

ACMS Statistics Seminar

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Tues, March 21, 2017

154 Hurley Hall

4:00 – 5:00 PM



Robust Statistical Inference of Manifold-Valued Data

Using Riemannian manifolds to model data with non-linear constraints has been of increasing interest recently. Much work has been done on parametric and nonparametric inference of measures of center of such data. Robustness of such measures must be a concern to adequately account for outliers or contaminations in samples of manifold-valued data. In this talk, we will introduce a procedure for robust estimation of both extrinsic and intrinsic means of distributions on a manifold, which are shown to be robust to outliers and contaminations of arbitrary nature. We will then demonstrate this method and methods of computation for several types of manifolds.

This is a joint work with Lizhen Lin from the University of Notre Dame.

The Department of Applied and Computational
Mathematics and Statistics

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