

# **The 2016 UKACC International Conference on Control (UKACC Control 2016)**

Belfast, UK, 31 August - 2 September 2016

## **GREETINGS FROM THE CONFERENCE CHAIRS**

On behalf of the Conference Organising Committee, it is our great pleasure to welcome you to the 2016 UKACC (United Kingdom Automatic Control Council) International Conference on Control (UKACC Control 2016). UKACC Control 2016, the 11th in this now well established series of prestigious biennial events, is being held for the first time this year in the historic city of Belfast, Northern Ireland, with the Energy, Power and Intelligent Control Research Cluster at Queen's University Belfast as the host. We hope you will enjoy your time in Belfast and Northern Ireland and find the conference stimulating and fruitful.

The technologies in automatic control have been playing important roles in our modern civilization for many decades and continue to be at the forefront of innovation today in areas such as autonomous vehicles, green transport, renewable energy, next generation manufacturing, Industry 4.0, healthcare, assisted living technologies and cooperative robotics. Since the first UKACC Control Conference took place in Exeter University in 1996, this conference series has provided an international platform for researchers, engineers, academicians, as well as industrial professionals from all over the world, to present their research results and development activities in automatic control in these and many other exciting areas, with the aim of promoting the development of automatic control, strengthening international academic cooperation and communication, and facilitating the exchange of research ideas.

The UKACC Control 2016 received 164 paper submissions from 25 countries with more than 130 registrations. With the tremendous work of the members of the International Program Committee, the final program has an exciting set of technical sessions covering the latest research and development results in automatic control. It contains a number of high level theoretical papers as well as many interesting application papers.

The highlights of the conference include:

- 3 keynote lectures by internationally leading researchers. Professor Tianyou Chai from Northeastern University, China will present a keynote on “Smart optimization control system for energy-intensive equipment”, Professor John Ringwood from Maynooth University, Ireland will talk about “Optimising the Performance of Wave Energy Systems”, and Professor Er-Wei Bai from University of Iowa, USA will speak on “Target/Source Localization by a Network of Imperfect Binary Sensors”.
- A 3-day UK-China workshop on shaping a low carbon energy future which is taking place immediately prior to Control 2016, and is free-of-charge for conference delegates if they wish to attend. The workshop aims to generate innovative ideas and develop holistic approaches for shaping a low carbon energy future, which will inform UK-China collaborations on energy research in delivering impact, shaping capability and training future leaders. It features keynote speeches, training activities, technical presentations and posters, panel discussions, break-out sessions, industrial visits, networking events and social visits. The workshop will also mark the launch of a joint laboratory on electric vehicles and smart grid founded by seven institutions and industrial partners from UK and China through the EPSRC-NSFC iGIVE project, and it complements the exchanges already occurring through the RCUK-funded UK-China Science Bridge on sustainable energy and built environment, previously highlighted when the Chinese Vice-Premier Madam Yandong Liu visited Northern Ireland in 2012.
- 2 pre-conference workshops targeting ‘Intelligent computing and control for networked systems’ and ‘Smart grids and electric vehicles’ and are also free to attend to all conference delegates.
- 1 pre-conference postgraduate networking and training workshop.
- Three mini symposia, one organized by the IET on ‘Applications of Biomedical Modelling and Control’, one co-organised by InstMC and IChemE on ‘Control Challenges facing the Rail and Process industries’ and one co-organised by Irish Manufacturing Research and Seagate on ‘Industry 4.0: Putting Theory into Practice’.

In addition to participating in the technical program, delegates are also cordially invited to attend the conference welcome reception and banquet, and are encouraged to explore the historic and vibrant city of Belfast which offers a unique combination of nice restaurants, pubs, hotels, and meeting venues in a spectacular setting.

We would like to take this opportunity to thank the organizing committee, the keynote speakers, the organizers of the special sessions, pre-conference workshops, mini-symposia and panel session, the program committee and reviewers, the conference participants, and of course, all the contributing authors who will be sharing the results of their research during the conference. Our sincere thanks also go to the many volunteers who assisted with conference logistics.

Last but not least, we would like to express our sincere gratitude to all our sponsors, including our main conference sponsors - Kuka Robotics, Seagate, Irish Manufacturing Research, National Instruments, IEEE and IET, and the UK-China workshop sponsors - British Council Newton Fund through the Researcher Links Scheme, NSFC, and the UK Science & Innovation Network through the Global Partnerships Fund. Their generous support has helped make UKACC Control 2016 a success.

With our best wishes for a wonderful and stimulating experience in Belfast!



**Seán McLoone**  
(General Chair)



**Kang Li**  
(Program Chair)



**Wasif Naeem**  
(Local Organising Chair)



**Sarah Spurgeon**  
(IPC Chair)