HARVARD UNIVERSITY
DEPARTMENT OF STATISTICS

Tel. 617-495-5496
Fax. 617-496-8057
statdept@stat.harvard.edu
http://www.stat.harvard.edu/

Science Center 7th Fl.
One Oxford Street
Cambridge, MA 02138

STATISTICS COLLOQUIUM

MONDAY, NOVEMBER 2, 2015
TALK: 4:15 PM — SCIENCE CENTER 300H
RECEPTION: 3:50 PM

"Multilinear Models for Tensor Data Analysis"

Peter Hoff
Departments of Statistics and Biostatistics
University of Washington-Seattle

ABSTRACT

Many modern multivariate datasets are naturally represented as arrays or tensors. For example, multivariate and/or longitudinal network data may be represented as a multiway data array. In this talk I will discuss some tools for analyzing such data, including parsimonious multilinear regression and covariance models. These tools are presented via an analysis of a ten-year time series of international relations data. I will also discuss some theoretical results concerning a class of generalized prior distributions that provide optimal equivariant covariance estimation.