



UNIVERSITÄT
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Einladung zum Gastvortrag

im Rahmen des InnoLecture-Kolloquiums

Am Freitag, 11.06.2010, 13.30 Uhr, spricht
in Gebäude C6.3, Hörsaal 1 (E08)

Prof. Vicente Feliu-Batlle

Industrial Engineering School
Castilla-La Mancha University

zum Thema

Some Mechatronics Applications of Algebraic Identification Techniques

Algebraic identification techniques have several advantages over standard identification methods: parameter estimation convergence is much faster, physical parameters are directly obtained without transformations from the discrete to the continuous domain, and little assumptions are needed about system noise. These may yield more efficient and intelligent systems for monitoring and control of mechatronic devices. This talk will give an overview of various identification algorithms and show successful applications on a variety of mechatronic devices.

First the signal processing problem of characterizing the harmonics of a sum of sinusoidal functions is addressed, then being this applied to the vibration monitoring of a flexible structure. After the adaptive open loop control of a flexible arm is studied. Then the adaptive closed loop control of a DC motor is implemented, as well as the adaptive closed loop control of a single link flexible arm. Finally, these techniques are applied to the adaptive control of a typically nonlinear system: a magnetic levitated ball.

Alle Interessenten sind herzlich eingeladen.

Univ.-Prof. Dr.-Ing. habil. J. Rudolph



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