



**Department of Mathematics and Statistics**

**COLLOQUIUM**

**Tuesday, September 23rd, 2014**

4:00 – 5:00 pm, Adel Mathematics Bldg., Room 164  
(refreshments at 3:45)

**Dr. Jin Wang**

Northern Arizona University

## **On Depth-Based Minimum Volume Ellipsoid Estimators**

### Abstract

Modifying Rousseeuw's minimum volume ellipsoid (MVE) estimators, we propose and study the depth-based minimum volume ellipsoid estimators for multivariate location and scatter. Under some conditions on depth functions, the estimators are affine equivariant, consistent, and square root convergent. Further the estimator of location is asymptotically normal. The robustness of the estimators is studied by both breakdown point and influence function.

ACGT Seminar: Tuesdays 12:45 – 1:45 pm, AMB 164.

Applied Math Seminar (AMS): Thursdays 12:45 – 1:45 pm, AMB 164.

Friday Afternoon Undergraduate Mathematics Seminar (FAMUS) meets Fridays at 3pm, AMB 164