



The Math Colloquium  
Department of Mathematics  
San José State University



David Barnes  
Lockheed Martin

*Mathematics and Missile Defense*

OCTOBER 1, 2008, MH320

**Abstract:** Missile defense has become more prominent in the news over the last few years, and is a topic of heated debate for some. The first portion of this talk will attempt to give a brief overview of the current layered defense approach being pursued by the United States from a purely technical perspective. One of the challenges in missile defense, and many other fields, is that of tracking small targets. The second portion of this talk will outline the tracking problem, focusing on measurement to track association for a single sensor, and track to track correlation with multiple sensors. Solutions to the measurement association problems often provide the foundation for multi-sensor track fusion, but it is frequently necessary to make modifications to account for the added complexity in the system.

*Background:* Some background in graph theory and probability may be helpful, but is not necessary.

*About the speaker:* Dave Barnes completed an M.S. in mathematics at SJSU in 2002 and is currently an engineer at Lockheed Martin Space Systems Company. Over the last six years he has worked in algorithm development, modeling and simulation, and flight data analysis.

SNACKS IN MH331B AT 2:30 PM

TALK STARTS AT 3 PM

For more information, see our full schedule at:

<http://www.math.sjsu.edu/~hsu/colloq/>