



WELCOME STUDENTS OF 2015/16!

Welcome to all our new and returning students. The Department has certainly grown in recent years, with a record breaking 108 students in the first year UG students (48% female).

I hope you enjoy the selection of class photos below.

Clockwise from top left UG1 BME, UG2 BME, UG4 BME, MRes Bioeng, PhD Bioeng, MRes MDDE, MSc BME, UG3 BME



Imperial Bioengineer

October 2015

WELCOME TO THE DEPARTMENT

Welcome to new starters

- **Dimitrios Athanasiou**
Research Assistant, with Jimmy Moore
- **Dr Lowell Edgar**
Research Associate, with Jimmy Moore
- **Dr Ola Kamala**
Research Associate with Claire Higgins
- **Charalambos Kannaris**
Research Assistant with Ian Radcliffe
- **Georgios Pothoulakis**
Research Assistant with Tom Ellis
- **Tim Weenink**
Research Assistant with Tom Ellis
- **Niall Logan**
Research Assistant with Claire Higgins

*Congratulations to **Edit Toth**, who was appointed as the Department Resource Officer on 1 October.*

GRANT SUCCESS

BBSRC grant awarded to Dr Andriy Kozlov
for *How do auditory cortical neurons represent ethologically relevant natural stimuli? Characterizing stimulus feature selectivity and invariance* (£433,906)

PUBLICATION SPOTLIGHT

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

Sivan Harel, Claire Higgins, Jane Cerise, Zhenpeng Dai, James Chen, Raphael Clynes and Angela Christiano *Pharmacologic inhibition of JAK-STAT signaling promotes hair growth* *Science Advances* 2015: Vol.1, no.9, e1500973 [doi:10.1126/sciadv.1500973](https://doi.org/10.1126/sciadv.1500973)

Holger Krapp *How a fly escapes the reflex trap* *Nature Neuroscience* 18, 1192-1194 (2015) [doi:10.1038/nn.4097](https://doi.org/10.1038/nn.4097)

John Wilson, Raoul van Loon, Wei Wang, David Zawieja, James Moore Jr., *Determining the combined effect of the lymphatic valve leaflets and sinus on resistance to forward flow*, *Journal of Biomechanics*, [doi:10.1016/j.jbiomech.2015.07.045](https://doi.org/10.1016/j.jbiomech.2015.07.045)

Synthetic Biology Hub UPDATE

by Dr Helen Findon, Outreach & Communications Manager, CSynBI

This month SynbiCITE, Imperial's synthetic biology IKC, was proud to join forces with Queen's University Belfast and Ulster University to deliver the Lean LaunchPad aimed at helping local researchers turn their inventions into new products and ventures. This is the first time that the Lean LaunchPad will run in Northern Ireland. By working in partnership with SynbiCITE, Queen's University Belfast and Ulster University hope to support and increase company creation in Northern Ireland.

SynbiCITE also participated at the World Expo 2015 in Milan this month. Feeding the Planet, Energy for Life was the core theme and it aimed to highlight one of the most pressing challenges of our time – how to feed and sustain an expected rise in the world's population to 9 billion by 2050. John Collins, Commercial Director of SynbiCITE, spoke at the event and gave an introduction to opportunities in synthetic biology for agri-tech.

On 1 October, SynbiCITE was proud to be the first sponsor of the new OBN Award for Best Emerging UK SynBio Company. The winner was Oxitec which won the award for developing pioneering solutions to control insects that spread human disease and damage crops. Dr Steve Chambers, CEO of SynbiCITE said "All the SynBio companies at the OBN awards, nominees and winners, represent the very best of synthetic biology in the UK. We are privileged to be able help them work towards commercialisation of ground breaking and disruptive technology." SynbiCITE partner Touchlight Genetics won the award for Best Emerging UK Biotech Company. Find out more about the event and all the winners on OBN's website.

On 6 October, SynbiCITE joined forces with SynBioBeta, Scottish Enterprise and University of Edinburgh to celebrate the opening of the new Centre for Mammalian Synthetic Biology with a special SynBioBeta Activate! event in Edinburgh.

OUT AND ABOUT

Antonios Pouliopoulos and **Ahmed El Ghamrawy** (Choi Lab) presented posters at the IEEE International Ultrasound Symposium in Taiwan. Entitled "Enhanced spatio-temporal control of acoustic cavitation during flow using a novel short-pulse ultrasonic pulse sequence and passive acoustic mapping" and "Acoustic particle palpation—a feasibility study on a novel stress source for elasticity imaging".

Professors Kitney and Freemont were principal guests on 1 October, together with Prof Jay Keasling of UC Berkeley at the opening of the National University of Singapore's (NUS) opening of their new synthetic biology centre SynCTI. They have been responsible for helping NUS design the new centre and gave to keynote addresses that the opening.

STAFF & STUDENT SUCCESS

Sanjeewa Abeytunge PhD student from Kozlov lab through the PRI program with the Rockefeller University in New York got the 2015 Capita Foundation Auditory Research (CFAR) grant (\$9,719.35) for the project titled: *A Novel Micro-probe for Direct Stimulation of Cochlear Hair Cells*. He has also won the Santander Mobility Award (£1,000).

Sarah Johnson, PhD student in the Moore Lab was interviewed and featured on the LE&RN social media channels following her attendance at the [2015 NIH Conference in Washington DC through a Lymphatic Education and Research Network Travel award](#).

MEDIA MENTIONS

Professor Richard Kitney featured in this month's **Naked Genetics Podcast** in association with the Genetics Society in the 'Engineering Life' feature. The item also featured **Dr James Field** of LabGenius, one of SynBiCITE's industrial partners.

