Department of Systems Engineering and Engineering Management

Seminar Series

Operational Data Exploration for Aircraft Health Monitoring

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Date	4 June 2018 (Monday)
Time	10:30am - 11:30am
Venue	P7303, 7/F, Yeung Kin Man Academic Building

Abstract

Massive amounts of data are generated during aircraft operation but most of them are underutilized. How to make use of the operational data to promote predictive maintenance from current preventative maintenance is an interesting topic. In this talk, we investigate four data categories including maintenance records, QAR data, ACARS messages from civil aircraft and structural vibrations from a self-sensing UAV wing. Based on their specific characteristics, various artificial intelligent methodologies are employed for different aircraft health monitoring purposes including: brake system fault diagnosis based on design knowledge and operational monitoring information, APU multi-parameter fusion and abnormal detection, APU degradation prediction as well as flight state identification based on deep learning techniques. These methods provide new perspectives of operational data utilization for better aircraft health monitoring.

About the Speaker

Xi Chen received the Ph.D. degree from Royal Melbourne Institute of Technology, Australia. He had two years' postdoctoral research at Commercial Aircraft Corporation of China (COMAC) and one year's visiting research at Stanford University, USA. Currently, he is a senior engineer at Shanghai

Engineering Research Center of Civil Aircraft Health Monitoring, COMAC. His research interests include maintenance engineering analysis, aircraft diagnosis, prognosis and health management.

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All are Welcome!

SEEM Seminar 2017-2018/040