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	**:**	**Rethinking the Performance Degradation Problem of Deep Graph Neural Networks**
SPEAKER	**:**	**Mr Zhou Kuangqi** **Graduate student, ECE Dept, NUS**
DATE	**:**	**19 June 2020, Friday**
TIME	**:**	**4pm to 5pm**
WEBINAR	**:**	**https://us02web.zoom.us/j/84303620590**

ABSTRACT

Graph Neural Network (GNN) architectures have been proposed and widely adopted to learn from graph-structured data, such as social graphs, protein interaction graphs, transaction graphs and so on. Existing GNNs have been observed to suffer performance degradation as model depth increases. This phenomenon is usually attributed in previous works to the oversmoothing problem. However, in our new work, we find that the main reasons for such a degradation problem is training difficulty and overfitting. Based on our observation, we propose effective training strategies for deep neural networks.

The objectives of this seminar are two-fold. First, backgrounds of GNNs, especially several popular GNN architectures will be introduced. Second, our new work on analysis and resolving the performance degradation problem of GNNs will be presented.

BIOGRAPHY

Zhou Kuangqi is a PhD student at National University of Singapore (NUS), advised by Prof. Feng Jiashi. His research interest covers deep learning and computer vision. At present, he is doing projects about Graph Neural Networks (GNNs).

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