

## Assistant Professor (Research) ZHANG, SIWEI

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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.

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