

## Upcoming Events & Seminars

### 'Insect behaviour, complex worlds from simple systems'

Speaker: Dr Alice Witney  
Department of Physiology  
Trinity College Dublin  
Venue: Printing House  
When: 12.30pm, 15th April

### 8th International Conference for Cellular Engineering ICCE

Trinity College Dublin  
June 10-12<sup>th</sup> 2010

## Recent Seminars

### Mechanoregulation of joint morphogenesis

Speaker: Karen Roddy  
Venue: Auk room,  
Department of Zoology,  
When: 16th February 2010

### Stochastic failure modelling of total hip replacement

Speaker: Pavel Galibarov,  
Venue: Printing Hall  
When: 19th March 2010

## For next month's edition:

If you have any submissions you would like to make to the next month's edition please email to [tcbe@tcd.ie](mailto:tcbe@tcd.ie). We welcome all news including journal publications, presentations at conferences, industrial or clinical collaborations, awards and research grants and new members to the teams.



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## Message from the Director

With the Easter break fast approaching; here is a brief overview of the last month's highlights and activities.

### Industry Collaborations

TCBE has had a series of successful meetings with Johnson & Johnson, Covidien, Neurosky and Integra. We are hoping that these will progress to funded collaborations.

### Biomedical Research Medal

Well done to the TCBE Medal Winners featured in the Spring edition of the Engineers Ireland Journal. Pictured below is Kevin Moerman, TCBE PhD student, with his Biomedical Research Medal.



### MSc in Biomedical Engineering

First recruits have been appointed for the Erasmus Mundus MSc in Biomedical Engineering. Three high calibre non-EU students from Sri Lanka, China and Pakistan. EU students will be selected in May

### MSc in Bioengineering

Feedback for all MSc modules this year has been positive and projects have all commenced.

### Summer School

We are hosting again the European Summer School in Bioengineering for Engineering and Medical Students from 11<sup>th</sup> – 23<sup>rd</sup> July. If there are any volunteers willing to be involved please email [tcbe@tcd.ie](mailto:tcbe@tcd.ie).

### TCBE Website

The TCBE website is in the process of being redesigned by the College Web design Office. It is hoped to have the new website launched in June. The main areas of focus will be on Research Themes, Education and a new section on Healthcare Innovations.

Imagery for the new website is of utmost importance to enhance our image as a progressive innovative Centre. TCBE is offering €50 for the best image emailed into us. If you have any images you think would be good for the new website please email to [tcbe@tcd.ie](mailto:tcbe@tcd.ie) by 23<sup>rd</sup> April. The images could be related to one of the 5 main Bioengineering Research Themes (Cardiovascular, Biomaterials, Regenerative Medicine, Neural, and Musculoskeletal), Education, images relating to the medical or clinical environments or of TCBE people carrying out research. Winner will be announced in next month's newsletter.

Don't forget to attend Dr Alice Witney's very interesting seminar on 15<sup>th</sup> April. I wish you all a very Happy Easter.

**Prof Richard Reilly**

**Director, Trinity Centre for Bioengineering**

# TCBE PEOPLE & ACTIVITIES

We would like to welcome a **new IRCSET postdoctoral researcher** to TCBE. Dr. Yurong Liu has been awarded an IRCSET Enterprise Partnership Scheme Postdoctoral Fellowship to join the TCBE. Yurong will be working on our collaborative project with Dr. Danny Kelly's lab and Prof. Kevin Mulhall in the Sports Surgery Clinic in Santry. He will be specifically looking at how human MSCs can be used to engineer functional cartilage tissue.



**David Taylor** was invited to write a series of articles for the high-profile

materials science journal **Materials Today**. The first, just published in their March 2010 issue, is entitled "Why Are Your Bones Not Made of Steel?". The next one, coming out in April, will be "What We Can't Learn from Nature". A podcast of an interview with Prof Taylor can be accessed [here: www.materialstoday.com/podcasts/](http://www.materialstoday.com/podcasts/)

Congratulations to **Grainne Cunniffe** who passed her PhD viva exam last week. Dr. Eugene McCloskey from the Metabolic Bone Centre in University of Sheffield was external examiner.

Congratulations also to **Pavel Gilbarov** and **Karen Roddy** who passed their PhD vivas this month. Well done to **Colm Lowery** who passed his MSc viva.

**Tatiana Vinardell** is spending 3 months (externship) in West Virginia University in the Department of



Orthopaedics with Dr Ming Pei. Tatiana is a PhD student under the supervision of Dr Daniel Kelly.

The goal of this stay is to learn different techniques about how to engineer cartilage and meniscus from synovial membrane stem cells. She gave a seminar to the Orthopaedics Dept about our research in Dublin and is running a project called "The effects of mechanical stimulation on tissue engineered meniscus".

**Prof Patrick Prendergast** was an invited speaker at the recent Valedictory Symposium held for Prof. dr. ir. Rik Huiskes on 4th February 2010 in the University of Technology, Eindhoven, The Netherlands. The Symposium was held to honour the career of Prof Huiskes whose research work has concentrated on osteoarthritis and hip replacement, knee trauma and ligament reconstruction, and osteoporosis and the mechanobiology of bone. Prof Prendergast's presentation was entitled 'Birds, bones and blood: biomechanics à la Rik Huiskes'.

## Papers & Publications

Niamh A. Plunkett, B.E.,<sup>1,2</sup> Sonia Partap, Ph.D.,<sup>1,2</sup> and Fergal J. O'Brien, Ph.D.<sup>1,2</sup> Osteoblast Response to Rest Periods During Bioreactor Culture of Collagen–Glycosaminoglycan Scaffolds published in *Tissue Engineering: Part A*

Daniel J. Kelly and Christopher R. Jacobs. The Role of Mechanical Signals in Regulating Chondrogenesis and Osteogenesis of Mesenchymal Stem Cells. *Birth Defects Research (Part C)*, in press.

R. Whelan, R. Lonergan, H. Kiiski, H. Nolan, K. Kinsella, J. Bramham, M. O'Brien, R.B. Reilly, M. Hutchinson, N. Tubridy. A high-density ERP study reveals latency, amplitude, and topographical differences in multiple sclerosis patients versus controls. *Clinical Neurophysiology*. In press.

R. Whelan, R. Lonergan, H. Kiiski, H. Nolan, K. Kinsella, M. Hutchinson, N. Tubridy, R.B. Reilly. Impaired information processing speed and attention allocation in multiple sclerosis patients versus controls: A high-density EEG study. *Journal of the Neurological Sciences*. In press

Whelan R. & Barnes-Holmes D. Consequence Valuing as Operation and Process: A Parsimonious Analysis of Motivation. In Press. *The Psychological Record*

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*Bioengineering for better health*