Hamilton Institute

Absolute Stability of Time Varying Control Systems.

Application to the Control of Wheeled Robots

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Abstract

The talk addresses the problem of absolute stability of control systems with sector-bounded feedback and time varying uncertainties. The extremal properties of the control system at the boundary of absolute stability are also investigated. The connection of properties of the absolute stability boundary with the existence of convex invariant functions and periodic motions is considered. The application of absolute stability theory to control law synthesis for mobile robots is considered. The problem of stabilization of the motion with unknown dynamics of the steering wheels actuator is addressed in the talk.

Venue: Seminar Room, Hamilton Institute, Rye Hall
NUI Maynooth

Time: **4.00 - 5.00pm** (followed by tea/coffee)

Travel directions are available at www.hamilton.ie

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