



CENTRO DE INVESTIGACIÓN Y DE ESTUDIOS AVANZADOS DEL IPN

El Departamento de Control Automático

invita cordialmente a su

Seminario Departamental

Control of Modern Electro-Hydraulic Drives - Theory and Industrial Practice

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This paper discusses problems of the position control of electro-hydraulic drives in the presence of unknown disturbances and uncertain plant parameters. Due to the strong nonlinearities of the system, more sophisticated control algorithms are recommended if an optimal closed-loop dynamic behavior and a high positioning accuracy are required. In order to overcome the system nonlinearities and ensure robustness against matched disturbances and plant uncertainties, an input-output linearization controller with an integral sliding mode disturbance compensator and second-order sliding mode acceleration observer is developed and experimentally tested. The industrial applicability of the new algorithms is also the scope of the investigation. The test results confirm a very good tracking performance and the robustness against model uncertainties.