

Editorial

Nanomechanical Sensing

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This special issue represents the first proceedings of the 8th International Workshop Series on Nanomechanical Sensing (<http://www.nmc2011.org/>), which was hosted by the CRANN Institute of the Trinity College, Pearse street, Dublin 2, Ireland, from May 11th to May 13th 2011.

This meeting was a followup of workshops held in Madrid (2004), Knoxville (2005), Copenhagen (2006), Montréal (2007), Mainz (2008), Jeju (2009), and Banff (2010). At the conference in Dublin more than 120 researchers from all over the world gathered to report on their newest research in 57 talks in 11 different sessions. A poster session with 33 posters was held on the evening of the 11th of May. The workshop brought together companies and academia and provided lively debates in a personal atmosphere. The meeting focused on new developments, investigations of cantilever-based sensors, cantilever systems engineering, and other nanomechanical sensing techniques (QCM, Nanowires and Graphene).

Nanomechanical sensors are an interesting new type of sensors (dimensions: nanometers to micrometers) that can detect biological species and trace elements in liquid and gaseous media when analysed differentially with an in situ-reference sensor. The main competitive advantages offered are label-free sensing and miniaturized size, which opens up for hand-held devices that can perform multiple detections simultaneously. The areas where nanomechanical sensors can see applications range from environmental monitoring (e.g., heavy-metal ion detection), via homeland security, to biomedical applications (e.g., DNA sequencing).

We would like to take this opportunity to thank all of the authors for their valuable contributions to make this special

issue a reflection of the scientific excitement of the NMC2011 conference.

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