Stanford University
Department of Statistics

DEPARTMENTAL SEMINAR
4:30pm, Tuesday, August 7, 2018
Sloan Mathematics Center Room 380C

Refreshments served at 4pm in Sequoia Lounge.

Speaker: Miaoyan Wang, University of Wisconsin, Madison

Title: Learning from Binary Multiway Data: Probabilistic Tensor Decomposition and its Statistical Optimality

Abstract:
Recently, tensors of order 3 or greater, known as higher-order tensors, have attracted increased attention in many fields. Methods built on tensors provide powerful tools to capture complex structures in data that lower-order methods may fail to exploit. However, extending familiar matrix concepts to higher-order tensors is not straightforward, and indeed it has been shown that most computational problems for tensors are NP-hard. In this talk, I will present some results on binary tensor decompositions that have statistical applications, including logistic tensor PCA and tensor-response regression.