

SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

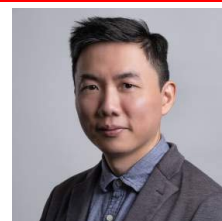
College of Design & Engineering

Website: <https://cde.nus.edu.sg/ece/>

Area: *Signal Analysis and Machine Intelligence*

Host: *Associate Professor Xinchao Wang*

Jointly organized with *Learning and Vision Lab*



TOPIC	:	An Introspective on Statistical Pattern Recognition in the Age of Generative AI
SPEAKER	:	Professor Junsong Yuan
DATE	:	15 July 2026 (Wednesday)
TIME	:	10:00AM to 11:00AM
WEBINAR	:	E4-04-03

ABSTRACT

The field of statistical pattern recognition has undergone significant evolution in the modern era of Generative AI (GenAI). It is widely recognized that this transformation has been driven by advances in computational power, the development of novel algorithms, and the increasing availability of large-scale datasets. In this talk, we will take an introspective look at the evolution of the field through case studies of classical computer vision problems such as object detection, image editing and video analytics, highlighting technical factors that have contributed to improved performance. We will review the traditional challenges in statistical pattern recognition, including the curse of dimensionality, over-fitting, and the semantic gap between low-level features and high-level semantics, and discuss whether recent strategies in GenAI have addressed these challenges. Rather than providing definitive conclusions, this talk aims to spark discussions on the limitations of GenAI and potential future research directions.

BIOGRAPHY

Dr. Junsong Yuan is Professor and Director of Visual Computing Lab at Department of Computer Science and Engineering, State University of New York (SUNY) at Buffalo, USA. Before joining SUNY Buffalo, he was a faculty member at Nanyang Technological University (NTU), Singapore. He obtained his Ph.D. from Northwestern University, M.Eng. from National University of Singapore, and B.Eng. from Huazhong University of Science Technology (HUST). He received Chancellor's Award for Excellence in Scholarship and Creative Activities from SUNY, Distinguished Lecturer from IEEE Signal Processing Society, Faculty Innovation Award from SONY, and Nanyang Assistant Professorship from NTU. He currently serves as the Editor-in-Chief of Journal of Visual Communication and Image Representation (JVCI) and Associate Editor of IEEE Trans. on Pattern Analysis and Machine Intelligence (T-PAMI) etc. He also serves as General/Program Co-chair of ICME/ICASSP/ICIP. He is a Fellow of IEEE and IAPR, and Distinguished Member of ACM.