

ICASP-4 (International Conference on Advanced Solidification Processing)

The 4th International Conference on Advances in Solidification Processes (ICASP-4) was held on 8 to 11 July 2014 at Beaumont Estate, Old Windsor, UK, with over 220 participants. ICASP is one of the major events of the international solidification community, taking place every 3 years. ICASP-1 was held in Stockholm, Sweden in June 2005; ICASP-2 in Seggau Castle, Graz, Austria in June 2008; and ICASP-3 in Aachen/Rolduc, Germany in June 2011.

ICASP-4 marked the beginning of a new era after the 60th anniversary of “constitutional supercooling” (W. A. Tiller, K. A. Jackson, W. J. Rutter and B. Chalmers, *The redistribution of solute atoms during the solidification of metals, Acta Metallurgica, 1(1953), 428*), which is widely regarded as the beginning of modern quantitative solidification science). While much remains to be done, significant progress has been made over the past six decades. ICASP-4 provided our community with a great opportunity to celebrate 60 years of solidification research and to discuss and debate new research directions and the grand challenges of the decades to come. For this purpose, we staged 15 plenary lectures and 19 invited lectures delivered by key researchers of our field. The other objective of ICASP-4 was to discuss the recent progress in solidification science and technologies, and this was done through parallel sessions of 112 oral presentations and a dedicated poster session of 70 poster presentations. The academic program was intertwined by social events, such as a BBQ evening and the Conference Gala Dinner. The entire program was designed to promote the exchange of scientific information and social interaction between members of our community.

One of the highlights of ICASP-4 was the presentation of the first John Hunt Medal and the first John Hunt Memorial Lecture. This annual award recognizes the lifetime contribution of Professor John Hunt FRS and is awarded to an individual who has made outstanding contributions to solidification science and/or casting technologies. The first recipient of the John Hunt Medal was Professor Rohit Trivedi, Anston Marston Distinguished Professor emeritus of Materials Science and Engineering at Iowa State University in the USA, for his manifold and lasting contributions to the understanding of microstructural development during solidification and phase transformations. Professor Trivedi also delivered the first John Hunt Memorial Lecture entitled “Dynamics of crystalline to glass transition,” which was inspiring and well received by the audience.

ICASP is developing into one of the most successful and attractive solidification conferences in the world. It has its own unique characteristics: high academic quality, extensive interactions between participants in the evening over “free” drinks, secluded locations, and so on. I am very pleased to say that we have pushed this conference series to a new height during ICASP-4 while keeping all of its traditions.

The eight papers published in this issue are selected from the 15 plenary lectures delivered during ICASP-4 representing a typical range of topics covered by the conference. Other papers presented have been peer-reviewed and will be published in IOP Conference Series: Materials Science and Engineering with open access.

Symposium Organizers:

Zhongyun Fan

BCAST, Brunel University London, Uxbridge, UK

zhongyun.fan@brunel.ac.uk