



Imperial Bioengineer

June 2015

End of another academic year

by Dr Jenna Stevens-Smith, Outreach Manager

As another academic year comes to an end, the Department celebrated the class of 2014-15 with awards and a performance by the Department's very own inhouse band (Gastric Band) on 25 June.

It was a pleasure to see and listen to our students talk about their research and all should be proud of what they have achieved this year. Special congratulations to the award winners:

Year 3 BEng Best poster (academic)
Mara Pop

Year 3 BEng Best poster (peer-rated)
Jointly awarded to Ayesha Salleh and Teodora Negoita

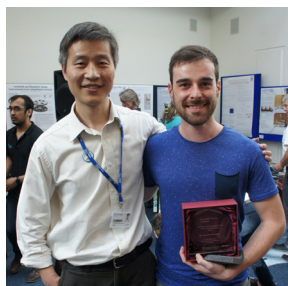
Year 4 Best project presentation
Justas Medeisis

Year 3 MEng Best group poster
Jedidiah Farquharson
Siu-Teing Ko
Sihao Lu
Hugo Muller

Year 2 Best EDP project
Kevin Eckford
George Taylor
Qi Rong Leon Ooi
Amin Ebrahim Salehzadeh-Nobari
Jing Yi Chan
Claudia Maw
Aino Elina Tompuri
Vanessa Ikebudo
Simos Koutsotidis

Year 1 Best Ethics coursework in Bioengineering in Action
Milica Hasbani
Zeinab Saci
Amirali Ghoncheh
Azhar Bashir

Congratulations to the 2015 GTA of the year Antonio Stanzola from Dr Mengxing Tang's group. It is the second year in a row that a research student from Mengxing's group has won this accolade with Yesna Yildiz winning the award last year.



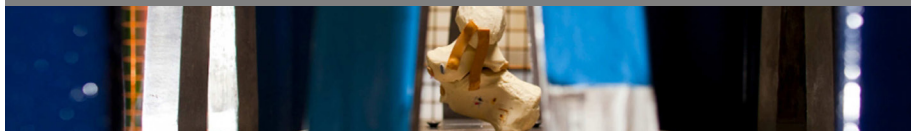
The 2015 GTA of the year Antonio Stanzola with supervisor Dr Mengxing Tang

This year the **Lecturer of the Year** award was jointly won by Dr Niamh Nowlan and Dr Spyros Masouros. This award is based on the SOLE scores for the academics.

Congratulations to all our final students and best of luck to you all in your next steps, don't forget to let us know what you get up to!



CENTRE FOR BLAST INJURY STUDIES UPDATE



Following on from the Centre's President's Research Excellence Award last month, Dr Spyros Masouros was awarded Lecturer of the Year for Commitment to Excellence in Teaching. In addition to this, two CBIS academics have been honoured in the 2015 Queen's Birthday Honours List. The Centre's Clinical Lead, Professor (Colonel) Jon Clasper and Associate Academic, Professor (Colonel) Peter Mahoney, were appointed to Commander of the Most Excellent Order of the British Empire (CBE) this month. Jon was a founding member of Imperial Blast; the predecessor to the Centre. As the first Defence Professor of Trauma and Orthopaedics (2009-2014) Jon was responsible for the orthopaedic research focus of the British military. Having completed this role he was asked to continue as Emeritus Professor, in addition to his appointment as Clinical Lead to

the Centre. Peter is Defence Professor of Anaesthesia and Critical Care at the Royal Centre for Defence Medicine in Birmingham; the primary receiving unit for all military patients and operational casualties. He plays a vital role in providing medical support to military operational deployments and delivering Medical Director's research programme.



The Department has recently published a new 'Impact brochure' based upon the impact case studies submitted for Research Excellence Framework 2014 (REF). If you are interested there are copies on the z-stand outside the coffee room, and it will be available online soon.

WELCOME TO THE DEPARTMENT

The Department are delighted to welcome the following new staff:

- **Mica Jones**
Recruitment and Personnel Administrator
- **Edina Forman**
Research Technician working with the IKC and Tom Ellis

GRANT SUCCESS

Leverhulme Grant awarded to Dr Claudia Clopath for "Receptive field development through synaptic plasticity" (£100,000)

Wellcome Trust ISSF Networks of Excellence Award awarded to Dr Andrei Kozlov for "Establishing a network of excellence in auditory nanomechanics" (£100,000)

PUBLICATION SPOTLIGHT

Be sure to check out the Department's recently published works below:

