

# POSTGRADUATE SEMINAR SERIES

## Topic Defence Seminar

**Topic Title:** **Anomaly Detection and Fault Diagnosis Based on DLV Methods for Complex Processes**

**Presenter:** **Ms. Chen Shumei**  
**PhD student, School of Data Science**

**Abstract :** With the advent of the advanced data acquisition and instrumentation, data generated from manufacturing and process operations are often high-dimensional and correlated due to the multiple sampling rates and high frequency variable characteristics. For process control, data collected from real time are most generally time series, in which the dynamics and uncertainties are quite complex. The dynamics contents of data are the most useful for feature interpretation and analysis, which are further used for process variable prediction and state identification. In recent years, the latent variable methods and dynamic dimensional reduction techniques are mainly focused on to deal with the modeling of dynamics in the latent subspace, which plays a critical role in the interpretation and understanding for complex process data. The latent dynamics modeling methods integrate the data analytics techniques with dynamic system theory, improving the performance of monitoring methods for troubleshooting processes.

**Date** : **17 June 2024, Monday**  
**Time** : **8:30 am – 11:30 am**  
**Venue** : **SEK106, 1/F, Simon & Eleanor Kwok Building**  
**Language** : **English**



**\*\*\* All are Welcome \*\*\***