Editorial

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Biographical notes: Ying Lei received his PhD degree from Vienna University of Technology. Currently, he is a Chair Professor of Civil Engineering at the School of Architecture and Civil Engineering, Xiamen University. His research interests include structural health monitoring, structural system identification and damage detection, structural control, and stochastic structural dynamics. He has gained some important academic awards such as the Chinese National Natural Science Award, award by the Chinese National Education Ministry for Advances in Science and Technology, Youth Award by the Fujian Provincial Government for Advances in Science and Technology, etc. He is the author of over 160 technical papers.

Ling Yu received his PhD degree from The Hong Kong Polytechnic University in 2002. He is currently serving as a Full Professor at the School of Mechanics and Construction Engineering, Jinan University, Guangzhou, China. He has served as a Principal Investigator for more than 40 funded projects, including five NSFC, eight provincial/ministerial NSF and over 30 consulting projects respectively. His research interests include highway bridge loading, structural health monitoring, structural vibration and its control, and automobile NVH. He has published over 210 technical papers in journals and conference proceedings in these areas, among them over 90 are in peer-reviewed journals.

Hua-Peng Chen is a Professor in Civil Engineering at Department of Engineering Science, University of Greenwich, UK, and Distinguished Professor at East China Jiaotong University, China. He received his PhD from University of Glasgow, UK. He is a Fellow of the Institution of Civil Engineers (UK) and a Chartered Civil Engineer (UK). His principal research interests

include health monitoring of large civil engineering structures, structural damage identification, stochastic deterioration modelling and lifetime performance assessment of aging civil infrastructure.

Currently, the vibration-based structural damage identification algorithms have been recognised and intensely studied as promising tools for monitoring structural conditions, detecting structural damage and assessing structural performance from a vast amount of monitoring data. One of the main categories of such algorithms is data-driven structural damage identification techniques which extract features from measured data, identify structural damage and assess structural performance when manually or automatically interpreting the significance of potential changes in these features. For exchange of the latest achievements in data-driven structural damage identification techniques, a special session on 'Data-driven structural damage identification and performance assessment' was successfully organised by us at the Structural Health Monitoring of Intelligent Infrastructure Conference 2017 (SHMII-8), which was held on December 6–8, 2017 in Brisbane, Australia. Due to the support by Dr. Jun Li, the Associated Editor of the *International Journal of Lifecycle Performance Engineering* (*IJLCPE*), a special issue from selected papers at the above special session was established after the conference.

Six papers were finally included in this special issue after peer viewers. These papers cover theoretical, computational and experimental work on data-driven structural damage identification and performance assessment technologies with possible applications in engineering structures. As the guest editors of the special issue in *IJLCPE*, we would like to express our sincere appreciation to the authors who contributed their work to this special issue and particularly to the reviewers for their time and efforts on reviewing and improving the papers to this special issue.