

*Department of Mathematics and Statistics*  
*Colloquium Lecture Series*

*Jill Faudree*  
*UAF*

**Graph Saturation Number: Some Results and  
Open Problems**

Given a graph  $H$ , we say a graph  $G$  is  $H$ -saturated if  $G$  contains no copy of  $H$  but, for every edge  $e \notin E(G)$ ,  $G + e$  contains a copy of  $H$ . The maximum number of edges in an  $H$ -saturated graph on  $n$  vertices is called the *extremal number of  $H$* . The minimum number of edges in an  $H$ -saturated graph on  $n$  vertices is called the *saturation number of  $H$* .

This talk will compare saturation numbers and the more familiar extremal numbers. In addition, some classical results and more recent results on saturation numbers will be described. Some open problems will be mentioned.

The talk is appropriate (and perhaps even interesting) to any one at the advanced undergraduate level or above with a little background in graph theory.

*Thursday, March 20, 2008*

*Chapman 106*

*1:00 – 2:00 pm*

*Refreshments after the talk in Chapman 101A*