McMaster University   University of Toronto   University of Waterloo

THE FIELDS INSTITUTE FOR RESEARCH IN MATHEMATICAL SCIENCES

GEOMETRIC MECHANICS SEMINARS

SPEAKER:

VELIMIR JURDJEVIC
University of Toronto

On the Topic:

"Variational Problems on Lie Groups"

Optimality and feedback, two main concerns of control theory, provide mathematics with new perspectives from which some of its classical theories can be seen in distinctive ways. I will illustrate the relevance of modern geometric control theory for classical variational problems on Lie groups, by concentrating on the theorem of Kirchhoff concerning the equilibrium configurations of thin elastic rods. I will also consider its extensions to the Riemannian spaces of constant curvature, and make explicit connections to the formulas of Griffiths, and the constrained Hamiltonian systems of Dirac.

Tuesday, March 16, 1993

3:30 pm, room 3018

at

The Fields Institute