Editorial

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Biographical notes: Sallehuddin Mohamed Haris is currently an Associate Professor at the Department of Mechanical and Materials Engineering, Universiti Kebangsaan Malaysia (UKM). He obtained his BEng in Manufacturing Systems Engineering from the University of Leeds, UK in 1993. He then worked in the manufacturing industry for a short period before joining UKM in 1995 as an Academic Tutor. He was then appointed Lecturer in 1996, Senior Lecturer in 2007 and Associate Professor in 2016. He received his MSc in Mechatronics from the University of London (Kings College London) in 1996 and PhD in Electronics and Electrical Engineering from the University of Southampton, UK in 2006. He has published more than 80 papers in peer reviewed journals and conference proceedings. His research interests include adaptive and switching control systems, hybrid dynamic systems and mechatronic systems for automotive and robotic applications.

Shahrum Abdullah received his BEng from Universiti Kebangsaan Malaysia (UKM), MSc from the University of Loughborough, UK and PhD from The University of Sheffield, UK. His career at UKM started in 1996 as a Tutor, Lecturer (1997), Senior Lecturer (2006), Associate Professor (2007) and Full Professor (2011). Currently, he Heads the Centre for Automotive Research (CAR) at the Faculty of Engineering and Built Environment, UKM. His research interests include fatigue failure and analysis, fracture and damage mechanics, signal analysis, mechanics of materials and engineering design. He has published more than 400 papers in refereed journals and conference proceedings.

This special issue contains selected papers from the ReCAR 2015 and NVC 2015 joint conference held at the Holiday Inn Melaka Hotel, Malaysia on 1–3 December 2015. ReCAR is a conference series that started in 2011 as the Regional Conference on Automotive Research. After the successful inaugural conference, it was decided to broaden the scope and extend participation to a wider international level. Thus, beginning from the second edition in 2013, the acronym was maintained, but the full title became the International Conference on Recent Advances in Automotive Engineering and Mobility Research. NVC, which is short for the International Conference on Noise, Vibration and Comfort, began in 2005, followed by conferences in 2007, 2010 and 2012. In 2015, both ReCAR 2015 and NVC 2015, which were the 3rd and 5th editions of their respective series, were held simultaneously. The conferences were organised by the Centre for Automotive Research, Faculty of Engineering and the Built Environment, Universiti Kebangsaan Malaysia.

Selected papers from the joint conference were invited for this special issue and, after a thorough peer review process, five were accepted for publication. The papers cover a range of topics which are highlighted as follows. In 'Transmission ratio calibration for electro-mechanically actuated continuously variable transmission', a new design for a continuously variable transmission (CVT) is proposed and studied. Unlike in conventional CVTs, where hydraulic actuators are used to change and maintain the transmission ratio, an electro-mechanical actuation system comprising of a single DC motor is used in this study. The article 'Development of estimated disturbance rejection feedback for an armoured vehicle using active front wheel steering' studies the problem of unwanted yaw motion of a wheeled armoured vehicle caused by the impulsive recoil force generated during gun turret firing. A novel control scheme incorporating an active front wheel steering (AFWS) system using an estimated disturbance rejection feedback (EDRF) control embodiment is proposed to overcome this problem. The paper 'Analysis of boost conversion process for a thermoelectric module' presents a study on extracting waste energy from a readily available low quality heat source using a boost conversion process. In the paper 'Tremor suppression for 4-DOFs biodynamic hand model using genetic algorithm', an active control system is proposed to help people suffering from involuntary tremors, affecting hand movement. Here, an intelligent controller is applied to suppress the tremor using proportional-integral (PI) control, and the controller gains were tuned by genetic algorithm (GA) methods. 'Driving pattern analysis of hybrid and electric vehicles in a German conurbation including a drive

system evaluation' presents a study on energy consumption of electric and hybrid cars based on driving profiles obtained from actual driving data taken on certain roads in Germany. From these profiles, realistic energy consumption patterns and ranges were obtained. The suitability of using conventional, battery electric or plug-in hybrid electric drive trains with respect to the driving profiles were then evaluated.

As the guest editors, we would like to express our greatest appreciation to all authors who contributed to the success of ReCAR 2015 and NVC 2015, and to this special issue of *IJAMechS*. We also thank all reviewers for their assistance in the reviewing process. We extend special gratitude to the Chief Editor of *IJAMechS*, Professor Mingcong Deng for accepting our proposal on publishing this special issue, and for his support throughout, and also to the whole team at Inderscience Publishers for all the support and assistance that they have given.