



School of Data Science

香港城市大學
City University of Hong Kong

SEMINAR SERIES

Smart Manufacturing: A Service Perspective

DATE 1st August 2019 (Thursday)
TIME 2:30pm to 3:30pm
VENUE P7510, 7/F, Yeung Kin Man Academic Building (YEUNG),
City University of Hong Kong

Abstract

A future manufacturing corporation will be highly digital, and it will function in new modes. After decades of integration of engineering design and manufacturing, the design-for-dedicated manufacturing will gradually transform in the design-for-open manufacturing. In many instances, manufacturing processes will become manufacturing-as-service (service manufacturing) systems. An enterprise will be gradually dominated by formation of services in a cloud. The emerging service manufacturing will be open, shared, easy to configurable, efficient, and democratic. Designing a manufacturing system of the past will reduce to formulating and solving an enterprise configuration problem. The presence of services in the cloud will be facilitated by the autonomously generated models. A formal approach to modeling configuration of manufacturing enterprises is discussed. The computational complexity of the configuration problem calls for different modeling and solution approaches ranging from mathematical programming and data science to quantum computing.



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GUEST SPEAKER'S PROFILE

Dr. Andrew Kusiak is a Professor in the Department of Industrial and Systems Engineering and Director of the Intelligent Systems Laboratory at The University of Iowa, Iowa City. He has chaired two departments, Industrial Engineering (1988-95) and Mechanical and Industrial Engineering (2010-15). His current research focuses on applications of artificial intelligence and big data in smart manufacturing, product development, renewable energy, sustainability, and healthcare. He has published numerous books and technical papers in journals sponsored by professional societies, such as the Association for the Advancement of Artificial Intelligence, the American Society of Mechanical Engineers, Institute of Industrial and Systems Engineers, Institute of Electrical and Electronics Engineers, Nature, and other societies. He speaks frequently at international meetings, conducts professional seminars, and consults for industrial corporations. Dr. Kusiak has served in elected professional society positions as well as various editorial roles in over fifty journals, including five different IEEE Transactions. Professor Kusiak is a Fellow of the Institute of Industrial and Systems Engineers and the Editor-in-Chief of the Journal of Intelligent Manufacturing.

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All are welcome