

MATHEMATICS DEPARTMENT
North Carolina State University

COLLOQUIUM

Wednesday, March 26, 2003
4:00 p.m. 201 Harrelson Hall

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California Institute of Technology

“Geometric mechanics, variational integrators, and asteroid pairs”

Geometric mechanics deals with mechanical systems with symmetry with an infusion of ideas from geometry, analysis and dynamical systems. A few highlights from its successes over the years will be reviewed. One of its more interesting interactions has involved the development of discrete mechanics and corresponding integration algorithms, with applications to long-term integration of, for instance, point vortices, as well as to dynamical problems in elasticity. An excellent recent example of the use of geometric mechanics is an analysis of the dynamics and dissociation rates of asteroid pairs, which are remarkably numerous among near-Earth asteroids.

Graduate students are invited to attend.

Tea will be served in HA 243 at 3:30 p.m.