
Editorial

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Biographical notes: Mahdi Mohammadpour is a Senior Lecturer in Dynamic Research Group of the Wolfson School of Mechanical, Electrical and Manufacturing of Loughborough University. He received his PhD in Tribodynamics from Loughborough University in 2014. His research focuses mainly on dynamics, tribology, energy efficiency and the related subjects. He is an Associate Editor for *International Journal of Powertrains*. He is also on the editorial board of *Shock and Vibration Journal*.

Mahdi Shahbakhti is an Associate Professor of Mechanical Engineering at the University of Alberta in Canada. He was previously a faculty member at Michigan Tech University (2012–2019), and post-doctoral scholar at the University of California-Berkeley (2010–2012). Over the past 21 years, he and his research group has worked on developing physical/data-driven dynamical models and model-based control techniques for automotive systems including conventional/hybrid/electric vehicles as well as connected and automated vehicles. He is currently the Chair of ASME Dynamic Systems Control Division Automotive and Transportation Systems Technical Committee and the Former Chair (2018–2020) of Energy Systems Technical Committee.

Christos Spitas is a Professor of Machine Design and Leader of the Space, Industry and Transportation Cluster at Nazarbayev University. Previously, he has served as a Professor of Embodiment Design and the Head of the Product Engineering Section at the Delft University of Technology and as well as in a number of positions in the defence and high-tech industry. His research covers various aspects of design from the architecture to the component and (meta)material level, with applications in the aerospace, automotive, energy and high-tech sectors.

Robert Prucka is the Alan Kulwicki Professor of Motorsports Engineering within the Department of Automotive Engineering at the Clemson University. His research and teaching interests include the design, control, calibration, performance and emissions of advanced powertrain systems. He is currently researching the use of artificial intelligence and/or optimal control strategies for the design and operation of electrified powertrains used in autonomous off-road vehicles. He also has active research related to novel low-emissions internal combustion engine concepts. He is also active in other motorsports engineering initiatives at the Clemson University Robert H. Brooks Sports Science Institute. He is a select committee member for the Emerging Trends and Technology Network (ETTN) at the Specialty Equipment Market Association (SEMA), member of the Society of Automotive Engineers (SAE) Combustion Committee, and an Associate Editor for the *International Journal of Powertrains*. He earned his PhD in Mechanical Engineering from the University of Michigan in 2008.

Umberto Montanaro received his MSc in Computer Science Engineering and PhD in Control Engineering and Mechanical Engineering from the University of Naples Federico II, Naples, Italy in 2005, 2009, and 2016, respectively. He is currently a Lecturer in Control Engineering and Autonomous Systems with the University of Surrey, Guildford, UK. His research outcomes have been the subject of more than 65 scientific articles published in peer-reviewed international scientific journals and conferences. His research interests include adaptive control, and control of piecewise-affine, mechatronic, automotive, connected autonomous vehicles and vehicle platooning.

Liangfei Xu received his BE and PhD degrees from the School of Vehicle and Mobility (SVM) at Tsinghua University in Beijing of China in 2003 and 2009, respectively. After graduation, he worked as a research assistant and Associate Research Fellow at SVM. In 2017, he was promoted as an Associate Professor. His research interests include dynamic modelling, diagnosis, control, and design of automotive polymer electrolyte membrane fuel cell (PEMFC) systems. He has published more than 100 SCI/EI papers, owns more than 50 patents and has achieved numerous prestigious awards and titles.

Transportation accounts for 23% of greenhouse gases. Hence, they are seen as one of the key contributors to the 2DS (2°C de-carbonisation scenario) by the International Energy Agency (IEA). Global electric vehicle (EVs) numbers are predicted to approach more than 20 million by the end of 2021 which is one of the promising technologies helping towards abovementioned targets. In conjunction with electrification efforts, autonomous vehicles and vehicle-to-everything (V2X) communication systems offer a wider horizon in terms of green mobility. Alongside these, new technologies for internal combustion engines (ICE) such as alternative fuels, stop-start, cylinder deactivation and variable valve timing (VVT) are all at the forefront of cutting emissions in the transition phase towards modern propulsions. These new technologies introduce new challenges to scientific and engineering community. *International Journal of Powertrains (IJPT)* provides a unique platform for researchers and engineers active in the field of powertrains to share, disseminate and resonate the impact of their research. *IJPT* is the only dedicated journal to the field of powertrain; and this special issue is designed to mark the 10th anniversary of *IJPT*. It includes wide range of subjects in the field of powertrain to produce a unique and outstanding issue, emphasising all above subjects, as well as providing a catapult for future excellent contributions in this journal.