

**2015 Joint UK-Japan Workshop on Physics and Applications of Superconductivity (JWPAS 2015)  
12-15 April, 2015**

April 22, 2015 (HE102). A joint UK-Japan workshop on the physics and applications of superconductivity was held between 12-15 April 2015 in the picturesque and historic King's College, Cambridge, UK. The workshop was organised on behalf of the Institute of Physics (IOP) Superconductivity Group, and was funded by the UK's Engineering and Physical Sciences Research Council (EPSRC), the DAIWA Anglo-Japanese Foundation, King's College, and the IOP, as well as sponsorship from Sumitomo (SHI) Cryogenics and SuperPower. The team from IOP Conferences also provided significant assistance in organising and running the event.

The aims of the workshop were to bring together a critical mass of world-leading researchers of superconductivity from the UK and Japan and to encourage the exchange of ideas and scientific discussions to provide a platform for formal and informal collaborations in the future. The workshop was also an opportunity to celebrate the 400<sup>th</sup> anniversary in 2013 of the opening of trade, scientific, cultural and diplomatic ties between the two countries. Delegates were provided with a booklet, "Japan-UK Science & Innovation Collaboration: Sources of Funding," published by the UK government's Science and Innovation Network (SIN), outlining in both English and Japanese the many funding opportunities for British and Japanese researchers to form scientific collaborations together.

79 delegates attended the workshop from the UK, Japan and Europe, including representatives from four exhibitors – IOP Publishing, Opera, Oxford Instruments, and Sumitomo (SHI) Cryogenics – and the main topics of discussion covered by the 44 talks (7 keynote, 3 invited and 34 contributed) and 20 posters, included:

- Applications (Large-scale, and small-scale / electronics)
- Superconducting materials (Bulk superconductors, HTS coated conductors, iron-based superconductors, fullerenes, and superconducting joints)
- Physics (Charge density waves in cuprates, properties of superconductors, and high- $T_c$  superconductivity)

The [technical programme](#) was supplemented by two discussion panels to identify the most significant challenges in each field and provide direction to attempt to solve these: one on the future of superconducting applications, which was led by presentations from Prof. Junichi Shimoyama (Aoyama Gakuin University), Dr Kenichi Sato (Sumitomo Electric), Prof. Damian Hampshire (University of Durham), and Dr Ziad Melham (Oxford Instruments Nanoscience), and another on the future of superconducting physics, led by Prof. Nobuyuki Yoshikawa (Yokohama National University), Prof. Antony Carrington (University of Bristol), and Prof. Ted Forgan (University of Birmingham).

The participants and organisers were extremely pleased with the number of high quality presentations and the discussions pursued thereafter, and on behalf of the scientific organising committee, I would like to thank everyone who helped organise and participate in the workshop to make it such a great success. We hope that this workshop has provided the catalyst for many fruitful collaborations between researchers from the UK and Japan in the future.



**The participants of the 2015 Joint UK-Japan Workshop on Physics and Applications of Superconductivity next to King's College Chapel, Cambridge**

Dr Mark Ainslie

JWPAS 2015 Scientific Programme Co-ordinator, University of Cambridge