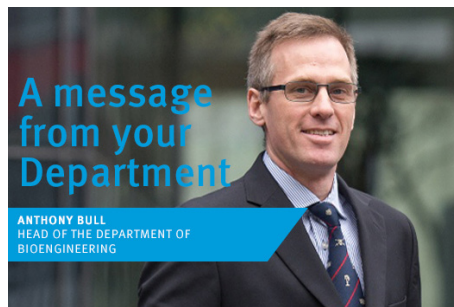


2016: Building on the success of 2015

As we start 2016 it is worth reflecting on the amazing year that 2015 was for the Department of Bioengineering. It was a big year in teaching in which our NSS overall satisfaction was rated at 97%. This is testimony to the work of all staff in the Department: academic staff who teach and prepare so carefully and are responsive to the students' needs; support staff who ensure that the care for students is second to none; and research staff and students who do so much to enhance the student experience through project and tutorial support. Particular mention and thanks must go to Mengxing Tang who, in his three years as Director of Courses, has overseen a significant growth in student numbers and quality with the very strong support from Liam Madden as Admissions Tutor, Martin Holloway our Academic Tutor and Britta Ross and the whole teaching office.

The Department continues to grow and so needs to focus on maintaining and developing its strong collaborative and open ethos. There are many ways to achieve that and attaining the Athena Swan bronze award is testimony to the fact that things are going well. We continue to have a strong music focus: Colin Caro celebrated his 90th birthday and was serenaded by a trio of string instruments led by Jennifer Siggers. The house band played at the Faculty of Engineering barbeque in addition to the usual departmental events. These small examples serve to highlight the esprit de corps felt by many, if not all, in the Department.



We continue to support individuals and congratulate Laura McKay and Shanas Choudhury who have returned to the Department, Jed McDonald and Melanie Albright who secured permanent positions and Allan Nyunt and Edit Toth who were promoted this year. Academic staff too have secured promotions (Darryl Overby, Mengxing Tang, Sylvain Ladame and Niamh Nowlan) and Angela Kedgley has been appointed as a Lecturer. I fully expect 2016 to be as successful for as many individuals and recognise that this success does not always mean staying at Imperial. In fact, 2015 was a very good year for postdoctoral staff going on to secure academic positions in other universities. We wish them all well.

And so I wish everyone in the Department of Bioengineering, and all our alumni and supporters, a happy and healthy 2016.

WELCOME TO THE DEPARTMENT

Welcome to new starters

- **Dr Antonio Forte**
Research Associate with Dr Tobias Reichenbach
 - **Ben Hardcastle**
Research Assistant with Prof Etienne Burdet
 - **Wilten Nicola**
Research Assistant with Dr Claudia Clopath
 - **Dr Erica Di Federico**
Research Associate with Prof Anthony Bull
 - **Professor Richard Hart**
On sabbatical from Ohio State where he is Chair of the Department and BMES President
 - **Melanie Albright**
Research Administrator (Allan Nyunt's team)
- This month sadly three colleagues are leaving, we wish them all the best in their next steps:

- **Mazen Haj Sleiman**
- **Ola Kamala**
- **Elisa Dominguez Huttinger**

GRANT SUCCESS

British Skin Foundation 3 year PhD studentship funding awarded to **Dr Claire Higgins** for a project on human hair follicle development. (£85,000)

The Garfield Weston Foundation has awarded **Professor Colin Caro** funding for his continued work on 3D Flow and Vascular Biology/Pathology (£35,000)

Royal Academy of Engineering Research Fellowship awarded to **Dr Amanda Foust** (£525,000)

PUBLICATION SPOTLIGHT

Be sure to check out the Department's recent publications:

Andrei S. Kozlov and Timothy Q. Gentne. *Central auditory neurons have composite receptive fields*. Proc Natl Acad Sci U S A. 2016 Jan 19. doi: [10.1073/pnas.1506903113](https://doi.org/10.1073/pnas.1506903113)

Susu Chen, George J Augustine, Paul Chadderton *The cerebellum linearly encodes whisker position during voluntary movement* eLife 2016 Jan 19 doi: [10.7554/eLife.10509](https://doi.org/10.7554/eLife.10509)



With the RAEng Research Fellowship, Amanda is enthusiastic to take her career and microscopes to the next level: powerful, user-friendly tools to unify the efforts of neurophysiologists and theoreticians, acquiring data previously inaccessible to previous methods.

