Tom Lenagan  
University of Edinburgh  
will speak on  

**Totally positive matrices**

**ABSTRACT:** A real matrix is totally positive if all of its minors are positive. More generally, a matrix is totally non-negative if all of its minors are non-negative. Totally positive/non-negative matrices arise in many areas; for example, oscillations in mechanical systems, stochastic processes and approximation theory, planar resistor networks, etc.

This talk will be an elementary introduction to the theory of totally non-negative matrices and the associated study of the non-negative real Grassmannian.

**Monday, 4 May 2009**  
**Lecture at 4:00 pm**  
**Coffee, tea, and refreshments from 3-5 pm**  
**Room 617, Wachman Building**  
**Department of Mathematics**