题目：**Distributed Optimization and Its Applications in Coordination of Distributed Energy Resources**

时间：**2020 年7月19日14:00 – 16:00**

地点：**腾讯会议 840 939 019**

报告人：**Prof. Tao Yang University of North Texas**
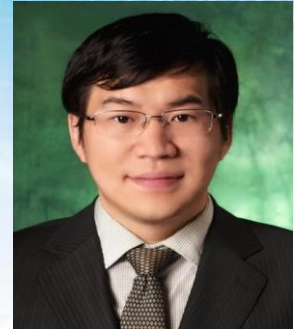
专家介绍

Tao Yang is an Assistant Professor at the Department of Electrical Engineering, University of North Texas. He received the Ph.D. degree in electrical engineering from Washington State University in 2012. Between August 2012 and August 2014, he was an ACCESS Post-Doctoral Researcher with the ACCESS Linnaeus Centre, Royal Institute of Technology, Sweden. He then joined the Pacific Northwest National Laboratory as a postdoc, and was promoted to Scientist/Engineer II in 2015. His research interests include distributed control and optimization with applications to power systems, cyber physical systems, networked control systems, and multi-agent systems.

报告内容

In this talk, we consider the optimal coordination problem for distributed energy resources (DERs) including distributed generators and energy storages. We first propose an algorithm based on the push-sum and gradient method to solve the optimal DER coordination problem in a distributed manner. In the proposed algorithm, each DER only maintains a set of variables and updates them through information exchange with a few neighboring DERs over a time-varying directed communication network. We show that the proposed distributed algorithm with appropriately chosen diminishing step-sizes solves the optimal DER coordination problem if the time-varying directed communication network is uniformly jointly strongly connected.