Fellowship for Foust

Each year, the Royal Academy of Engineering awards a handful of Research Fellowships aimed at enabling promising early-career scientists to establish their independent research careers. This past year, the Academy selected Imperial Bioengineering's Amanda Foust through a rigorous three-stage process, including an interview before a panel of RAEng Fellows. Amanda begins the fellowship this month which will provide support over the next five years, including funding for equipment, consumables, conference travel and salary.

The aim of Amanda's research program is to engineer bridges between cutting-edge optical technologies and neuroscientists to acquire new, ground-breaking data on how brain circuits wire, process, and store information. Amanda's five-year vision focuses on adapting recent advances in holographic technology to manipulate the activity of genetically-modified, light-sensitive neurons in complex spatio-temporal patterns, combined with high-speed imaging of the circuit activity.

Amanda's career in Neurophotonics began early:

- **Washington State University (BS 2006)**
Computational Neuroscience including honors thesis and first peer-reviewed publications (Supervisor: Prof David Rector)
- **Yale University (MPhil. and PhD)**
Pre-doctoral fellowships funded by US NSF NIH. Collaborated with Dr. Dejan Zecevic. (Supervisor: Prof. David McCormick)
- **US NSF International Postdoctoral Research Fellowship (2 years)**
Université Paris Descartes where she pursued Fourier optics training from Prof. Valentina Emiliani's expert team, adapting holographic light shaping technology to further improve the specificity and speed of neuronal voltage imaging.

• **Coordination**
Amanda coordinated a funding bid to the US NIH B.R.A.I.N. Initiative, which established a consortium between Prof. Emiliani's lab and three others, including Dr. Simon Schultz's Neural Coding Lab, where over the past year, Amanda has been developing and optimizing a two-photon holographic light sculpting microscope.

OUT AND ABOUT

Dr Jenna Stevens-Smith, Professor Holger Krapp and Dr Andrei Kozlov visited Bishop Gilpin Primary School on 13 January to talk about bio-inspired engineering. On 15 January **Dr Jenna Stevens-Smith**, spoke at Boundary Oak School in Fareham about 'what is a bioengineer'.

Biochanges goes stateside, the synthetic biology and biodesign innovation event series host their next event at [MIT Media Lab](#) on 1 February. If you missed the Imperial event earlier this month here's a link to the [full lecture](#). The event has been organised by **Stephen Gray**.

STAFF & STUDENT SUCCESS

Dr Paul Rinne, Dr Michael Mace, Prof Etienne Burdet and Dr Ravi Vaidyanathan have been awarded the 'NHS Innovation Challenge Prize 2015-16: Rehabilitation' for their gripAble device.

gripAble has also been shortlisted for the semi-finals of 'OneStart - The world's premier life sciences & healthcare accelerator'. This is great exposure with 750 applicants from around the world and only 40 places in the semi-final. The team will find out at the February boot-camp if they have made the final.

Congrats to **Asim Bhuta** who passed his viva on the 5th January.

Professor Colin Caro, who celebrated his 90th birthday in 2015, **was interviewed by Andrew Czyzewski about his illustrious career**.

Inaki Sainz de Murieta Fuentes has been awarded the highly competitive Extraordinary Doctoral Award (Premios Extraordinarios de Doctorado) from Universidad Politécnica de Madrid (UPM).

Antonio Stanziola, a 2nd year PhD student in Dr Mengxing Tang's group, has won this year's student competition prize at the 21th European symposium on Ultrasound Contrast Imaging at Rotterdam, for his work on high frame-rate ultrasound.

Dr Anil Bharath's spinout Cortexica was featured in the **Times** and **Independent** this month with the expansion of the technology to John Lewis and the growing interest in bio-inspired 'visual search'.

LAB SEMINAR

The next **Cell culture and fluorescent microscopy seminar** will be **14:00-15:00** on **29 February 2016** in **RSM 3.03**.

Highly recommended for new students, anyone from non-biology subject backgrounds working in our labs or for anyone who wants a refresher in these areas.

