Speaker: Junfeng Yin (Tongji University)

Title: Projection iterative methods for the solution of linear inverse problems

Abstract:

Linear inverse problems with constraints usually arise in many practical applications, for instance, compressed sensing, phase retrieval and regularized basis pursuit problem. After reviewing the progress of randomized projection iterative methods, we propose a class of Bregman-Kaczmarz methods and establish their convergence. The tuning of parameters and acceleration techniques are further investigated in detail. We demonstrate the efficiency of the proposed methods by comparing them with other state-of-the-art Kaczmarz methods in terms of computation time and convergence rate using synthetic experiments and real-world applications.