

Seminar

## **Beyond Deep Recognition: Discovering Visual Patterns in Big Visual Data**

## Junsong Yuan, PhD

State University of New York

## Tuesday, February 25, 2020

2:00-3:00 pm - EEB 248

**Abstract:** Thanks to the success of deep learning, many computer vision tasks nowadays are formulated as regression problems. However, often times one has to rely on large amounts of annotated training data to make the high-dimensional regression successful. In this talk, we will discuss a complementary yet overlooked problem beyond deep visual recognition and regression. We will discuss why and how to discover visual patterns in images and videos that are not annotated, e.g., unsupervised and weakly-supervised visual learning and pattern discovery, and explore how to utilize them to better model, search, and interpret big visual data. Applications in visual search, object detection, action recognition, and video analytics will also be discussed.



**Biography:** Junsong Yuan is an Associate Professor and Director of Visual Computing Lab of CSE Department, State University of New York at Buffalo. Before that he was an Associate Professor at Nanyang Technological University (NTU), Singapore. He received his PhD from Northwestern University and M.Eng. from National University of Singapore. He is currently Associate Editor of IEEE Trans. on Image Processing (T-IP) and Machine Vision and Applications (MVA), and Senior Area Editor of Journal of Visual Communication and Image Representation (JVCI), and served as program co-chair for ICME 2018 and area chair for CVPR/ACM MM/WACV/ACCV/ICIP/ICPR etc. He received Best Paper Award from IEEE Trans. on Multimedia, Nanyang Assistant Professorship from NTU, and

Outstanding EECS Ph.D. Thesis award from Northwestern University. He is a Fellow of International Association of Pattern Recognition (IAPR).

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