

26th Annual Medical Engineering Student Project Competition

27 February 2014
One Birdcage Walk,
Westminster
London SW1H 9JJ,
UK

VENUE

The competition will take place at the Institution Headquarters, One Birdcage Walk, London SW1H 9JJ. The building is set in the heart of Westminster, approximately 5 minutes walk from either St James's Park or Westminster Underground stations, on the district and circle lines. Westminster is also on the jubilee line, where there is wheelchair access. Parking in central London is very difficult and delegates are advised to use public transport.

Delegates flying to London will arrive at either London Heathrow or London Gatwick airports. Heathrow is 30 minutes from Paddington Station on the Heathrow Express. Heathrow is also serviced by the Piccadilly line on the Underground network. The journey time to central London is approximately 40 minutes. Gatwick airport is 30 minutes from Victoria on the Gatwick Express. Trains depart every 15 minutes.

PROGRAMME

Time Programme

10:30 Welcome Refreshments and Registration

11:20 Introduction - Peter Brett to introduce poster presentations and advise on judging process
Poster Presentation Introductions (1 minute presentation / 3 minute questions each)

Judges:

Peter Brett, Brunel University / Dr Sarrawat Rehman, JRI / Tom Shannon, Vicon / David Calder, Health Tech and Medicines KTN

JRI prize for best undergraduate poster presentation (£250 book token)

11:30 Shane Fogarty - Medication Capsule Thermoforming Process Improvement and Electrostatic Analysis

Alaa Abdulali Alsaffar - Development of Methods To Pressure Map The Patient Device Interface In Support Surface

David Williams - Exploring Knee Loading Using Magnetic Resonance Imaging

JRI prize for best taught masters poster presentation (£250 book token)

Qausain Tammer - Osteoporosis and Pharmaceutical Drugs - Is this the best treatment?
Tricia Adjei - Complexity and Dispersion Analysis of Filtered Intracranial Pressure Signals from Hydrocephalus Patients.

Amy Rebecca Sibley - The role of Kinesio Tape in correcting scapular position and orientation in swimmers and non-swimmers.

Samuel Smith - Design of a 'Heavy Limb Lifter' for the assistance in treatment of pressure ulcers and oedema.

Christopher John Grant - Design of an automated fluid handling device for enhanced volumetric flow separation of bioparticles using electrostatic forces

Ama Frimpong - Development of a materials driver system for the additive manufacturing of light - activated polymeric solutions

Heather Ilona Black - The Biomechanics of Bruising

Nawar Al-Zebari - Shape Memory Polymer Blends for Biomedical Applications

MediMaton prize for best PhD poster presentation (£250) (1 minute presentation / 3 minute questions each)

Chi Leng (Agnes) LEONG - Bioengineered microfluidic devices for the real-time clinical measurement of neurochemicals

Wayne Ayre - Novel approaches to the development of PMMA bone cement

Mario Alberto Accardi - Numerical and Experimental Characterisation of Articular Cartilage - A Study on Biomechanics and Biotribology, Osteoarthritis and Tissue Engineering Solutions

Shona Cunnigham - Carbon Dioxide Absorption and Channelling in Closed Circuit Rebreather Scrubbers

Neil Vaughan - Development of a Patient-Specific Epidural Simulator for Virtual Training and Assessment

Diogo Miguel Geraldos - Orthotropic Modelling of the Skeletal System

Olga Korolkova - Brachial Pressure Waveforms: Measuring and Modelling

12:50 Buffet lunch (Judges deliberate in Environment Room)

Cathy Holt to introduce sponsors:

- 13:50
- Dr Sarrawat Rehman, JRI
 - Patrick Finlay, MediMaton
 - Tom Shannon, Vicon

Podium Presentation Prizes

Vicon prize for best medical engineering project (£500) (12 min each / 3 min questions)

Judges:

Tom Shannon, Vicon / Ian Charlton, Oxehhealth Ltd / Tony Unsworth, Durham University

13:56 Tom Shannon to introduce the Vicon prize and advise on judging process

14:00 Ana Rita Pereira Morgado da Silva - Advanced signal processing of electrocardiogram recordings for the early detection of cardiac autonomic neuropathy in diabetes type 2

14:12 Questions

14:15 Katherine Stephenson - Feature extraction and classification of electroencephalogram recordings for Alzheimer's disease diagnosis

14:27 Questions

14:30 Anna Varone, Habiba Yasmin - Lithium Chloride reduces interleukin-1 β -mediated cartilage degradation

14:42 Questions

MediMaton prize for best medical engineering recent PhD thesis (£500) (20 min each / 5 mins Q&A)

Judges:

Anna Angus-Smyth, EPSRC / Garth Johnson, ADL Smartcare / Patrick Finlay, MediMaton

14:58 Patrick Finlay to introduce the MediMaton prize and advise on judging process

15:00 Joseph Sherwood - Blood velocity and viscosity in bifurcating microchannels

15:20 Questions

15:25 Claire Rebecca Donoghue - Analysis of MRI for Knee Osteoarthritis using Machine Learning

15:45 Questions

15:50 Joanna Bruncker - Photoacoustic Doppler velocity measurements using time-domain cross-correlation

16:10 Questions

16:15 Judging

Sponsors to announce winners:

- Edward Jrafer, JRI - Undergraduate and Masters Poster Presentation Winners

16:30 - Patrick Finlay, MediMaton - PhD Poster Presentation Winners

- Tom Shannon, Vicon - Medical Engineering Project

- Patrick Finlay, MediMaton - Medical Engineering Recent PhD Thesis

16:50 Photographs

17:00 Chair to announce the Smith & Nephew Lecture taking place following the competition

ENQUIRIES

General enquiries prior to the event should be addressed to:

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