

Time: Wednesday May 4th, 2011 11:00am
Location: Buchanan A202

Maximal Representation Dimension of Finite p -Groups

Shane Cernele, University of British Columbia

The representation dimension $\text{rdim}(G)$ of a finite group G is the smallest positive integer m for which there exists an embedding of G in $GL_m(\mathbb{C})$. I will give a non-technical introduction to the notion of essential dimension, and use it to motivate the following question: For fixed prime p and integer $n \geq 1$, what is the largest value of $\text{rdim}(G)$, as G ranges over all groups of order p^n ? I will give the answer, and discuss some of the ideas behind the proof. This talk is based on joint work with Masoud Kamgarpour and Zinovy Reichstein.