

ME SEMINAR SERIES SPRING 2006

The Continuous Sensitivity Equation Method and Some of its Applications

by **Dr. Lisa Davis**

Associate Professor, Mathematical Sciences
Montana State University

Abstract

This presentation includes a short overview of the recent history of the continuous sensitivity equation method, a description of the essential mathematical theory behind the method, and practical applications for the technique. Examples are provided to illustrate the technique and to point out various mathematical and computational issues that can arise, and an ongoing project that uses sensitivity analysis in combination with optimal control techniques for the optimal placement of sensors and actuators is also discussed.

Speaker's Brief Biography

Lisa Davis graduated from Virginia Polytechnic Institute and State University in 1999 with a PhD in Mathematics. Upon completion of her degree, she joined the faculty of Montana State University as an Assistant Professor in the Department of Mathematical Sciences. She was promoted to Associate Professor in 2005, and her specialty area of research is sensitivity analysis of systems governed by partial differential equations. Her interests lie in various aspects of sensitivity analysis related to the modeling, simulation, control and optimization of these systems.

Friday, April 28, 2006

3:30–5 PM

(3:30– 3:55 is social time; talk starts promptly at 4 PM)

Rogers Hall 226

Coffee and tea will be served

Department of Mechanical Engineering

Oregon State **OSU** **College of Engineering**
UNIVERSITY