



THE LEADING DEPARTMENT OF BIOENGINEERING IN THE UK

# Bioengineering news

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## IN THIS ISSUE

# Head of Department's message

by Professor Anthony Bull

## Excellence

We work and study in a Department that is excellent - populated by excellent people performing world-leading research and engaged in top class education with access to some of the brightest and best students.

## Tyranny of the urgent

This excellence does not come easily and our inexorable striving sometimes leaves little time for reflection and scrutiny. The tyranny of the urgent means that we all spend significant time dealing with the 'here and now', responding to emails, addressing requests and so making life busier and busier for each one of us. This fragmentation of time, punctuated by the mundane, cuts down on periods for focused high quality activity. Therefore, my internal negative response to the regular request to write a note for the departmental newsletter is to see this as 'just another thing' to do, and yet, with more positive reflection, I also recognise that it gives me time to mull over how things are going.

## Question

This month's reflection is put simply as a question: "How do we maintain our excellence, become more effective as individuals and as a Department, and extend our departmental culture of collegiality and support?"

I invite you all to consider this question and write to me with your answers so that we can continue our striving, effectively and well. <http://goo.gl/D4rCZ>

## Date for the diary 2013 Bagrit Lecture

MONDAY 10 JUNE 17:30  
Lecture Theatre G16, Sir Alexander Fleming Building.

Photoacoustic tomography: Ultrasonically beating the optical diffusion and diffraction limits.

Lecture by Professor Lihong Wang, Washington University in St Louis.



## GTA of the year

Congratulations to all our GTAs on their fantastic contributions to teaching this year, but particularly to **Dr Martina Wicklein**, who has been awarded GTA of the year 2012/13.

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## CBIS news

Read all about the latest CBIS grant news, conference and events information, visits and future plans in Major Martin Dansey's report

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# Graduate Teaching Assistant of the year for 2012/13

by Professor Rob Krams

All Bioengineering students and staff were recently invited to assist with the selection of the departmental GTA of the year award for 2012/13. Encouragingly, the number of votes cast and supporting comments was even greater than the previous year. The number of nominated GTAs increased from 15 to 23 which is a significant proportion of our GTA support staff.

The four GTAs with the greatest number of votes were selected for short-listing: **Atushi Takagi, Luke Bashford, Martina Wicklein and James McIntosh** – congratulations all!

An awards committee consisting of Mengxing Tang, Liam Madden and myself scrutinised the many supporting and complimentary comments. The number of comments made about the GTAs made the short-listing process pleasingly difficult.

The overall winner was **Dr Martina Wicklein** who was chosen for many reasons including the following:

- Numerous undergraduate and postgraduate students have benefited from the high quality of her module teaching, study group tutoring and project supervision.
- She has represented the department superbly in many outreach activities including the Imperial College Festival, Imperial College Open Day, Headstart summer school.

Martina will receive the Department of Bioengineering of the year award trophy and a cheque for £250 at our departmental (Research Day) awards ceremony at 17.00 on Thursday 27 June. She has also been put forward as our departmental nominee for the Faculty of Engineering GTA of the year award. The Faculty of Engineering awards ceremony takes place at 16.00 on Tuesday 11 June.

The Department is fortunate to have so many great GTAs like Martina, Atushi, Luke, James, Will Abbott (the previous GTA of the year) and many others. All our GTAs undergo a Faculty of Engineering organised training programme therefore their reflective practice on teaching and learning has been informed by [Dr Esat Alpay's course](#).

On behalf of the Department I would like to thank all our GTAs for the great work that they do in supporting teaching and learning in the Department.

## NEWS ITEMS FOR THE NEXT ISSUE?

PLEASE EMAIL  
j.stevens-smith@imperial.ac.uk



## News in brief

### Best support staff

Many congratulations to **Mr Martin Holloway** who was shortlisted for the award of 'Best Support Staff' in the recent student academic choice awards. Mr Holloway was pipped to the post by the very worthy Civil Engineering candidate but he remains our number one!

