

# Seminar

## Fall 2011



THE UNIVERSITY OF  
SOUTHERN MISSISSIPPI  
SCHOOL OF COMPUTING

**Title:** So Macaulay was in Need of a Diet ...

**Time & Location:**

2:00pm, Friday, October 21, 2011  
Southern Hall 303

**Presenter:**

Dr. John Perry  
Department of Mathematics  
The University of Southern Mississippi

**Abstract:** A fundamental object in non-linear algebra can be computed linearly with a Macaulay matrix. This matrix grows unreasonably fast, so implementation is a challenge. Recent theoretical insights allow researchers to prune unnecessary rows of this matrix (preventing excessive growth), and rearrange its columns (diminishing its girth). In other words, we "put Macaulay on a diet".