Assistant Professor (Research) SiWei Zhang

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Academic Qualification:

PhD., Macau University of Science and Technology, Macao, 2020
M.S., Guangdong University of Science and Technology, Guangzhou, China, 2015
B.S., Harbin Institute of Technology, Harbin, China, 2009

Teaching Area

Signals and Systems
Computer Science Principles

Research Area

Scheduling and automation
Discrete event systems
Petri nets

Working Experience

2023 - Present, Assistant Professor, Macau Institute of Systems Engineering, Macau University of Science and Technology
2021 - 2022, Postdoctoral Fellow, Macau Institute of Systems Engineering, Macau University of Science and Technology

Academic Publication（selected）

S. W. Zhang, N. Q. Wu, and Z. W. Li, T. Qu, and C. D. Li, “Petri net-based approach to short-term scheduling of crude oil operations with less tank requirement,” *Information Sciences* , 417, 247-261, 2017.
L. C. Chen, **S. W. Zhang**, N. Q. Wu, Y. Qiao, Z. C. Zhong, and T. Chen, Optimization of inventory space in smart factory for integrated periodic production and delivery scheduling, *IEEE Transactions on Computational Social Systems* , 1-24, Sep. 2022.
Y. Qiao, Y. J. Lu, J. Li, **S. W. Zhang**, N. Q. Wu, and B. Liu, “An efficient binary integer programming model for residency time-constrained cluster tools with chamber cleaning requirements,” *IEEE Transactions on Automation Science and Engineering* , vol. 19, no. 3, 1757-1771, Jul. 2022.
J. Li, Y. Qiao, **S. W. Zhang**, Z. W. Li, N. Q. Wu, and T. R. Song, “Scheduling of single-arm cluster tools with residency time constraints and chamber cleaning operations,” *Applied Sciences* , vol. 11, no. 19, Oct. 2021.
Y. Qiao, **S. W. Zhang**, N. Q. Wu, M. C. Zhou, Z. W. Li, and T. Qu, “Efficient approach to failure response of process module in dual-arm cluster tools with wafer residency time constraints,” *IEEE Transactions on Systems, Man, and Cybernetics: Systems* , vol. 51, no. 3, pp. 1612-1629, March 2021.
Y. Qiao, **S. W. Zhang**, N. Q. Wu, X. Wang, Z. W. Li, M. C. Zhou, and T. Qu, “Data-driven approach to optimal control of ACC systems and layout design in large rooms with thermal comfort consideration by using PSO,” *Journal of Cleaner Production* , vol. 236, Article 117578, Nov. 2019.

Patents（selected）

S. W. Zhang, N. Q. Wu, and Z. W. Li, System, method, computer program and data signal for scheduling at least one physical event, *US Patent* 11,263,708 B2, Application No. 15/396,992, Granted Mar. 1, 2022.

S. W. Zhang, N. Q. Wu, and Z. W. Li, "A system, method, computer program and data signal for scheduling at least one physical event," *Australia Patent* , 2017100002, Filed: 2017-01-03, Granted: 2017-01-19.

Professional Certification and Awards

Best Paper Award in Application, "A virtual wafer-based scheduling method for dual-arm cluster tools with chamber cleaning requirements," by Y. Qiao, J. Li, Y. J. Lu, S. W. Zhang, N. Q. Wu, and B. Liu, *IEEE International Conference on Networking, Sensing and Control* , Xiamen, China, December 3-5, 2021