### Grant news

**Dr Etienne Burdet** has been awarded another EU-FP7 project called SYMBITRON (with the University of Twente and TU Delft in the Netherlands; Santa Lucia Foundation in Roma, EPFL in Switzerland and Ossur in Iceland), to develop a model of lower limb

control in spinal cord injury patients, and an exoskeleton with which they would be able to walk again.

### Editorial appointment

**Dr Diego A. Oyarzún** has recently been appointed Associate Editor for the journal Frontiers in Synthetic Biology, a Specialty Section of Frontiers in Bioengineering and Biotechnology.

### Promotions

**Ms Britta Ross** has been promoted to Taught Courses Manager which recognises her exemplary management of services and a soon to be recruited assistant.



Mr Holloway – what a guy!



# CBIS news

by Major Martin Dansey

## Continued development

The last few months have seen continued development within the Centre including infrastructure projects, personnel recruitment and of course outreach programmes conducted within the Imperial Festival. The Centre's new laboratories have now been completed and handed over with only minor snagging issues still outstanding. The case of the missing no entry light has been solved as we finally found the contractors had fixed it to the inside of a connecting door which although handy wasn't exactly where we had in mind. Also the temperature in the labs has now been stabilised following a few tweaks by the electricians so all Lab users can now bask in the steady 20 degrees.

Hopefully the prospect of a new mint green CBIS Lab coat combined with our Mediterranean climate will be enough to encourage a further five PhD students to join the fold as we seek to further expand our team. Positions are now available within all our areas of study so if you haven't already applied you best get your skates on. A similar number of UROP vacancies have also been advertised for positions over the summer. We welcome **Dr Gopala Anantharam** who joins our team in Civil Engineering and say goodbye to **Richard Curry** an exchange PhD student from the University of Cape Town.

## CBIS sporting achievements

In the event the fetching protective clothing doesn't quite entice people to CBIS perhaps the Centre Sporting Challenge will. The league was kicked off with a CBIS bowling championship conducted following our quarterly CBIS research day. **Ashton Barnett-Vanes** has screamed into an early lead by thoroughly trouncing the opposition, especially **Spyros Masouros** who's intense concentration ensured he choked at the final hurdle finishing a disappointing third. The gloves are now off so the next event, Karting, should have a significant competitive edge. The bowling and evening meal was undoubtedly fun but this shouldn't distract from the main event which had been the Centre's Quarterly Research Meeting or "CBIS Day". All the Centre's PhD students and PDRA's came together from four

departments across Imperial and in addition from the Cavendish Lab in Cambridge to share the progress in their studies and open it up to cross disciplinary discussion. Presentations on reticulating foam proceeded those on bone fracture patterns and gait analysis to name but a few. **Dr Bill Proud** also gave an informative talk on the Split Hopkinson Bar where all members were educated to the real meaning of stress! The highlight was the two final presentations conducted by **Captain Dave Henson** Royal Engineers and **LCpl Corie Mapp** of the Household Cavalry, where they shared their experiences of being involved in explosions causing significant blast injuries in a clear and quite amazingly candid fashion. The two double amputees left the audience encouraged but humbled by their incredibly positive outlook. We pass our thanks to both for providing such tangible context to the work of the Centre.

## Festival fever

Continuing the theme the Centre also took part in the Imperial Festival providing balloon busting and smoke ring thrusting demos to grab the attention of adults and children alike. A mini shock tube was created to show the initiation of a shock wave with an industrial sized Air Zooka providing the air blast to prove the point. The rolling video and poster provided the science behind the toys which when brought together gave a good overall feel for the subject of Blast. A special mention must go to **Nguyen Thuy Tien** (Luz to her mates) for being instrumental in creating the equipment and setting up and taking down the stand, a great effort.

## Don't miss the annual conference

CBIS signs off this month with a look to the latter part of the year and our Annual Conference to be held in October. Arrangements are continually developing but this is likely to prove to be an event not to be missed so block out your diary and watch this space!

