



The Math Colloquium
Department of Mathematics
San José State University



Rodney Martin

NASA Ames Research Center

*Linear Dynamical Systems for IVHM:
Detection, Diagnosis, Prognosis and Mitigation*

SEPTEMBER 2, 2009, MH320

Abstract: The IVHM (Integrated Vehicle Health Management) project supports NASA's Aviation Safety program, and aims to detect, diagnose, predict, and mitigate adverse events that may occur during flight. This talk will cover the use of linear dynamical systems in IVHM.

The basic motivation and potential applications of this work will be discussed, followed by an introduction to basic ideas of linear dynamical systems and machine learning. Then, after a discussion of how these ideas are used in IVHM, the talk will conclude with a discussion of how these methods perform in practice.

Background: First courses in linear algebra and statistics.

About the speaker: Rodney Martin received his Ph.D. in mechanical engineering from UC Berkeley and is a researcher in the Intelligent Systems Division at NASA Ames Research Center. His current research supports efforts for advanced analytics and complex systems in the IVHM project and development efforts for the Ares I-X ground diagnostic prototype within the Constellation program.

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/>