School of Data Science
香港城市大學
City University of Hong Kong

Hong Kong Institute for Data Science
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ONLINE SEMINAR

Robustness in Process Data Analytics

Date: 08 September 2021 (Wednesday)

Time: 10:00am - 11:00am

Seminar link: https://cityu.zoom.us/j/95562791556

ABSTRACT

Modern industry is awash with a large amount of data. While useful information may be buried in some of data waiting for discovery, others may simply be noises. Extraction of information and knowledge discovery from data, particularly from day by day routine process operating data, is challenging. There are many issues such as data nonlinearity, non-Gaussian, high dimensionality, collinearity, noncausality, multiple modes, sample irregularity, outliers etc that must be considered during the information extraction process. This presentation will focus on one of the most important issues in Process Data Analytics from theoretical perspective, namely the robustness to the outliers in process data analytics. The presentation introduces a typical probabilistic approach to coping with robustness issues in process data analytics, including its mathematical formulation and interpretation.

Prof Biao HUANG

GUEST SPEAKER'S PROFILE

Prof Biao Huang obtained his PhD degree in Process Control from the University of Alberta, Canada, in 1997. He had MSc degree (1986) and BSc degree (1983) in Automatic Control from the Beijing University of Aeronautics and Astronautics. Prof Huang joined the University of Alberta in 1997 as an Assistant Professor in the Department of Chemical and Materials Engineering, and is currently a full Professor, NSERC Industrial Research Chair in Control of Oil Sands Processes, and AITF Industry Chair in Process Control (2013-2018).

He is a Fellow of the Canadian Academy of Engineering and Fellow of Chemical Institute of Canada. He is recipient of Germany's Alexander von Humboldt Research Fellowship, Canadian Chemical Engineer Society's Syncrude Canada Innovation and D.G. Fisher awards, APEGAs Summit Research Excellence award, University of Alberta's McCalla and Killam Professorship awards, Petro-Canada Young Innovator Award, AsTech Outstanding Achievement in Science & Engineering Award and a Best Paper Award from Journal of Process Control.

Prof Huang's research interests include: data analytics, process control, system identification, control performance assessment, Bayesian methods and state estimation. He has applied his expertise extensively in industrial practice. He is currently the Editor-in-Chief for IFAC Journal Control Engineering Practice, Subject Editor for Journal of the Franklin Institute, and Associate Editor for Journal of Process Control.

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All are welcome