NEW UNDERGRADUATE PROGRAMME!

The Department first began teaching the UG Biomedical Engineering programme in 2002. The new programme degree called Molecular Bioengineering will be an additional undergraduate programme to the current Biomedical Engineering degree from 2017. The two bioengineering programmes take contrasting but complementary approaches to bioengineering. Molecular Bioengineering develops a bottom up understanding of the links between molecules, cells, tissues, organs, limbs generating function, health and disease within a bioengineering context whereas our Biomedical Engineering programme takes a top down approach, meaning graduates from each bioengineering programme will be uniquely skilled.

Alongside a breadth of core engineering and bioengineering knowledge, graduates of the Molecular Bioengineering programme will have a specialist understanding of biochemical, physiological and biological processes coupled with excellent advanced practical laboratory skills in chemical biology, molecular biology, synthetic biology, analytical sciences, microfluidics and device engineering. In the first and second years of the Molecular Bioengineering programme over 60% of modules will include lab-based learning and teaching activities.

The entry requirements reflect the importance of a strong interest and foundation in chemistry as well as maths. For A level mathematics and chemistry, and one other A level subject (preferably biology, further maths or physics) are required at least at grades A*AA.

The Department has continued to evolve and develop the programme based on research innovations and feedback from students and advisory boards. Developments have included the addition of specialist pathways in the third and fourth years and accreditation by four professional engineering institutions. The excellence of the programme was recognised this year when the MEng in Biomedical Engineering topped the 2017 Guardian University League Table for General Engineering.

However, the discipline of bioengineering has continued to evolve at a fast pace and the Department decided there was a need for another programme, one built upon strong foundations in chemistry and maths, rather than the strong maths and physics background required for biomedical engineering. Development of the new programme has been led by Dr Sylvain Ladame and Professor Martyn Boutelle.

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END OF NEWS ITEM
Dr Hari Arora was invited to speak at the Explosive Blast Response of Naval Composite Materials and Structures Workshop at RMIT, Melbourne, Australia (6 April 2016). Funded by the Office of Naval Research (US), Dr Arora also met with researchers at NTU and A*STAR in Singapore who he is collaborating with on mitigating materials development.

Dr Reiko Tanaka gave a plenary lecture on “Systems dermatology for mechanistic understanding of skin barrier homeostasis” at Cosminnov 2016, an international conference of cosmetology, in Orleans, France, in May.

Dr Hari Arora was invited to give a technical talk on translational research, defining how mechanical engineering practice is being applied across the field of bioengineering and in particular my research on blast lung injury at IMechE, London, UK on 18 May 2016.

Professor Jimmy Moore gave a lecture to Stanford Biodesign students in May.

Julia Sun (Almquist group) has won the Best GTA award at the Student Academic Choice Awards (SACA)

Tony WK Cheung (Tang group) has just passed his PhD viva

Anna Sharrock (CBIS) was awarded the Richard Wiseman Medal at the Association of Trauma & Military Surgery (ATMS)

Anisha Malde (4th year MEng) was a finalist for the Female undergraduate of the year and was awarded an internship. As part of being a finalist Anisha was required to give more insight on how to get more women involved as well as become part of Rolls-Royce Advertising videos.

Professor Molly Stevens was awarded the 2016 Clemson Award for Basic Research at the World Biomaterials Congress in Montreal, Canada this last Friday. The Award recognises her for having contributed to the basic knowledge and understanding of the interaction of materials with tissue.

Dr Steffan Verbruggen (Nowlan group) awarded the prize for Best Poster at the Innsisheen Clinical Translation Showcase 2016 in Sheffield on Thursday 5th May. The poster was titled: “Fetal Movements as Biomarkers for Fetal Health”.

Paul Rinne and Michael Mace (Burdet Group) were runners-up at the oneStart finals with their stroke rehabilitation innovation griPable.

May was a successful month for student start-up CustoMem with co-founder Gabi Santos and co-founder Gabriella Mentz (MEng 2015) CustoMem co-founder and CEO was awarded a Royal Academy of Engineering Enterprise Fellowship.

Blast Injury Science & Engineering. A guide for clinicians and researchers.

Academics and researchers from the Centre for Blast Injury Studies, together with a number of external collaborators have compiled a textbook detailing the science and engineering of blast injury science. Aimed to help the spectrum of researchers from all backgrounds who seek to conduct science and engineering based research on blast injuries, the contents of the book are a consequence of the team’s experience in working in an interdisciplinary environment. As such, there is something for everyone. The text is divided into four sections. Section A provides a background in blast physics, biomechanics and the behaviour of materials, giving the reader a solid introduction to the underpinning physics of blast transmission through and within materials. Section B characterises blast injuries by the process of explosion and some of the weapons that produce such injuries. Using the London 7/7 suicide bombings as an example, Section C provides information on the principles of forensic investigation and the types of physical and computational models used to improve the understanding of blast and blast mitigation. The effects of blast on the human is further developed in the final Section (D).

Published by Springer, the textbook is available for purchase via all major retailers, the proceeds of which will go to the Royal British Legion.