香港浸會大學
HONG KONG BAPTIST UNIVERSITY

DEPARTMENT OF
COMPUTER SCIENCE
計算機科學系

Department of Computer Science

SEMINAR
2023 SERIES

Prof. Qiang Liu

IEEE Senior Member
Northeastern University
China

Date: 13 March 2023 (Monday)

Time: 2:30pm – 3:30pm

Venue: Dr. Wu Yee Sun Lecture Theatre, WLB109, Shaw Campus

Registration: https://bit.ly/cs-ereg

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Working Condition Identification and Quality Prediction in the Era of Big Data and Industrial Internet

ABSTRACT

Intelligent manufacturing of modern industrial processes is the solution towards safe and efficient, green operation. The working condition identification and quality prediction are two major concerns of intelligent manufacturing in the era of big data and industrial internet. This talk will first review the existing work on working condition identification and quality prediction. In view of the spatiotemporal characteristics of the dynamic data and image sequences of industrial processes under abnormal conditions and non-optimal conditions, some recent work on operation condition identification and quality prediction from the research group is presented. The experimental results on real industrial processes demonstrate the effectiveness of the proposed method. Finally, the future work is prospected.

BIOGRAPHY

Qiang LIU Professor at State Key Laboratory of Synthetical Automation for Process Industries, Northeastern University, China. He is the post doctor fellow in Viterbi School of Eningeering in the University of Southern California from Sep. 2014 to Oct. 2016. He is a senior member of IEEE and the recipient of the Outstanding Young Scholar of Liaoning Revitalization Talents Program, China. He is the Committee Member and Secretariat-General of the Technical Committee on Big Data of the Chinese Association of Automation. He is also the Committee Member of the IFAC Technical Committee on Fault Detection, Supervision and Safety for Technical Processes.

His research interests include big data analytics, machine learning, statistical process monitoring and fault diagnosis of complex industrial processes. He has published more than 70 peer-reviewed papers. He won a number of academic awards, including the Best Paper Award of 2018 IEEE Conference on Intelligent Rail Transportation. He is a principal investigator of two Key projects supported by Natural Science Foundation of China and National Key Research and Development Program of China. He is a principal investigator of the National Natural Science Foundation of China (NSFC)/Research Grants Council (RGC) Joint Research Scheme. He is the Editor/Guest Editor of a few International Journals, including the Associate Editor of Intelligence & Robotics, Control Engineering of China, and head Guest Editor of a special issue on "Advanced Intelligent Manufacturing System: Theory, Algorithms, and Industrial Applications" in the IEEE Transactions on Industrial Informatics.

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