



Mathematical Sciences

The University of Texas at El Paso



Spring 2017

Colloquium Series

Friday, February 17, 2017 at 3:00pm in Bell Hall 143

Candidate for the position of Assistant Professor in Computational Science

Dr. Michael Pokojovy

Department of Mathematics
University of Memphis

A Cluster-Based Outlier Detection Scheme for Multivariate Data

Detection power of the squared Mahalanobis distance statistic is significantly reduced when several outliers exist within a multivariate data set of interest. To overcome this masking effect, we propose a computer-intensive cluster-based approach that incorporates a reweighted version of Rousseeuw's minimum covariance determinant method with a multi-step cluster-based algorithm that initially filters out potential masking points. Compared to the most robust procedures, simulation studies show that our new method is better for outlier detection. Additional real data comparisons are given.

This is joint work with J. Marcus Jobe, Miami University, Oxford, OH.



For further information, please contact Dr. Ori Rosen at orosen@utep.edu

