YAN KE (Dr)

Postdoc (Engineering and Management), PhD (Computer Science), BSc (Computer Science) (Hons)

Assistant Professor

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CURRICULUM VITAE

ACADEMIC QUALIFICATIONS:

- Ph.D. (Computer Science, 2013), National University of Singapore, Singapore
- Bachelor of Computer Science, National University of Singapore, Singapore

EMPLOYMENT RECORDS:

- Assistant Professor, Department of Building, School of Design and Environment, National University of Singapore, Singapore (2019-)
- Lecturer/Associate Professor, College of Information Engineering, China Jiliang University, China (2015-2019)
- Postdoc Researcher, Department of Engineering and Management, Masdar Institute of Technology, Khalifa University, United Arab Emirates (2013-2014)

PROFESSIONAL/CONSULTING ACTIVITIES:

- Leading/Corresponding Guest Editor, IEEE/ACM Transactions on Computational Biology and Bioinformatics (impact factor: 3.317), Special Issue: “Machine Learning for AI-Enhanced Healthcare and Medical Services: New Development and Promising Solution”.
- Leading/Corresponding Guest Editor, IEEE Transactions on Industrial Informatics (impact factor: 7.377), Special Issue: “AI and Machine Learning Solution Cyber Intelligence Technologies: New Methodologies and Applications”.

TEACHING:

- PF1101 Fundamentals of Project Management
- PF3201 Measurements
- PF3301 Maintainability of Facilities

RESEARCH INTERESTS:

- Artificial Intelligence
- Machine Learning

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- Big Data
- Smart Building Design
- Energy Solutions using AI Technology

SELECTED PUBLICATIONS:

- Ke Yan, Adrian Chong and Yuchang Mo. Generative Adversarial Network for Fault Detection Diagnosis of Chillers. Building and Environment, vol. 172, 2020. doi: 10.1016/j.buildenv.2020.106698.
- Ke Yan, Yuting Dai, Meiling Xu, Yuchang Mo. Tunnel Surface Settlement Forecasting with Ensemble Learning. Sustainability 12 (1), 232.
- Ke Yan, Wen Shen, Jing Huang and Zhiwei Ji. Unsupervised learning for fault detection and diagnosis of air handling units. Energy and Buildings, Vol 210, 2019. doi: 10.1016/j.enbuild.2019.109689.
- Ke Yan, Wen Shen, Qun Jin and Huijuan. Emerging Privacy Issues and Solutions in Cyber-Enabled Sharing Services: From Multiple Perspectives, IEEE Access, vol. 7, pp. 26031–26059, 2019.
- Ke Yan, Ho-Lun Cheng and Jing Huang. Representing implicit surfaces satisfying Lipschitz conditions by 4-dimensional point sets, Applied Mathematics and Computation, 354: 42-57, 2019.
- Ke Yan, Chaowen Zhong, Jing Huang and Zhiwei Ji. Semi-supervised Learning for Early Detection and Diagnosis of Various Air Handling Unit Faults. Energy and Buildings, 2018, 181: 75–83. doi: 10.1016/j.enbuild.2018.10.016.
- Ke Yan, Yang Du and Zixiao Ren. MPPT Perturbation Optimization of Photovoltaic Power Systems Based on Solar Irradiance Data Classification. IEEE Transactions on Sustainable Energy, 10 (2), 514-521, 2018. doi: 10.1109/TSTE.2018.2834415.
- Ke Yan, Zhiwei Ji, Huijuan Lu, Jing Huang, Wen Shen and Yu Xue. Fast and Accurate Classification of Time Series Data using Extended ELM: Application in Fault Diagnosis of Air Handling Units. IEEE Transactions on Systems, Man and Cybernetics: Systems, 49 (7), 1349-1356, 2017. doi: 10.1109/TSMC.2017.2691774.
- Ke Yan, Zhiwei Ji, Wen Shen. Online Fault Detection Methods for Chillers Combining Extended Kalman Filter and Recursive One-class SVM, Neurocomputing, 228: 205–212. 2016.
- Timothy Mulumba, Afshin Afshari, Ke Yan, Wen Shen and Leslie K. Norford. Robust model-based fault diagnosis for air handling units. Energy and Buildings, 86: 698--707. 2015.
- Ke Yan, Wen Shen, Timothy Mulumba, Afshin Afshari*: ARX Model Based Fault Detection and Diagnosis for Chillers Using Support Vector Machines. Energy and Buildings, 81:287-295. 2014.

EDITORIAL BOARD:

- IEEE Transactions on Industrial Informatics
- IET Frontier Computing
- IEEE/ACM Transactions on Computational Biology and Bioinformatics

INVITED TALKS:

- Project Quality Achievement in Construction. Novus Convention 2019 jointly organised by CIDB•CIOB Malaysia, 19 October 2019, KL, Malaysia.
- Efficient View-Based 3D Reflection Symmetry Detection. SIGGRAPH Asia 2014, CSMD workshop, Shenzhen, China.

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