



Seminar Series of the



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Collaborative Center of Control Science (CCCS)

Global Stabilization of the PVTOL and Real-time Application To a Four-rotor Mini-helicopter

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Abstract: A simple control technique for the stabilization of the planar vertical take-off and landing (PVTOL) of aircraft is proposed. The control law provides global convergence to the origin and is based on nested saturations approach. The technique is extended to cover also the stabilization of four-rotor helicopters. Real-time experiments have been carried out on an electric four-rotor mini-helicopter.

Biography: Rogelio Lozano was born in Monterrey, Mexico on July 12 1954. He obtained a Ph.D. degree in Automatic Control in 1981 from the Laboratoire d'Automatique de Grenoble, France. He worked at CINVESTAV from 1981 to 1987. He spent a one-year study leave at the University of Newcastle in 1984-1985. He was Senior Research Associate at NASA Langley Research Center from 1987 to 1988. He is CNRS Director of Research since 1990 at the Universite de Technologie de Compiegne and head of the laboratory Heudiasyc since 1995. His interests are in adaptive control, nonlinear systems, control of under actuated mechanical systems, flight control and teleoperation.