



Announcing

A Colloquium Presentation

March 21, 2007 at 2:00 pm

Southern Hall 303

at The University of Southern Mississippi

Speaker: Yan Wang

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**Title: On Graphs with Optimal $L(2, 1)$ -Labelings
having Δ Holes**

Abstract:

An assignment of non-negative integers to the vertices of graph G is called an $L(2, 1)$ -labeling if and only if the labels of adjacent vertices differ by at least 2 and the labels of vertices at distance two are different. The λ -number of G , denoted $\lambda(G)$, is the smallest integer k for which there exists an $L(2, 1)$ -labeling of G into $\{0, 1, 2, 3, \dots, k\}$. Any $L(2, 1)$ -labeling with span $\lambda(G)$ is called a λ -labeling of G . If L is a λ -labeling of G , then for $h \in \{1, 2, \dots, \lambda(G) - 1\}$, h is a hole of L if and only if h is not in the image of L . For fixed graph G , $\rho(G)$ is the minimum number of holes taken over all λ -labelings of G . In this talk, we investigate the structure of connected graphs with $\rho = \Delta$ which are known to be Δ -regular graphs with order $t(\Delta + 1)$ for some t , and explore the relationship between graphs with $\rho = \Delta$ and other graphs, including Moore graphs and odd graphs.

Further Information

Refreshments are served from 1:50 pm until 2:00 pm in Southern Hall 303. Further details and information about this and other departmental activities is available online at http://www.math.usm.edu/bulletin_board/.