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Academic Qualification

Ph. D. in Systems Engineering, Xi'an Jiaotong University, Xi'an, China, 1988.

M. S. in Systems Engineering, Xi'an Jiaotong University, Xi'an, China, 1985.

B. S. in Electrical Engineering, Anhui University of Technology, Huainan, China, 1982.

Teaching Area

Algorithm theory

Operations research and optimization

Automation, Electric motor and drive

Research Area

Intelligent manufacturing

Discrete event systems, and Petri net theory and applications

Production planning, scheduling and cont   hed   ¼

: Shenyang Institute of Automation, Chinese Academy of Sciences, Shenyang, P. R. China, Associate Professor.

: School of Industrial Engineering, Purdue University, West Lafayette, Indiana, USA, Visiting Scholar.

: Shenyang Institute of Automation, Chinese Academy of Sciences, Shenyang, P. R. China, Assistant Professor.

Research Grants

Operational Optimization and Control of Cluster Tools with Multiple Chamber Configuration in a Process Module for Wafer Fabrication, FDCT.

Self-Learning Optimal Control of City Energy Management System Based on Edge Computing, FDCT.

Optimal Scheduling and Control of Cluster Tools for Wafer Fabrication with Strict Process Constraints in Semiconductor Manufacturing, FDCT.

Maximally Permissive Supervisory Control of Resource Allocation Systems Based on Resource-Oriented Petri Nets, FDCT.

Short-Term Scheduling Optimization for Continuous Process Industry by Using Hybrid System Control Theory, FDCT.

Representative publications (Complete publication refer to my webpage)

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[1] _____ and M. C. Zhou, _____, CRC Press, Taylor & Francis Group, New York, October 2009.

[2] _____ and M. C. Zhou, Resource-oriented Petri nets in deadlock prevention and avoidance, in M. C. Zhou and M. P. Fanti (Ed.), _____, Marcel Dekker, NY, January 2005.

[3] _____ and M. C. Zhou, A resource-oriented Petri net approach to scheduling and control of time-constrained cluster tools in semiconductor fabrication, in Z. W. Li and A. M. Al-Ahmari (Ed.), _____, IGI Global, New York, May, 2013.

[4] Y. Qiao, _____, and M. C. Zhou, Real-time scheduling and control of single-arm cluster tools with residency time constraint and activity time variation by using resource-oriented Petri nets, in Z. W. Li and A. M. Al-Ahmari (Ed.), _____, IGI Global, New York, May, 2013.

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[6] _____, M. C. Zhou, F. Chu, and S. Mammar, Modeling, Analysis, Scheduling and Control of Cluster Tools in Semiconductor Fabrication, in _____, Edited by M. C. Zhou, H.-X. Li and M. Weijnen, Wiley/IEEE Press, Hoboken, NJ, pp. 289-315, 2015.

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[1] _____, Y. Qiao, Z. W. Li, A. Al-Ahmari, A. El-Tamimi, and H. Kaid, A novel control-theory-ba

approach to scheduling of high throughput screening system for enzymatic assay, , , , early access, DOI: 10.1109/TSMC.2022.3161643.

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2011 QSI Best Application Paper Award Finalist, for the paper "Modeling and Analysis of Dual-Arm Cluster Tools for Wafer Fabrication with Revisiting," by Y. Qiao, N. Wu, and M. C. Zhou,