

**JIEA: A SPECIAL ISSUE
FOR THE UKBIM6 MEETING**

I. G. GRAHAM, J. TREVELYAN AND S. N. CHANDLER-WILDE

The 6th UK Conference on Boundary Integral Methods (UKBIM6) was held at Durham on 17th-18th September, 2007. This Special Issue of the *Journal of Integral Equations and Applications* presents some aspects of the state-of-the-art in a range of methods relating to boundary integral equations. The papers in this issue are expanded versions of the presentations of the authors at the conference.

The UKBIM conferences were conceived to be a relaxed forum organised by researchers for researchers. The earlier meetings took place in Leeds (1997), Brunel (1999), Brighton (2001), Salford (2003) and Liverpool (2005). The United Kingdom has played a prominent role in the development of boundary integral and boundary element methods, and the success of the UKBIM meetings is testament to the sustained activity in this field of research in the UK. However, although the meetings were originally conceived as a national event, it has been especially pleasing in recent years for UKBIM meetings to be able to welcome participants from overseas. At the Durham conference 18 countries were represented amongst the list of authors.

Boundary integral and boundary element methods offer a research field that is inter-disciplinary, being of interest particularly to both mathematicians and engineers. One of the strengths of the UKBIM series of conferences is that it attracts participants from both of these communities to share ideas.

The keynote lecture of the 6th UKBIM Conference was given by Dr. Mario Bebendorf, of Rheinische Friedrich-Wilhelms Universität, Bonn. Dr. Bebendorf's research has made a significant impact in the area of efficient implementation of boundary element methods for partial differential equations. In the short time since obtaining his doctorate, he has established a strong reputation in developing efficient methods of treating non-local operators. In particular, he has worked on novel techniques to approximate boundary element matrices. His Adaptive Cross Approximation (ACA) method has attracted much