



McMaster University



University of Toronto



University of Waterloo

## THE FIELDS INSTITUTE FOR RESEARCH IN MATHEMATICAL SCIENCES

### DIRECTOR'S SEMINAR

#### SPEAKER:

**OLIVER O'REILLY**  
Department of Mechanical Engineering  
University of California, Berkeley

On the Topic:

#### **"Dissipation Induced Instabilities in Reversible Systems"**

Instabilities induced by the presence of velocity dependent dissipation in the equilibria of reversible systems is discussed. The analysis includes a determination of the nonlinear stability of the equilibria for the dissipationless reversible system using normal forms. Several connections of the results to their similar counterparts in Hamiltonian dynamical systems theory are established. Examples from the field of dynamic buckling of elastic structures provide some physical systems to illustrate the results.

**Monday, February 22, 1993**

**4:00 pm, room 3018**

**at**

**The Fields Institute**