

## SEMINAR ANNOUNCEMENT

### DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Faculty of Engineering

Website: <https://www.eng.nus.edu.sg/ece/>

**Area: Signal Analysis & Machine Intelligence**

**Host: Prof Li Haizhou**

**Jointly organized with**

**IEEE Systems, Man and Cybernetics Singapore Chapter**

**Chinese and Oriental Language Information Processing Society**

**Teochew Doctorate Society, Singapore**

**IEEE Circuits and Systems Singapore Chapter**

<b>TOPIC</b>	:	<b>Stretching Beyond Linear Methods for Pattern Classification</b>
<b>SPEAKER</b>	:	<b>Prof Kar-Ann TOH School of Electrical and Electronic Engineering Yonsei University</b>
<b>DATE</b>	:	<b>Wednesday, 27 January 2021</b>
<b>TIME</b>	:	<b>5.00PM to 6.00PM</b>
<b>WEBINAR</b>	:	<b>Join Zoom Meeting <a href="https://nus-sg.zoom.us/j/89682858601?pwd=ZG9lWUtGNmc5V0NjNlpmBjd0eDIKQT09">https://nus-sg.zoom.us/j/89682858601?pwd=ZG9lWUtGNmc5V0NjNlpmBjd0eDIKQT09</a> Meeting ID: 896 8285 8601 Password: 644695</b>

### ABSTRACT

According to Herbert A. Simon, “the more relevant patterns at your disposal, the better your decisions will be.” In this talk, an overview of key ideas in pattern classification will be illustrated right after a brief background introduction. Subsequently, several deterministic learning methods for regression and classification shall be introduced. These learning methods are found to be related to each other through data transformation. Finally, we introduce a stretchable learning where feature extraction and target fitting can be performed at the same time. Some numerical examples will be given to demonstrate the effectiveness of the learning method. The talk shall be concluded by a pictorial view of relationships among these classifiers.

### BIOGRAPHY

**Kar-Ann Toh** is a Professor in the School of Electrical and Electronic Engineering at Yonsei University, South Korea. He received the PhD degree from Nanyang Technological University (NTU), Singapore in 1999. He worked for two years in the aerospace industry prior to his post-doctoral appointments at research centers in NTU from 1998 to 2002. He was affiliated with the Institute for Infocomm Research in Singapore from 2002 to 2005 prior to his current appointment in Korea. He was a Visiting Professor at National University of Singapore in 2020 during his sabbatical leave. His research interests include biometrics, pattern classification, and machine learning. He has served/is serving as an Associate Editor of several international journals including IEEE Transactions on Biometrics, Behavior and Identity Science, IEEE Transactions on Information Forensics and Security, Journal of Franklin Institute, Pattern Recognition Letters, and IET Biometrics.

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