SYN BIO EVENTS

April 6-8 April 2016

SynBioBeta London 2016

Imperial College London, South Kensington, UK

<http://www.synbicite.com/news-events/events/synbiobeta-london-2016/>

April 9-10 April 2016

EUSynBioS Symposium: Engineering Biology for a Better Future

Imperial College London, South Kensington, UK (hosted by SynbiCITE)

<http://www.eusynbios.org/symposium/>

CAREERS CORNER

Team Consulting

Friday 5th February, 1-2pm

RSM 228

Team Consulting is a small but rapidly expanding product engineering consultancy based just outside Cambridge. They specialise in the development of new medical devices. In 2015 they recruited one of our MEng graduates into an Electronics and Software Engineering role. This was the first time they had taken a new graduate and the company is keen to recruit more Bioengineers in 2016. Peter Matthewson, Senior Engineer, and Gabi, a 2015 MEng Bioengineering graduate, will talk about the company, its work in medical technology and their recruitment plans for 2016.

Company website: <http://www.team-consulting.com/>

Bioengineering Companies Database

Robert Ferguson has added a database with details of companies and organisations operating in biomedical engineering and allied industry sectors to the Department of Bioengineering's website.

You can find this database on the our website via the following links. The database is intended to help you with your search for jobs, internships and projects.

<http://www.imperial.ac.uk/bioengineering/study/career/>

1:1 Interviews

Robert is available this term for 1:1 interviews with students and researchers to discuss your careers plans, applications and interviews. Please email him for an appointment. In addition Careers Consultant Rachel Power and Placement and Internship Adviser Barnaby Mollett will be available for drop in interview on

Tuesday from 12noon – 1pm in RSM 4.28a.

UPCOMING EVENTS

3 February 2016 from 13:00 in RSM2.28

CBIS seminar on Blast Injury Rehabilitation

Chaired by Prof Alison McGregor and will feature talks from our colleagues at Imperial, Headley Court and Blatchford.

7-8 May 2016

Imperial Festival

Imperial College London, South Kensington campus

15 June 2016 17:30-18:30

2016 Bioengineering Annual Lecture

Professor James Collins, MIT

Imperial College London, South Kensington campus

http://www.imperial.ac.uk/bioengineering/about/bioengineering_lecture/

4-7 July 2016

Eurohaptics 2016

Professor Etienne Burdet, Dr Ildar Farkhatdinov and Dr Franck Gonzalez are co-organising.

Imperial College London, South Kensington campus

Paper submission deadline: **1/02/2016**.

Website: www.eurohaptics2016.org

OPPORTUNITIES

The next **Imperial Festival**, takes place on Saturday 7 and Sunday 8 May 2016. **Deadline for applications for proposals is 5 February**. The Festival is the College's biggest annual event for celebrating our work, with opportunities to engage with over 15,000 visitors, including members of the general public, alumni and other College stakeholders.



Would you like to see your research featured on the Department website? Then send your interesting photos to **Laura McKay** and they may be featured on the Department homepage as this image from Professor Holger Krapp's group, taken at the Imperial Festival last year.

EQUALITY & DEPARTMENTAL CULTURE

EVENT

The PDC will be holding a **"Thinking about a baby" workshop** from **12:00-14:30** on **Thurs 18 Feb** in **Seminar Room 2 of the Seminar and Learning Centre (SALC2)**, in the Sherfield Building. We will be discussing the challenges of having a baby during a PostDoc, and the support structures that are available at Imperial for new or expecting parents. There will also be a panel discussion with some PostDocs who have gone through this process recently.

ARTICLE

On Friday 15th January, John Wilson, Ethan Rowland and Kealan Exley attended the inaugural LGBTSTEMinar at the University of Sheffield. The conference brought together a diverse group of people working in STEM who identify as LGBT or support those who do. Talks covered a variety of topics - from killer mice in the southern Atlantic, to the collision of the andromeda Galaxy with the Milky Way, and whether epigenetics can really predict sexuality. The fantastic keynotes emphasised that even in accepting and welcoming workplaces there is always more that can be done to ensure that everyone becomes the best scientist they can be. Following the successful #ILookLikeAnEngineer social media campaign, we would like to highlight Prof Elena Rodriguez-Falcon's #ILookLikeAnLGBTengineer.

NEW YEARS HONOURS

Congratulations to **Professor Liz Tanner** from Glasgow University for her OBE for "Services to Biomedical Engineering".

Prof Tanner is a member of the Department's Advisory Board.

Congratulations to Alumnus **Michael Uren** (Mechanical Engineering, 1943) who received a knighthood for his services to philanthropy. Sir Michael Uren's donation secured the Biomedical Engineering Research Hub, a new 20,000sqm translational research hub at Imperial's White City Campus.

[Technicians Shanas and Marta were featured in a video for a new course in the business school.](#)

CONTACT

Send news for the next issue to:

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Outreach & Public Engagement Manager