

1125-51-1070 **Si-ghi Choi*** (si-ghi.choi@mavs.uta.edu), 411 South Nedderman Drive, 478 Pickard Hall,
Arlington, TX 76019. *Image reconstruction from limited view Radon data using
GPCA*. Preliminary report.

Image reconstruction in various types of tomography requires inversion of the Radon transform and its generalizations. While there are many stable and robust algorithms for such inversions from reasonably well sampled data, most of these algorithms fail when applied to limited view data. The talk discusses a method of stable reconstruction from limited view data for functions, whose support is a union of finitely many circles. Our method is based on a modified version of GPCA (General Principle Component Analysis) and some results from algebraic geometry. (Received September 14, 2016)