

Zhengang Guo

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Biography

Zhengang Guo (B.Eng.'15, Ph.D.'21) is currently a Ph.D. student of the Department of Electrical and Electronic Engineering at Imperial College London, London, UK. He received the B.Eng. and Ph.D. degrees in mechatronic engineering from Northwestern Polytechnical University, Xi'an, China, in July 2015 and June 2021, respectively. From September 2018 to September 2020, he was a joint Ph.D. student at Cardiff University, Cardiff, UK. His research interests include super-resolution, nonconvex optimization, and wireless communications.

Education

Ph.D., Electrical and Electronic Engineering, Imperial College London

(January 2020 – Present)

Communications and Signal Processing Group, Department of Electrical and Electronic Engineering
Supervisors: Dr. Wei Dai, Prof. Bruno Clerckx, FIEEE, FIET

Ph.D., Mechatronic Engineering, Northwestern Polytechnical University

(September 2015 – June 2021)

Department of Industrial Engineering, School of Mechanical Engineering
Supervisor: Prof. Yingfeng Zhang

Joint Ph.D. (Non Degree), Electrical and Electronic Engineering, Cardiff University

(September 2018 – September 2020)

Centre for Integrated Renewable Energy Generation and Supply, School of Engineering
Supervisor: Prof. Jianzhong Wu

B.Eng., Mechatronic Engineering, Northwestern Polytechnical University

(September 2011 – July 2015)

Department of Industrial Engineering, School of Mechanical Engineering
Supervisor: Prof. Yingfeng Zhang

Research Projects

1. Signal Sensing, Design and Delivery for Electronic Environment (Joint ICL-UCL Consortium)

Grant EP/S026657/1, Supported by UK EPSRC, Value £520,757, April 2019 - March 2022

2. Research on Self-Adaptive Collaborative Optimization Approach of Smart Production-Logistics Systems Based on CPS and Industrial Internet of Things

Grant 51675441, Supported by National Natural Science Foundation of China, January 2017 - December 2020

3. Research on Modelling and Optimization Approach for Local Energy Networks (PI)

Grant 201806290042, Supported by State Scholarship Fund of China, September 2018 – September 2020

4. Innovative Design of Smart Equipment Based on CPS (PI)

Grant G2017KY0407, Supported by Northwestern Polytechnical University, January 2017 - December 2018

Membership

Graduate Student Member, IEEE

Graduate Student Member, IEEE Power & Energy Society

Academic Services

Conference Organization

Organizing Committee Member, The 19th International Manufacturing Conference in China (IMCC) 2021

Oral Session Chair, The Sino-German Forum on Manufacturing (SGFM) 2021

Peer Reviewer in Journals

IEEE Transactions on Industrial Informatics, IEEE Transactions on Intelligent Transportation Systems, IEEE Intelligent Transportation Systems Magazine, Applied Energy

Awards

1. Outstanding Ph.D. Graduate, March 2022
2. Hexagon First-Class Scholarship, November 2017
3. Outstanding Graduate Scholarship/First-Class Academic Scholarship, October 2017

Teaching

EE4.07 Coding Theory (40 hours, Dr. Wei Dai)

Graduate Teaching Assistant, Department of EEE, Imperial College London, October 2022 - December 2022

EE4.66 Topics in Large Dimensional Data Processing (50 hours, Dr. Wei Dai)

Graduate Teaching Assistant, Department of EEE, Imperial College London, October 2021 - December 2021

EE4.66 Topics in Large Dimensional Data Processing (40 hours, Dr. Wei Dai)

Graduate Teaching Assistant, Department of EEE, Imperial College London, October 2020 - December 2020

Publications

Google Scholar Citation = 363, h-index = 5, i10-index = 4. (Note: * corresponding authorship)

- [1] **Z. Guo**, Y. Zhang*, S. Liu, X. V. Wang and L. Wang, "Exploring self-organization and self-adaption for smart manufacturing complex networks", *Frontiers of Engineering Management*, Nov. 2022.
- [2] **Z. Guo**, Y. Zhang*, X. Zhao and X. Song, "CPS-Based Self-Adaptive Collaborative Control for Smart Production-Logistics Systems", *IEEE Transactions on Cybernetics*, vol. 51, no. 1, pp. 188-198, Jan. 2021.
- [3] **Z. Guo**, Y. Zhang*, J. Lv, Y. Liu and Y. Liu, "An Online Learning Collaborative Method for Traffic Forecasting and Routing Optimization", *IEEE Transactions on Intelligent Transportation Systems*, vol. 22, no. 10, pp. 6634-6645, Oct. 2021.
- [4] Y. Zhang*, **Z. Guo**, J. Lv and Y. Liu, "A Framework for Smart Production-Logistics Systems Based on CPS and Industrial IoT", *IEEE Transactions on Industrial Informatics*, vol. 14, no. 9, pp. 4019-4032, Sept. 2018.
- [5] Y. Zhang*, **Z. Guo**, C. Qian and R. Li, "Investigation on Process-aware Based Intelligent Modeling of Bottom Layer Manufacturing Resources and Self-adaptive Collaborative Optimization Methodology", *Journal of Mechanical Engineering*, vol. 54, no. 16, pp. 1-10, Aug. 2018.
- [6] **Z. Guo**, Y. Zhang*, X. Zhao and X. Song, "A Timed Colored Petri Net Simulation-Based Self-Adaptive Collaboration Method for Production-Logistics Systems", *Applied Sciences*, vol. 7, no. 3, pp. 235, Mar. 2017.
- [7] Y. Liu*, M. Yang and **Z. Guo**, "Reinforcement learning based optimal decision making towards product lifecycle sustainability", *International Journal of Computer Integrated Manufacturing*, vol. 35, no. 10-11, pp. 1269-1296, Jan. 2022.
- [8] O. Tang, Y. Liu*, **Z. Guo** and S. Wei, "Refund policies and core classification errors in the presence of customers' choice behaviour in remanufacturing", *International Journal of Production Research*, vol. 59, no. 12, pp. 3553-3571, Mar. 2021.

References

1. Dr. Wei Dai, Communications and Signal Processing Group, Department of Electrical and Electronic Engineering, Imperial College London, London, UK. E-mail: wei.dai1@imperial.ac.uk
2. Prof. Bruno Clerckx, Communications and Signal Processing Group, Department of Electrical and Electronic Engineering, Imperial College London, London, UK. E-mail: b.clerckx@imperial.ac.uk
3. Prof. Yingfeng Zhang, Department of Industrial Engineering, School of Mechanical Engineering, Northwestern Polytechnical University, Xi'an, China. E-mail: zhangyf@nwpu.edu.cn
4. Prof. Jianzhong Wu, Centre for Integrated Renewable Energy Generation and Supply, School of Engineering, Cardiff University, Cardiff, UK. E-mail: wuj5@cardiff.ac.uk