THE UNIVERSITY OF TEXAS AT DALLAS

SCHOOL OF NATURAL SCIENCES AND MATHEMATICS

MATHEMATICAL SCIENCES DEPARTMENT

MATHEMATICS COLLOQUIUM

by

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ADAPTIVE TRACKING AND PARAMETER IDENTIFICATION
FOR NONLINEAR CONTROL SYSTEMS

Abstract: Given a control system with unknown parameters and a reference trajectory for the system, the adaptive tracking and parameter identification problem is to find a dynamic controller that forces the system to track the reference trajectory, and a parameter estimator variable that converges to the unknown parameter vector. In the first part of this talk, I will review the relevant background on nonlinear control systems. Then I will discuss my recent work on adaptive tracking and parameter identification for systems with unknown control gains. In the last part, I will discuss an application to curve tracking controllers for marine robots.

[This work is joint with Marcio de Queiroz, Frederic Mazenc, and Fumin Zhang.].

Date: Thursday, February 16, 2012

Time: 2:00 - 3:00 PM
Coffee will be served in FO 2.610F at 1:30 PM

Room: SLC 2.304

Public Invited

NOTE: Please contact Lorre Antoine at lantoine@utdallas.edu or (972)883-2161 or by FAX at (972)883-6622 for up-to-date colloquium information if you want to receive E-mail notices.