S Sadeh, C Clopath, S Rotter (2015) *Emergence of Functional Specificity in Balanced Networks with Synaptic Plasticity*. PLoS Comput Biol 11(6): e1004307. doi: 10.1371/journal.pcbi.1004307

C.F. Lee (2015) *Thermal breakage of a semi-flexible polymer: Breakage profile and rate*. Journal of Physics: Condensed Matter 27, 275101. doi:10.1088/0953-8984/27/27/275101

Chee Hau Leow, Francesco Iori, Richard Corbett, Neill Duncan, Colin Caro, Peter Vincent and Mengxing Tang *Microbubble void imaging - a non-invasive technique for flow visualisation and quantification of mixing in large vessels using plane wave ultrasound and controlled microbubble contrast agent destruction* has been accepted for publication in Ultrasound in Medicine and Biology

Paresh A. Parmar, Lesley W. Chow, Jean-Philippe St-Pierre, Christine-Maria Horejs, Yong Y. Peng, Jerome A. Werkmeister, John A.M. Ramshaw, Molly M. Stevens, *Collagen-mimetic peptide-modifiable hydrogels for articular cartilage regeneration*, Biomaterials, Volume 54, June 2015, Pages 213-225, ISSN 0142-9612, <http://dx.doi.org/10.1016/j.biomaterials.2015.02.079>.

Lin, Y., Chapman, R. and Stevens, M. M. (2015), *Integrative Self-Assembly of Graphene Quantum Dots and Biopolymers into a Versatile Biosensing Toolkit*. Adv. Funct. Mater., 25: 3183-3192. doi: 10.1002/adfm.201500624

ALUMNI UPDATE

Simon Thompson, Trauma and Orthopaedic Surgeon won the James Joyce Gold medal for his paper entitled "A 20 year longitudinal prospective evaluation of endoscopic ACL reconstruction with patellar tendon autograft." at the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine in June. This was alongside colleagues from North Sydney Orthopaedic and Sports Medicine Centre L Salmon, A Waller, J Roe, J Linklater and L Pinczewski.

Dave Roche will begin teaching Maths/science at St Edward's in North Oxford in September.

OUT AND ABOUT

Dr Chiu Fan Lee spoke at "Physics and Biology of Active Systems" at the University of Aberdeen and "Statistical Mechanics of Glassy, Complex and Non-Equilibrium Systems" at King's College London.

Professor Nick Bosanquet was invited to speak and chair the panel discussion on "Funding & improving EBME services in the NHS" at the EBME Seminar 2015 on 30 April which was covered in the June edition of Clinical Services Journal.

Dr Ian Radcliffe was invited to attend the UK Sport-Project Paralympic Futures Lab on 3 June, where leading members from EIS and UKSport along with some external advisors met to have a café style discussion on trends that may develop over the next 10 years in the world of Paralympic sport.

Helena Topouzi, PhD student in Dr Claire Higgins Lab, has had her abstract selected for oral presentation at the European Society of Dermatological Research meeting in Rotterdam this September. Her abstract is entitled, "Expression map of three distinct skin fibroblast populations isolated from human skin".

Liam Madden represented the Faculty and the Department by leading a workshop at the UCAS International Teachers and Advisors Conference. He also represented the Department by making presentations and leading tours at the College organised HE advisors conference.

Professor Charles Michel gave an invited lecture at the European Congress of Anaesthesiology in Berlin on 2 June on "The revised Starling Principle and its relevance to intravenous fluid therapy".

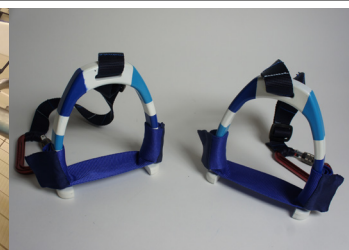
Professor Peter Weinberg, Dr Zahra Mohri, Dr Mariea Brady, Ethan Rowland, Yean Chooi swapped their lab coats for lycra as they took part in the 40th annual British Heart Foundation London to Brighton fundraising ride on Sunday 21 June. Setting off on this 54-mile ride from Clapham



Common at 6:30am, the team tackled several climbs over the South Downs including the iconic 248m Ditchling Beacon and were rewarded with stunning views over the surrounding Sussex countryside before arriving in Brighton in good time for lunch.

If you'd like to help the team reach their £1,000 target please donate at: <https://www.justgiving.com/Fatty-Streaks/>

STAFF & STUDENT SUCCESS



Starting aid developed by **Sports Innovation Challenge UROP** students last summer for S5 swimmer Andrew Mullen is going to be used by him at the IPC World Championships in Glasgow in July 2015.

