



**Department of Mathematics and Statistics**

**COLLOQUIUM**

**Tuesday, September 15<sup>th</sup>, 2015**

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

**Sudipta Mallik**  
NAU

## Structured Inverse Eigenvalue Problems

**Abstract:** We know how to find  $n$  eigenvalues of an  $n \times n$  matrix  $A$ . Now suppose  $n$  real numbers are given and positions of zero-nonzero entries of an  $n \times n$  matrix are specified. Is there an  $n \times n$  matrix  $A$  with the given  $n$  real number as its eigenvalues and with the specified zero-nonzero pattern? An introduction to this kind of structured inverse eigenvalue problems will be presented. I will also mention a related work by Monfared-Mallik which gives a spectral characterization of matchings in graphs.

Algebra Combinatorics Geometry and Topology (ACGT) Seminar meets every Tuesday, 12:45 – 1:45 pm, AMB 164.

Applied Math Seminar (AMS) will meet occasionally on Thursdays, 12:45 – 1:45 pm, AMB 164, as announced.

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