

**Indiana University-Purdue University
Indianapolis**
Department of Mathematical Sciences

STATISTICS SEMINAR

12:15pm—1:15pm, Tuesday, Feb. 06, 2018
SL 137

Speaker: Chung Ching Cheung (PhD Candidate)
Department of Mathematical Sciences, IUPUI

Title: Weighted M-Estimation for Clustered Data

Abstract:

Weighted M-estimators for R^d -valued clustered data is studied and sufficient conditions for their consistency are given. Their asymptotic normality is established with estimation of the asymptotic covariance matrix. Robustness of these estimators is addressed in terms of their breakdown point. Comparison with the unweighted case is performed with some numerical studies. They highlight that optimal weights maximizing the relative efficiency have a bad impact on the breakdown point.

Reference:

El Asri, Mohammed, Delphine Blanke, and Edith Gabriel. "Weighted M-estimators for multivariate clustered data." *Statistics & Probability Letters* 112 (2016): 26-34.