Samira Jamalian from the Moore Lab finished 2nd place in the PhD student paper competition at the Summer Biomechanics, Bioengineering & Biotransport Conference (SB3C) in Utah, USA. Her paper was "Suction Effect Produced by Active Contraction of Collecting Lymphatic Vessels Facilitates Lymphatic Filling".

Sharah Abdul Mutalib from the Burdet Lab won the Best Poster Prize in the International Society of Prosthetics and Orthotics Congress in Lyon, France for her poster on "An instrumented toy for the assessment of hemiplegic cerebral palsy infants".

MEDIA MENTIONS

"£288m bill for injured heroes: Experts calculate sum of care, rehabilitation and prosthetics for troops who were injured in Afghan bombings"

Mail On Sunday, 1 June- Professor Anthony Bull

<http://www.mailonsunday.co.uk/news/article-3105178/288m-bill-injured-heroes-Experts-calculate-sum-care-rehabilitation-prosthetics-troops-injured-Afghan-bombings.html>

"Robotics pioneers voice frustration with UK funding rules"

Financial Times, 31 May - Dr Aldo Faisal

<http://www.ft.com/cms/s/0/cf564920-05fc-11e5-b676-00144feabdc0.html#axzz3bnLgWTA4>

"Glaucoma Awareness Week"

Insight Radio, 8-14 June- Dr Darryl Overby

http://www.insightradio.co.uk/podcast-episode.html?category=afternoon_edit&name=2015-06-12_dolores_conroy_darryl_overby_glaucoma_awareness_week_tx_pc.mp3#VZaEtlVj5x

Free IPEM membership for students

Free student membership now available for undergraduates and full time postgraduate students.

More info: <http://www.ipem.ac.uk/AboutIPEM/JoinIPEM.aspx>

UPCOMING EVENTS

Departmental Seminars

Thursdays 12.00-13.00

9 July 2015 12:00-13:00 RSM2.28

Professor John Culling from Cardiff University's School of Psychology

Tuning out at the Cocktail Party

14 July 2015 12:00-13:00 RSM2.28

Professor Ariel Ben-Naim from Department of Physical Chemistry, The Hebrew University of Jerusalem

Hydrophobic-Hydrophilic interactions in protein folding, protein-protein association and molecular recognition

For more information, visit:

<http://www3.imperial.ac.uk/bioengineering/events/departmentseminars>

Science Friday Seminar Series

Fridays from 16:20

Imperial Events

29 July Centre for Neurotechnology Colloquium series **Professor Peter Brown, Medical Research Council Brain Network Dynamics Unit at the University of Oxford** Novel temporally-patterned electrical stimulation techniques to treat Parkinson's disease and Tremor at 17:00, RSM 2.28.

20-25 July Engineering Summer School for 11-14 year old girls

29 July Y10 Insights Summer School

4-7 August Sutton Trust Summer School (Y12 students)



Photo of attendees at the BME IDEA conference held at Imperial 4-5 June, led by Professor James E Moore Jr.

External Events & Conferences

3rd International Conference on Integrative Biology

4-6 August

Valencia, Spain

<http://integrativebiology.conferenceseries.com/>

Contact: Dr Armando Del Rio Hernandez for further information.

CMBBE conference

1-5 September

Montreal, Canada

Abstract submission deadline is 22 May

<http://cmbbe2015.com/>

MEIbioeng15

7-8 September

Leeds, UK

<http://meibioeng.org/>

MPEC2015 (IPEM Medical Physics and Engineering Conference)

8 - 10 September

Liverpool, UK

<http://www.ipem.ac.uk/ConferencesEvents/MPEC.aspx>

BMES Annual Conference

7-10 October

Tampa, Florida

<http://bmes.org/annualmeeting>

POSTGRAD UPDATE

The Department was buzzing on 16 June with 37 PhD students sharing their research to date through seminar-style presentations and poster displays. The Department thanks the students, supervisors, examiners and everyone else in attendance, with special thanks to Drs Anil Bharath and Sylvain Ladame for chairing each of the eight-hour ESA sessions.

New webpage offering guidance on travel-related funding opportunities has been launched: http://www3.imperial.ac.uk/bioengineering/admin/research_students/travelfunds. It is targeted at PhD students but, many of the listed opportunities may be relevant for those in later stages of their research careers, including Post Docs. This list is not exhaustive but it's a good place to start when looking for travel funding. If you know of additional sources, not listed please email details to Melanie Albright.

CONTACT

Send news for the next issue to:

Dr Jenna Stevens-Smith

Outreach & Public Engagement Manager