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## Editorial

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**Biographical notes:** Peter Xu received his BE in Manufacturing Engineering and his ME in Mechanical Engineering from Southeast University, China, 1982 and 1985, respectively, and his PhD in Mechatronics and Robotics from Beijing University of Aeronautics and Astronautics, China, in 1988. He joined the University of Auckland in 2011 as the Chair in Mechatronics Engineering. Before this appointment, he was a Professor of Mechatronics (2007–2010) in the School of Engineering and Advanced Technology, Massey University, New Zealand. His current research interests are mainly in areas of advanced mechatronics/robotics with applications in medicine and foods.

Tom Moir was with the Industrial Control Unit of the University of Strathclyde Scotland from 1982 to 1983. From 1983 to 1999, he was a Lecturer then Senior Lecturer at Paisley College/University of Paisley Scotland. Moving to Auckland New Zealand in 2000, he was with Massey University for ten years at the Institute of Information and Mathematical Sciences followed by the School of Engineering and Advanced Technology. He moved to AUT University Auckland in 2010 as an Associate Professor in the School of Engineering.

Johan Potgieter received his BSc Engineering degree in Mechanical Engineering and his MSc Engineering degree in Mechanical Engineering from the University of Natal, South Africa, 1997 and 1999, respectively, and his PhD in Mechatronics and Robotics in 2003. He is an Associate Professor in Mechatronics and Robotics in the School of Engineering and Advanced Technology at Massey University (Auckland). His current research interests are mainly in areas of advanced robotics with applications in medicine and automotive related areas. Currently, his consulting research is with Chrysler in Detroit.

Fakhrul Alam is a Senior Lecturer at the School of Engineering and Advanced Technology, Massey University, Albany, New Zealand. He holds a BSc in Electrical and Electronic Engineering (First Class with Honours) and MS and PhD in Electrical Engineering. His research interest includes intelligent transportation systems, wireless communication systems, wireless sensor networks and adaptive signal processing. He is an elected member of Sigma Xi, the Scientific Research Society.

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'Mechatronics' is the blending of mechanics, electronics and computer into an integrated design. It forms the basis of an ever growing list of smart products of great technical and commercial value. Mechatronics design can result in products which are much smarter and simpler than their intricate and costly predecessors and can

make commonplace the miracles of yesterday. Much value-added comes from the skilful use of sensors, actuators and embedded machine intelligence. Machine-vision has emerged from the laboratory among other sophisticated sensors to find real applications in areas which include inspection, fault detection, gaming, 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 18th predecessors, International Conference in Mechatronics and Machine Vision in Practice (M2VIP), M2VIP 2012 was held in Auckland, 28–30 November 2012, provided a dynamic forum for over 100 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.

This special issue consists of 15 peer-reviewed papers that were selected from those presented at the conference. Each paper was revised and expanded dramatically from its original version. The set of papers represent various recent applications of mechatronics and machine vision in real-world problems and are directly relevant to biomechatronics and biomedical robotics.