

Magnonics 2017, August 7-10, 2017, Magdalen College, University of Oxford

Magnons are a quanta of spin-excitation in magnetically-ordered materials. Magnonics stands for “magnon + electronics”. It builds on our knowledge of magnetism and electronics, and now further looks for the quantum nature of magnons. The main objective of Magnonics 2017 was to bring together world-leading scientists in the relevant research areas, with a specific aim of discussing technical and fundamental aspects of using magnons (spin-waves) as a building block of new information technologies. This Magnonics conference is a symbolic one for the field and Magnonics 2017 is the fifth in a series of events and the first to be held in the UK. Magnonics 2017 included both established and early-career scientists across the world. The significance of the science was enormous. As one measure of this, there were 23 invited speakers that reported on their recent work, already published in the highest impact journals and/or even unpublished work to stimulate scientific discussions. In doing so, it was possible to discuss and identify important physical and technological problems in the field of Magnonics. This conference offered a place where scientists of all career levels could spend days and nights together during the course of the conference period and encouraged stimulated, concentrated discussion.

Magnonics 2017 overall was a great success, attracting 129 participants across the world who work in a broad spectrum of the loosely-defined research field of “Magnonics”. This number of participants is a record high in the history of Magnonics conferences and can be translated into current great interest in Magnonics research as well as successful growth of the research community. UK and Japanese scientists are at the centre of such research activities, and during the conference week there was a strong presence of Japanese and UK scientists in many different ways. Invited talks from Professor Saitoh, Tohoku University, (who gave the IEEE Distinguished Lecture), Professor Ono, Kyoto University, Dr Satoh, Kyushu University and Hashimoto also from Tohoku University, were all well-received and there were many interesting discussions during the sessions as well as outside. Younger researchers such as postdocs and PhD students from Japan attracted large crowds in front of the posters they presented. These were nicely embedded in the conference programme where there was 13 different scientific sessions totalling 44 speakers with 60 poster presentations, together with other network sessions carried out by a Nature editor and JSPS delegates. The immediate scientific impact of the Magnonics 2017 conference can be recognised by the record high number of participants and the high quality of many scientific interactions throughout the week. A longer term impact will be measured by future ground-breaking research coming out of this community, new collaborations that form between the participants as well as an increase in

the size of the research community. A location and Chairs for Magnonics 2019 has already been identified, nominated and agreed upon during the Magnonics 2017 conference. It should be possible to recognise the longer term impact of the Magnonics 2017 conference and we will be able confirm the relatively longer term impact to be made at the Magnonics 2019 conference in the two years time.

- Dr Hidekazu Kurebayashi, University College London



Conference attendees