



The Math Colloquium
Department of Mathematics
San José State University



Julie Bellerose

Carnegie Mellon Silicon Valley/NASA-Ames

Small body exploration: from fundamental science to spacecraft mission development

SEPTEMBER 1, 2010, MH320

Abstract: Small bodies are among the most primitive remnants of our solar system's formation, and understanding their formation and evolution gives direct insights on our solar system. In this pursuit, the dynamics of binary asteroid systems are of particular interest. Factors complicating these dynamics include coupling of the non-uniform shape of asteroids, solar radiation pressure, surface charge, and mass and momentum exchange.

We will discuss the current status of small body exploration missions, as well as current research topics and open questions, and give an overview of analysis and computational methods.

Background: Students should have taken differential equations, linear algebra, and basic physics (mechanics).

About the speaker: Julie Bellerose obtained her Ph.D. in Aerospace Engineering at the University of Michigan. She is currently a research scientist at Carnegie Mellon Silicon Valley, collaborating with the science teams of small body missions under development at NASA Ames.

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/>