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: Asst Prof Feng Jiashi

TOPIC	:	**On Self-Supervised Contrastive Learning Without Negative Pairs**
SPEAKER	:	**Mr Hu Dapeng** **Graduate Student, ECE Dept, NUS**
DATE	:	**Friday, 15 January 2021**
TIME	:	**4.00PM to 5.00PM**
WEBINAR	:	**Join Zoom Meeting** **https://us02web.zoom.us/j/4621242017?pwd=bWNHa3FYRGZNY2VKYjlkVXFrcWlJQT09** **Meeting ID: 462 124 2017** **Passcode: 617078**

ABSTRACT

Self-supervised learning (SSL) has achieved impressive advances during the past year and has been widely adopted to learn robust and discriminative features for various vision tasks. Currently, self-supervised contrastive learning seems to be the most promising SSL method. Specifically, besides the positive pairs generated from the sample itself, the previous paradigm of contrastive learning needs to sample a large number of extra negative samples. Based on this prevailing paradigm, many methods are proposed to effectively and efficiently sample negative pairs. However, is the negative sampling process indispensable for self-supervised contrastive learning? This talk will introduce recent works on contrastive learning without negative pairs, including BYOL and SimSiam. Both works show that contrastive learning can work even without explicit negative sampling process. The objectives of this seminar are two-fold. First, the introduction of two related works including BYOL and SimSiam. Second, the introduction of detailed ablation experiments on BYOL to figure out which part actually facilitates the success of BYOL.

BIOGRAPHY

Hu Dapeng is a PhD student at National University of Singapore (NUS), advised by Prof. Feng Jiashi. His research interest covers deep learning and computer vision. Recently, he is interested in domain adaptation and self-supervised learning.