SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
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Area: Signal Analysis & Machine Intelligence

Host: Prof Li Haizhou

Research/Technical Seminar

TOPIC	**:**	**Deep Reuse**
SPEAKER	**:**	**Dr Wang Xinchao** **Stevens Institute of Technology**
DATE	**:**	**Monday, 3 August 2020**
TIME	**:**	**10.00AM to 11.00AM**
WEBINAR	**:**	**Join Zoom Meeting** **https://nus-sg.zoom.us/j/4156763801?pwd=cUdJUkFBZC85eVI5OEd5aHhrSDhNUT09** **Meeting ID: 415 676 3801** **Password: 335166**

ABSTRACT

Deep learning has brought about unprecedented results in many artificial intelligence (AI) tasks, but also at an unprecedented cost: training deep networks relies on a huge amount of annotated data and often hundreds if not thousands of GPU hours. In this talk, we will discuss our endeavors towards reusing pre-trained deep networks, which can be found prevalent online, to build compact yet competent models, without accessing human-annotated data. We will start by introducing a novel approach that “distills” knowledge from a pre-trained graph convolutional network to build a smaller one, and then discuss our work on “amalgamating” knowledge from multiple heterogeneous pre-trained networks to learn a compact and versatile model. Next we will present a lightweight approach to measuring “distances” between knowledge contained in various pre-trained networks, so as to understand their intrinsic transferability. We will conclude this talk by discussing our future work on deep model reuse.

BIOGRAPHY

Xinchao Wang has been a tenure-track Assistant Professor at Stevens Institute of Technology, New Jersey, United States, since November 2017. Before joining Stevens, he was an SNSF postdoctoral fellow at University of Illinois Urbana-Champaign (UIUC) with Prof. Thomas S. Huang. He received a PhD from Ecole Polytechnique Federale de Lausanne (EPFL) in 2015, and a first-class honorable degree from Hong Kong Polytechnic University (HKPU) in 2010. His research interests include artificial intelligence, computer vision, machine learning, medical image analysis, and multimedia. His articles have been published in major venues including CVPR, ICCV, ECCV, NeurIPS, AAAI, IJCAI, MICCAI, TPAMI, IJCV, TIP, TMI, and TNNLS. He is an associate editor of IEEE Transactions on Circuits and Systems for Video Technology (TCSVT) and Journal of Visual Communication and Image Representation (JVCI). He has been or will be serving as an area chair of CVPR, ICIP, ICME, and as a senior program committee member of AAAI and IJCAI.