Department of Systems Engineering
香港城市大學
City University of Hong Kong

Joint seminar with IEEE Technology and Engineering Management Society (HK Chapter)

PHM of Complex Engineering Systems – Methods and Applications

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Abstract

Prognostics and Health Management (PHM) is an important research direction in reliability engineering. With the large-scale deployment of sensors and the maturity of big data technology, PHM has been more and more widely used in complex engineering systems, and it has produced significant social and economic benefits. PHM generally includes the key tasks such as anomaly detection, fault diagnosis, health assessment, and remaining useful life (RUL) prediction. The new generation of machine learning methods represented by deep learning has played a central role in promoting the development of PHM in the big data environment. This report takes high-speed train key components and subsystems as examples, and presents the latest developments in our laboratory. These new methods have a certain degree of versatility, and can be extended to the key components of other types of engineering systems.

About the Speaker

Dr. Yan-Fu Li, is currently the Director of the Institute for Quality & Reliability in Tsinghua University and a full professor in Industrial Engineering Department in Tsinghua University, China. His research areas mainly include system reliability and PHM with the applications onto rail systems, telecom systems, etc. Dr. Li has published more than 100 high quality international journal papers. He is elected as the Highly Cited Chinese Researcher 2019-2022 by Elsevier and Top 2% Scientists Worldwide 2022 by Stanford University. He has won multiple national society and international society search awards. He is currently an Associate Editor of Reliability Engineering & System Safety and IEEE Transactions on Reliability, a senior member of IEEE and IISE. He is a vice president of the System Reliability Chapter of System Engineering Society of China.

Enquiry: 3442 8422 | All are welcome