

DISSERTATION  
DEFENSE

*On Graphs with a Given Endomorphism Monoid*

Benjamin Shemmer  
Emory University

**Abstract:** Hedlin and Pultr proved that for any monoid  $M$  there exists a graph  $G$  with endomorphism monoid isomorphic to  $M$ . We will give a construction  $G(M)$  for a graph with prescribed endomorphism monoid  $M$ . Using this construction we derive bounds on the minimum number of vertices and edges required to produce a graph with a given endomorphism monoid for various classes of finite monoids.

Thursday, April 2, 2009, 4:00 pm  
Mathematics and Science Center: W201

Advisor: Vojtech Rodl

MATHEMATICS AND COMPUTER SCIENCE  
EMORY UNIVERSITY