
Editorial

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Biographical notes: Peter Xu joined The University of Auckland on February 1, 2011, as Chair in Mechatronics Engineering. He was the Professor of Mechatronics (2007–2010), Associate Professor (2005–2006) and Senior Lecturer (1999–2004) in School of Engineering and Advanced Technology, Massey University, New Zealand. Prior to coming to New Zealand, he worked at the City University of Hong Kong (1993–1998), the University of Stuttgart, Germany (1990–1992) and Southeast University, China (1988–1989). His current research interests are mainly in areas of advanced mechatronics/robotics with applications in medicine and foods. He is Senior Member of IEEE and Fellow of IPENZ (Institution of Professional Engineers of New Zealand). He has served as Associate Editor for IEEE Transactions on Industrial Electronics (since 2003), was Associate Editor for IEEE Robotics and Automation Magazine (2008–2009), and Editor for *International Journal of Intelligent Systems Technologies and Applications, IJISTA* (2005–2010).

Tom J. Moir is an Associate Professor in Electrical and Electronic Engineering AUT University Auckland, New Zealand. Prior to this he spent 10 years at Massey University Auckland and 16 years at Paisley College/Paisley University Scotland. He is the author of around 100 publications in the areas of Signal Processing/Control Systems and the holder of one patent in the area of co-channel interference suppression in FM radio.

Johan Potgieter received the BSc Eng degree in Mechanical Engineering and the MSc Eng Degree in Mechanical Engineering from University of Natal, South Africa, 1997 and 1999, respectively, and the PhD degree in Mechatronics and Robotics in 2003. He is an Associate Professor in Mechatronics and

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Fakhrul Alam is a Senior Lecturer at the School of Engineering and Advanced Technology, Massey University, Auckland, New Zealand. He received BS in Electrical & 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 & Portable Radio Research Group (MPRG). His research interest includes intelligent transportation systems, adaptive signal processing and wireless sensor networks. He is an elected member of Sigma Xi, the Scientific Research Society.

‘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, M2VIP 2012 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 eight 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.