

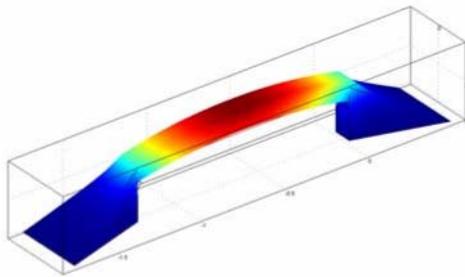


# Multiphysics Modeling with FEMLAB

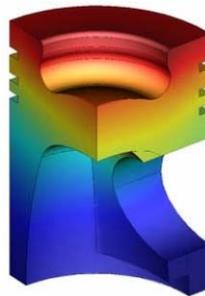
**Location:** Furnas Hall, SUNY Buffalo  
**Date:** January 13, 2005  
**Host:** Dr. Venkat Krovi  
**Seminar:** 10:00am - 12:00pm (206 Furnas Hall)  
**Mini-course:** 01:00pm - 03:00pm (1019 Furnas)

**Seminar Abstract:** Come see FEMLAB live – watch models being built from scratch, ask questions and participate in discussions on the modeling process. In particular we could look at models from:

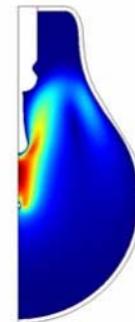
- Coupled electric field, heat transfer and structural mechanics in a MEMS device
- Defining arbitrary chemical kinetics and coupling to transport phenomena
- Coupling an electromagnetic field to fluid flow in magnetic drug targeting
- Optical properties coupled to structural stress in a photonics application
- Multiphysics in a piezoelectric device
- Fluid-solid interaction
- Arbitrary user-supplied partial differential equations



*Micro Beam Structure-  
Heating and Thermal Expansion*



*Diesel Engine Piston-  
Fatigue Cracking*



*Light Bulb –  
Non-Isothermal Flow*

We will preview the upcoming version 3.1 of FEMLAB.  
Some of the exciting new features of FEMLAB 3.1 include:

- Heat Transfer Module
- MEMS Module
- Earth Science Module
- Report Generator
- SolidWorks Interface
- Support for quadrilateral, hexahedral and prism elements
- 64 bit architecture support  
and many more...



**Seating for the mini-course is limited!!!!**

**If you would like to attend the mini-course please RSVP by  
January 10<sup>th</sup> 2005 via e-mail to [fecio@eng.buffalo.edu](mailto:fecio@eng.buffalo.edu)**