## EVENTS

### Departmental seminars

All seminars will be on Thursday 13:00-14:00 in room RSM 3.03 unless otherwise stated.

For further details please contact [Chiu Fan Lee](#). If you know of someone who would like to be on the email distribution list for these seminars please provide them with the [following link](#).



28 May 2013

The doctor will sense you now. **Professor Martyn Boutelle** (above), Department of Bioengineering explores the advancement of biomedical sensors for clinical monitoring in his inaugural lecture. 1.31 Royal School of Mines, 17:30 – 18:30. Please register in advance by emailing [Katie Weeks](#).

29 May 2013

**Professor Anthony Bull**. Sticks and Stones may break my bones but blast does something more. 14:00, room 164, Skempton Building.

30 May 2013

**Dr Katherine Fraser**, Department of Bioengineering. Bleeding hearts: Improving mechanical circulatory support.

06 June

**Dr Nathan Goehring**. Cancer Research UK. Title TBC.

07 June

**Thomas Knöpfel**, Division of Brain Sciences, Imperial College London. Imaging Neural Circuit Dynamics with Voltage-Sensitive Fluorescent Proteins. 11:00 – 12:00, 2.28 RSM.

13 June

**Dr Armando Del Rio Hernandez**. Department of Bioengineering. Title TBC. RSM 3.03.

20 June

**Prof Christina Kuttler**. Technische Universität München. Title TBC. RSM 3.03.

### Staff vs student footie!

Come along to play or watch this clash of the titans! 16:30 on 31 May 2013 in Hyde Park by the tennis courts. For further information please email [Liam Madden](#).

# Conference and meeting news

Alumnae **Ayishwarya Menon** (MEng Biomedical Engineering) recently spoke at TEDMED Live the Other Song. Held in India for the first time on 21 April 2013, the event brought together innovators and thought leaders from various fields and multidisciplinary communities. Speakers shared their innovations and experiences on this common platform, which will trigger the consistent growth and advancement of the medical system. Ayishwariya is a Product Manager in Orthopaedics for Materialise Asia Pacific. Watch the event [here](#). Ayishwariya appears at 1 minute 38 seconds.

**Professor Anthony Bull** gave a keynote lecture at the Royal College of Surgeons of England this month. His talk was entitled 'Biomechanics of the Knee' in the session 'Primary and revision hip and knee replacement surgery'.

Congratulations to **Naiara Rodriguez Florez**, who was awarded the ESB Student Travel Award to present her work entitled 'Does the

lacunar canalicular permeability of murine bone change with age?' at the European Society of Biomechanics.

Professor **Jimmy Moore** will be attending the ASME Summer Bioengineering Conference in late June this year, where:

- Phd student **John Wilson** has been selected as a finalist in the PhD student paper competition.
- Phd students **Samira Jamalain** and **Mohammad Jafarnejad** will present their research.
- The band BEDrock will play for a raucous conference crowd. Jimmy on bass and vocals and ex-Head of Department Professor Ross Ethier on guitar.

Professor Moore will also be giving a seminar on 7 June at KTH Royal Institute of Technology in Stockholm and will participate in the BME-IDEA entrepreneurship education

symposium in Galway on 14 June, where he will present his newly approved MRes programme in [Medical Device Design and Entrepreneurship](#).

**Professor Kim Parker** has been invited to deliver the MacDonald lecture at the Artery 13 meeting which will be held in London this October. Artery 13 is the 13th annual conference organised by Artery: Association for Research into Arterial Structure and Physiology. The MacDonald Lecture is an invited lecture named in honour of D.A. MacDonald (1917-1973) whose book Blood Flow in Arteries remains the most influential book on the subject of arterial hemodynamics.

**Drs Holger Krapp, Martina Wicklein and Kit Longden** gave invited talks at a symposium 'The Computational Basis of Early Vision', funded by the [Rank Prize](#) Funds, in Grasmere recently.

## Bioengineering news

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