

THE MATHEMATICS DEPARTMENT PRESENTS

# A MATHEMATICS COLLOQUIUM

MONDAY, February 4, 2008

BOND HALL 227

4:00 pm

**Title: Irreducible representations of the symmetric group**

**Speaker: J.P. Cossey**, University of Arizona

**Abstract:** Recently, Fayers has proven a long standing conjecture of James and Mathas that gives a combinatorial characterization of when a Specht module of the symmetric group is irreducible at the prime  $p$ . After giving some background on representation theory and the symmetric group, we will discuss this characterization. In addition to solving an interesting representation-theoretic question, Fayers' work raises some interesting combinatorial questions that we will discuss.

Refreshments will precede the talk at 3:30pm in Bond Hall 300  
courtesy of Sue Kaplan.