
Editorial

Waqar Ahmed*

School of Computing,
Technology and Physical Sciences,
University of Central Lancashire,
Preston PR1 4BU, UK
E-mail: wahmed4@uclan.ac.uk

*Corresponding author

Mark J. Jackson

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

Michael Harris and Robin Clarke

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

Biographical notes: Waqar Ahmed is the Chair of Advanced Manufacturing and Nanotechnology at the University of Central Lancashire. His area of research is thin film coatings and surface chemistry.

Mark J. Jackson is an Associate Professor of Mechanical Engineering in the College of Technology at Purdue University. His research interests are in the area of machining and grinding, manufacturing processes and nanotechnology.

Robin Clarke is a Professor of Engineering at the University of Ulster. His research interests are in the area of engineering and manufacturing.

Harris was appointed to the University of Ulster in 1981. There he teaches Dynamics of Mechanical Systems, Robotics and Control at all undergraduate levels. His research interest is the dynamics of robot manipulators, particularly the application of screw theory to the kinematics of six degrees-of-freedom parallel-linkage robots. He also works on new assessment methods, particularly the automatic marking of mathematical assignments. Both these areas of interest are reflected in his 26 publications. He is a Member of the Irish Manufacturing Committee, which runs the annual International Manufacturing Conference.

Since the beginning of the new millennium, significant advancements have been made in the development of materials and products. Innovations in materials and product technology in recent years include process development and integration, advanced materials, surface engineering and aerospace technology. Therefore, the goal of this Issue of the *International Journal of Computational Materials Science and Surface Engineering* is to publish the current state-of-the-art in 'advances in manufacturing'. The papers presented in this issue are based on presentations made during the *23rd International Manufacturing Conference* held 30 August–1 September 2006 at the University of Ulster, United Kingdom. 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, MRIA, FIAE, FREng, FRS, (Past President of the Institution of Mechanical Engineers and Emeritus Professor of Queen's University, Belfast) 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 including:

- Micro and Nanomanufacturing
- 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 of 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 manufacturing and are expected to expand the knowledge of readers of the *International Journal of Computational Materials Science and Surface Engineering*. We are grateful to authors who contributed to this Special Issue. The papers presented in this Issue have been refereed by peer referees who are experts in their field, and have returned their reviews on time. We wish to thank them for their reviews. Special thanks go to Professor Mohammed Dorgham of Inderscience Publishers for his continued support and guidance and for agreeing to publish this Special Issue.