
Editorial

Michael Harris* and Robin Clarke

School of Electrical and Mechanical Engineering,
University of Ulster,
Newtownabbey, County Antrim BT37 0QB, UK
E-mail: dmj.harris@ulster.ac.uk
E-mail: rb.clarke@ulster.ac.uk
*Corresponding author

Jose Gracio

Department of Mechanical Engineering,
University of Aveiro,
Aveiro, Portugal
E-mail: jgracio@mec.ua.pt

Waqar Ahmed

Nanotechnology Integrated Bioengineering Research Centre,
University of Ulster,
Newtownabbey, County Antrim BT37 0QB, UK
E-mail: w.ahmed@ulster.ac.uk

Mark J. Jackson

Center for Advanced Manufacturing,
College of Technology,
Purdue University,
West Lafayette, IN 47907-2021, USA
E-mail: jacksonmj@purdue.edu

Biographical notes: Michael Harris is a Lecturer in the School of Electrical and Mechanical Engineering, University of Ulster, Newtownabbey, UK. He is active in research in the area of nanotechnology and nanoscience. He was the co-organiser of the 23rd International Manufacturing Conference that was recently held at the University of Ulster.

Robin Clarke is a Professor of Mechanical Engineering in the School of Electrical and Mechanical Engineering at the University of Ulster, Newtownabbey, UK. His area of research is nanoengineering and manufacturing technologies. He was coorganiser of the 23rd International Manufacturing Conference that was recently held at the University of Ulster.

Jose Gracio is a Professor in the Department of Mechanical Engineering at the University of Aveiro, Aveiro, Portugal. His area of research is tribology and thin films and coatings and was recently responsible for organising the International Conference on Nanostructured Coatings and Thin Films at the University of Aveiro.

Waqar Ahmed is the Chair of Nanotechnology at the University of Ulster. His area of research is in chemical vapour deposition of thin film nanostructures especially nanocrystalline diamond. He was educated at the University of Salford and has held academic positions at the University of Northumbria and Manchester Metropolitan University, UK.

Mark J. Jackson is a Professor of Mechanical Engineering at the College of Technology of Purdue University. His research interests include micromachining and the design of nanomachine tools. He read Mechanical Engineering at Liverpool John Moores University and conducted Post Doctoral Research at the University of Cambridge in the Department of Physics.

Over the past ten years, significant advancements have been made in the development of nanomanufacturing processes. Innovations in nanomanufacturing in recent years include physical vapour and chemical vapour deposition of micro and nanostructures, physical vapour deposition of thin films for functional coatings on cutting tools, spraying of micro and nanocomponents, electroplating nanostructures, to name but a few. Therefore, the goal of this special issue of the *International Journal of Nanomanufacturing* is to publish the current state-of-the-art in 'innovations in nanomanufacturing' and to provide a forum for innovations in nanomanufacturing.

The papers presented in this issue are based on oral presentations made during the 23rd International Manufacturing Conference held 30 August–1 September 2006 at the University of Ulster, UK. The conference was opened by the Vice Chancellor of the University of Ulster Professor Richard Barnett followed by a plenary session with three invited speakers. Professor Sir Bernard Crossland MRSA, FIAE, FREng FRS (Past President IMech E, Emeritus Professor Queens University) gave a talk on "Where now in Engineering Manufacturing in Ireland?" Professor Enrique Ares Gomez (University of Vigo) spoke about "Manufacturing Education in Spain" and Professor Waqar Ahmed (University of Ulster) gave a presentation about "Nanomanufacturing: An Emerging New World".

A wide range of topics were covered during the conference in the form of oral presentations including

- Micro and nanomanufacturing
- Business strategy and supply chain management
- Environmental engineering and human factors
- Biomedical engineering
- Industrial automation and process control
- Industrial engineering, operations management and education
- Manufacturing processes and technology
- Materials technology
- Product development, concurrent engineering and quality
- Simulation, manufacturing systems.

Although the conference proceedings contain many of the presentations (*Proceedings of the 23rd International Manufacturing Conference*, Editors: D.M.J. Harris, R.B. Clarke, W. Ahmed, M. Morgan and W. McKnight, 2006), a selection of papers included in this Special Issue are specially extended versions of the conference presentations selected to represent advances in Innovations in Nanomanufacturing and are expected to enlighten readers of the *International Journal of Nanomanufacturing*. We are grateful to authors who contributed to this Special Issue. This papers presented in this Special Issue have been refereed by peer reviewers who are experts in their field and have returned their reviews in a timely fashion. We wish to thank them for their reviews.

Special thanks to Professor Mohammed Dorgham of Inderscience Publishers for his continued support and guidance and for agreeing to publish this Special Issue.