Towards Efficient, Versatile, and Privacy-Preserving Federated Learning Algorithms

Mingyi Hong
Associate Professor
Department of Electrical and Computer Engineering
University of Minnesota

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Abstract: Federated learning (FL) is a recently proposed, communication-efficient, distributed machine learning paradigm dealing with distributed and private data sets. Despite the fact that there have been a lot of recent research in this area, many challenging questions still remain. In this talk, we will first provide a brief overview of the recent FL research, and then present a few of our works that gear towards achieving the optimal computation/communication efficiency, that are applicable to various kinds of FL application scenarios, as well as being able to preserve (client-wise) data privacy.

Bio: Mingyi Hong is an Associate Professor in the Department of Electrical and Computer Engineering, University of Minnesota. Currently, he is serving on the IEEE Signal Processing for Communications and Networking (SPCOM), and Machine Learning for Signal Processing (MLSP) Technical Committees. His research interests are primarily in optimization theory and its applications in signal processing and machine learning.

This talk is part of the School of Mathematical and Statistical Sciences Seminar Series, and will take place from 11:15AM to 12:05PM through Zoom: an invitation will be forwarded to everyone soon.