

**GSD2016**

**Kernel Fusion-Refinement for Semi-supervised  
Nonlinear Dimension Reduction**

Xuelei (Sherry) Ni, Kennesaw State University

In this talk, a kernel based fusion-refinement procedure with the idea of minimal loss of information is presented for the semi-supervised nonlinear dimension reduction problem. Numerical experiments are conducted in the framework of high-dimensional semi-supervised learning based on some popular data sets. The results demonstrate that the new method (named SemKFR) can efficiently handle the nonlinear features in these data sets. Moreover, the comparison between SemKFR and other algorithms also justify its competitiveness in the semi-supervised learning area.