Editorial

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Biographical notes: W.L. Xu received the PhD in Mechatronics and Robotics from Beijing University of Aeronautics and Astronautics, China, in 1988. He is a Professor of Mechatronics in the School of Engineering and Advanced Technology, Massey University, Auckland, New Zealand. Prior to joining Massey in 1999, he worked at the City University of Hong Kong, University of Stuttgart, Germany and Southeast University, China. His current research interests include medical robotics, chewing robotics and diagnostic biosensor. He serves as an Associate Editor for IEEE Transactions on Industrial Electronics and IEEE Robotics and Automation Magazine, and Editor for *Int. J. Intelligent Systems Technologies and Applications*.

T.J. Moir received the BSc in Control Engineering and a PhD in Estimation and Control Theory from Sheffield Hallam University, in 1979 and 1983, respectively. He has been a Senior Lecturer in the School of Engineering and Advanced Technology, Massey University, Auckland, New Zealand since 2000. Before joining Massey University, he was a Lecturer/Senior Lecturer at Paisley University, Scotland for 16 years. His main research interests are in the areas of adaptive signal processing of speech signals and automatic control of smart-house technology. He is a European Engineer and a Member of the IET and IPENZ (New Zealand).

Johan Potgieter is a Senior Lecturer in Mechatronics and Robotics in the School of Engineering and Advanced Technology at Massey University (Auckland). He graduated from the University of Natal with a PhD in Mechatronics in 2003. His current research interests include sensor and vision fusion technologies for bio-mechanical applications. The most exiting area of research has been in the development of alternative carbon-based fuel systems for automotive and marine applications. Currently, he is working on the development of the Hulme supercar, with contributions in the areas of Chassis, Suspension and Aerodynamic analysis and design.

Fakhrul Alam is a Senior Lecturer at the School of Engineering and Advanced Technology, Massey University, Auckland, New Zealand. He received his BS in Electrical and Electronic Engineering from BUET, Bangladesh and MS and PhD in Electrical Engineering from Virginia Tech, USA. During his stay at Virginia Tech, he was with the Mobile and Portable Radio Research Group (MPRG). His research interest includes adaptive signal processing for wireless communication systems, wireless sensor networks and cognitive radio. He

serves as a regular reviewer for top international conferences and journals in the area of wireless networks. He is an elected member of Sigma Xi, the Scientific Research Society.

Mechatronics has become accepted for what it is, the blending of mechanics, electronics and computer control into an integrated design. It forms the basis of an ever growing list of products and techniques of great technical and commercial value. Mechatronic design can result in products which are much simpler than their intricate and costly predecessors and can make the miracles of yesterday commonplace. The skilful use of sensors and embedded machine intelligence provides significant value addition. Machine vision has emerged from the laboratory to find real applications in various diverse fields, for example inspection, fault detection, vehicle guidance and robot control. Low-cost cameras have been developed for multimedia applications, but with their ease of interfacing they offer a whole new field of low-cost vision-based control.

Following the success of its 14 predecessors, M2VIP'08, the 15th International Conference on Mechatronics and Machine Vision in Practice was held at Massey University in Auckland, New Zealand, 2–4 December 2008. It provided a dynamic forum for international experts and researchers to present and review advances in mechatronics and machine vision which have culminated in practical applications, or which promise practical implementation in the very near future.

All 118 papers presented at this conference passed a rigorous refereeing process, first as extended abstracts and then again as full manuscripts. The accepted papers underwent final revision in light of the second round of the reviewing process. Grateful thanks are owed to the international team of reviewers for their diligence in assessing the papers.

The papers selected for this special issue represent the quality, breadth and depth of the practical side of the research in the field of Mechatronics and Machine Vision.