Editorial

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Biographical notes: Zheng Xu is currently a professor at Shanghai Polytechnic University, China. He has authored or co-authored more than 200 publications. He is with over 4100 citations (H-index 31). He is the Editors-in-Chief of Taylor & Francis *Cyber-Physical Systems* journal (EI and Scopus index). He is also the section editor of Springer *Discover Internet of Things* journal (EI and Scopus index). He won the Best Editor Award of the Year 2022 of Springer *Discover Internet of Things* journal. His paper entitled 'Ensemble-based multi-filter feature selection method for DDoS detection in cloud computing' obtained EURASIP Best Paper Awards 2019.

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Neil Yen received the joint PhD degree from the Department of Human Informatics and Cognitive Sciences, Waseda University, Shinjuku, Japan, and the Department of Computer Science and Information Engineering, Tamkang University, Taipei, Taiwan, in 2012. He is currently an Associate Professor at

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the School of Computer Science and Engineering, The University of Aizu, Japan. His interests include human-centric computing, big data, and anticipatory computing.

In a highly decentralised energy framework, intelligent control methodologies – such as neural networks, machine learning, and other advanced computational techniques – present highly efficient solutions for upholding the quality and reliability of electricity supply. Distributed energy resources (DERs) are poised to become the foundational pillars of future urban smart grids, where the security and resilience of energy supply will be increasingly managed by localised resources at the neighbourhood or district level.

To facilitate this transformative shift, the seamless and large-scale integration of DERs necessitates intelligent, coordinated strategies that optimise their collective performance. Achieving this requires a comprehensive understanding of the interactions among diverse DERs, exploring ways to amplify synergies across various energy vectors (e.g., electricity, heat and mobility), and enabling them to mutually reinforce one another. Moreover, it is crucial to investigate the underlying mechanisms through which different energy vectors can collaboratively support the operation and stability of smart grids.

Given that smart control lies at the heart of unlocking these synergies, developing effective and adaptive control strategies is essential. These strategies should aim to achieve optimal DER dispatch, ensuring the enhancement of urban energy system efficiency while maintaining flexibility, reliability and sustainability.

Acknowledgements

The guest editors wish to thank EiC Dr. M.A. Dorgham for providing the opportunity to edit this special issue. We would also like to thank Journal Manager Alexandra Starkie, and the referees who have thoroughly evaluated the papers for their support.