

Taft Lecture

CHARLES
PHELPS
TAFT
RESEARCH CENTER
at the University of Cincinnati

Thursday
April 30, 2009
4:00 PM–5:00 PM
Braunstein 309

Professor Jean-Michel Coron
Laboratoire Jacques-Louis Lions,
Université Pierre et Marie Curie (Paris VI)

Control and Nonlinearity

We present methods to study the controllability and the stabilizability of nonlinear control systems. The emphasis is put on specific phenomena due to the nonlinearities. In particular we study cases where the nonlinearities are essential for the controllability or the stabilizability. We illustrate these methods on control

systems modeled by ordinary differential equations or partial differential equations (Euler and Navier-Stokes equations of incompressible fluids, Korteweg de Vries equations, Burgers equations, Schrödinger equations)