Dr Aldo Faisal and Sabine Dziemian demonstrated the artistic talents of the eye-tracker controlled robot arm for [Reuters](#) and [New Scientist](#).

Ana Matronic, lead singer of Scissor Sisters and robot enthusiast made a trip to Imperial on 23 October to visit the [Faisal Lab](#).

PhD student and T42 200m sprinter **Dave Henson** came 7th in the final of his first World Championships on 28 October. Earlier in the week Dave was the flag bearer for Team GB. [Telegraph](#), [Portsmouth News](#), [BBC](#).



ALUMNI UPDATE

Our alumni are making an impact around the globe. Dr Aldo Faisal was delighted to meet up with former students **Sonja Fenske**, **Ammann Saleem**, **Naveed Ejaz** at SfN this month (pictured above). Dr Jenna Stevens-Smith and Dr Ben Alquist met with **Dr Kuldeep Singh Rana** who is now a postdoc in Colorado and MEng 2009 alumna **Dr Nuri Purswani Ramchandani** popped into the Department this week on her way back to Nairobi where she is a Research Scientist for IBM.

The Blocks team including co-founders BEng 2015 graduate **Alireza Tahmasebzadeh** and 2011 MEng Alumnus **Serge Vasylechko** have had huge success from their recent crowd-funding reaching their \$250,000 target in 56 minutes of their [kickstarter campaign](#) the current total is \$1,193,521 with 17 days still to go.

SfN prize for former MRes student **Julija Krupic** (pictured above), for her essay "Brain crystals." Krupic went on to do a PhD at University College London and she is currently a Sir Henry Wellcome Fellow at UCL, where she conducts research on how place cell activity guides animal behavior. In 2016, Julija will move to the Salk Institute where she will study how connectivity affects the functional properties of place cells.

Alumna **Valentina Miguez-Pacheco** now a PhD student at the Institute of Biomaterials, University of Erlangen-Nuremberg, Germany is first author of *Bioactive glasses in soft tissue repair* published in the American Ceramic Society Bulletin, Vol. 94, No. 6.

A decade after our first graduating class we now have a new Alumni spotlight section on the website and we would love to hear what our alumni are now up to. Please get in contact with [Robert Ferguson](#).

CONTACT

Send news for the next issue to:

Dr Jenna Stevens-Smith

Outreach & Public Engagement Manager

UPCOMING EVENTS

Departmental Seminars

Thursdays 12.00-13.00

5 November 2015 12:00-13:00 RSM2.28

Dr Tara Keck from the **Department of Neuroscience, Physiology & Pharmacology, University College London** Homeostatic plasticity in the mouse visual cortex

12 November 2015 12:00-13:00 RSM2.28

Professor Uta Noppeney from the **Dept. of Psychology and Computational Neuroscience and Cognitive Robotics Centre, University of Birmingham** See what you hear. Constructing a representation of the world across the senses

<http://www.imperial.ac.uk/bioengineering/whats-on/events/>

Science Fridays are back!!!

Join us in RSM2.28 from 16:30 Hear what fellow researchers in the Department are up to mingle, discuss, network and eat pizza afterwards.

Imperial Events

4 November 18:00-20:30 SAF G16

2015 Hounsfield Lecture

Professor Jürgen Hennig, University of Freiburg

Magnetic Resonance Imaging: visions of life

5 November 14:00-15:00 RSM3.01C

Shanas Choudhury, Tissue Culture & Microscopy Technician

Basics in cell culture and fluorescent microscopy seminar

10 November 17:00-18:30 RSM G20

Imperial College London Robotics Forum

Dr James Kilner (UCL) and Professor Ferdinando Mussa-Ivaldi

(Northwestern University, USA)

Interaction and motor learning in humans

25 November 17:00-18:00 RSM2.28

Centre for Neurotechnology Colloquium

Dr Antoine Adamantidis, University of Bern

Optogenetic dissection of sleep-wake circuits in the brain

26 November 18:00-19:00 Huxley LT308

Lecture in Design Engineering

Professor Kristina Shea

Computational Design-to-Fabrication Lecture

3D Bioplotter has arrived for more information and to book a training session please contact **Marta Garcia Bellmunt**.

EQUALITY AND DEPARTMENTAL CULTURE



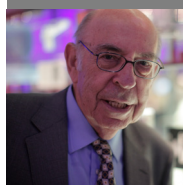
**Athena
SWAN**

On 1 October the **Department** was awarded an **Athena SWAN Bronze award**.

This award and the action plan will be implemented over the coming three years, to improve Department culture and equality for all. To celebrate the importance of equality, members of the Department are taking part in **November/MOVEMBER to raise awareness of men's health**, particularly mental health, prostate and testicular cancers. If you're interested in the challenges and pressures of masculine identity in the 21st Century, **Being a Man (BAM) Festival** is at the Southbank Centre from 27-29 November. The female equivalent **Women of the World (WOW) Festival** in March 2016.

The College are currently working on the renewal of the **institutional Athena SWAN Silver award**. As part of this process there are a number of focus groups running prior to Christmas. The remaining focus groups are Academics on 26 Nov and Professors on 2 Dec. If you're interested in taking part [sign up for free here](#). If you're unable to attend a focus group you can still contribute by filling out the [short survey](#). The Athena SWAN process provides us with an opportunity to build on our existing activities, and we benefit from the way the process challenges us to think about what more we can do to support our staff.

BIOENGINEERING LEGEND



The Department is delighted to wish **Professor Colin Caro** a happy 90th birthday! [Colin played a key role in the development of bioengineering at Imperial from the 1960s.](#)

Staff are invited to attend a Departmental celebration of this special occasion on **4 November** at 16:30 in 3.01C.