



McMaster University



University of Toronto



University of Waterloo

**THE FIELDS INSTITUTE  
FOR RESEARCH IN MATHEMATICAL SCIENCES**

**SEMINAR SERIES ON CONTROL THEORY**

**SPEAKER: KIRSTEN MORRIS**

On the topic

**Input-Output Stability for Accelerometer Control Systems**

will be held

**Wednesday, November 20, 1991 at 3:30 p.m.**

in

**MC 6091A  
University of Waterloo**

An equivalence between external and internal exponential stability, under certain assumptions, exists for traditional state-space representations of finite-dimensional linear control systems. This justifies the use of frequency domain methods such as  $H_\infty$  techniques. This equivalence can be extended to a large class of infinite-dimensional systems, those that are well-posed (in the sense of Salomon). Unfortunately, acceleration measurements of structural vibrations are not well-posed in this sense. However, a well-defined input-output relation exists for all inputs with finite energy, as well as an equivalence between external and internal exponential stability.