

Please Post

Physics Colloquium

“Modeling and Simulation of Ferromagnetic Shape Memory Thin Film”

Dr. Tianyu Zhang
Math Department
Montana State University

Friday, February 14, 2014
4:10 – 5:00 pm, 108 EPS

Abstract: We propose an energy model for ferromagnetic shape memory thin film (including both sharp interface and strain gradient models for surface energy). Finite element approximation of the energy is given and second order convergence of the approximation energy is proved. Nonlinear Conjugate Gradient method is used to minimize the approximation energy and our numerical results confirm the proven convergence order. We then apply the model to Ni₂MnGa with quasi-static continuation technique to simulate the formation of a tunnel under applied magnetic field.

Host: Jiong Qiu
Refreshments 3:45 p.m.
EPS 2nd Floor Atrium

Please Post