



# UKACC PhD Presentation Showcase

Royal Society, London  
23<sup>rd</sup> October 2014, 2.00pm

- |    | Time |                                                                                                                                        |
|----|------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1  | 2.05 | <b>Fluid flow control</b><br>Robust control of wall-bounded turbulent fluid flows<br>Peter Heins<br>University of Sheffield            |
| 2  | 2.10 | Tollmien-Schlichting Wave Cancellation by Feedback Control<br>Hari Vemuri<br>Imperial College London                                   |
| 3  | 2.15 | Low order modelling for feedback control of fluid flows around complex geometries<br>Oliver Dellar<br>University of Sheffield          |
|    |      | <b>Controller design</b>                                                                                                               |
| 4  | 2.25 | Fault-Tolerant Control: A Gaussian Process Model Based Approach<br>Xiaoke Yang<br>University of Cambridge                              |
| 5  | 2.30 | Data-Driven Control<br>Thabiso M. Maupong<br>University of Southampton                                                                 |
| 6  | 2.35 | A complete and convex search for discrete-time noncausal FIR Zames-Falb multipliers<br>Shuai Wang<br>University of Manchester          |
| 7  | 2.40 | Incorporating Control Performance Tuning into Economic Model Predictive Control<br>Olumuyiwa Olanrewaju<br>University of Cambridge     |
| 8  | 2.45 | Point-to-point Iterative Learning Control with Optimal Time Point Selection<br>Yiyang Chen<br>University of Southampton                |
|    |      | <b>Vibration and position control / monitoring</b>                                                                                     |
| 9  | 3.00 | Shaft-mounted vibration control systems in rotating machinery<br>Samuel Jiménez<br>University of Bath                                  |
| 10 | 3.05 | Bounded Disturbance Amplification in Mass Chains<br>Kaoru Yamamoto<br>University of Cambridge                                          |
| 11 | 3.10 | Robust Fault analysis Technique for Permanent Magnet DC Motor In safety Critical Applications<br>Wathiq Abed<br>University of Plymouth |
| 12 | 3.15 | Synchrotron Electron Beam Control<br>Sandira Gayadeen<br>University of Oxford                                                          |
| 13 | 3.20 | Compensator Design for Model-in-the-Loop Testing with H-infinity Optimization<br>Jiayang Hu<br>University of Bath                      |
|    | 3.30 | <b>BREAK</b>                                                                                                                           |

- Renewables and energy efficiency**
- 14 3.45 Control for Load Mitigation in Wind Turbines  
Alan Wai Hou Lio  
University of Sheffield
- 15 3.50 Declutching Control of Wave Energy Converters Involving State Constraints  
Zhe Feng  
Imperial College London
- 16 3.55 Modelling and Engineering Design for Improved Energy Efficiency in an Optimized Grow-cell  
Ioannis Tsitsimpelis  
Lancaster University
- 17 4.00 Variable Supply Pressure Electro-hydraulic System for Efficient Multi-axis Motion Control  
Can Du  
University of Bath
- 18 4.05 Energy Efficient Scheduling Algorithm for Real-Time Computing Systems  
Mason Thammawichai  
Imperial College London
- Vehicles – road and rail**
- 19 4.20 Ethical pre-emptive decision making algorithm inspired by altruism for controlled energy absorption  
James E.Trollope  
Coventry University
- 20 4.25 Managing The Risk Of The Implementation Of Mechatronic Bogies In Rail Vehicles  
Mitixa Jani  
Loughborough University
- 21 4.30 MPC based Rear Wheel Torque Vectoring Near the Limits of Handling  
Efsthios Siampis  
Cranfield University
- 22 4.35 Active Control of Trolleybus Current Collection Systems (ACTCCS)  
Min Chen  
Loughborough University
- Estimation and modelling**
- 23 4.45 Noise Covariance Estimation for Time-varying and Nonlinear Systems  
Ming Ge  
Imperial College London
- 24 4.50 Autonomous Scalable Methods for Inference in Big Data and Multiple Target Tracking.  
Allan De Freitas  
University of Sheffield
- 25 4.55 Optimal Mode Decomposition for high dimensional systems  
Jakub Krol  
Imperial College London
- 5.15 **BEST PAPER PRIZE PRESENTATION**