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Einladung zu einem Vortrag

High-Performance Motion and Vibration Control and Applications

Von

Prof. Tsu-Chin Tsao
University of California,
Los Angeles

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ABSTRACT:
Mechanical motion generation and vibration suppression is fundamental to numerous modern Intelligent Machines and emerging innovations. Common control methods such as the PID control and optimal linear feedback control are ineffective for systems with complex dynamics in both the machine and the environment. Motivated by industrial applications and innovations, strategies to achieve high-performance control beyond the bandwidth of the basic feedback control loop will be presented for applications in machine tools, disk drives, laser beams, magnetic bearings, robotic surgical interventions, and etc.

BIO SKETCH:
Dr. Tsu-Chin Tsao is Professor at the Mechanical and Aerospace Engineering Department, Henry Samuelli School of Engineering and Applied Science, University of California Los Angeles. Dr. Tsao received B.S. in engineering from National Taiwan University (1981), and M.S. (1984) and Ph.D. (1988) in mechanical engineering from University of California Berkeley. Before joining UCLA as Professor in 1999 he was Assistant and Associate Professor at University Illinois at Urbana-Champaign. Dr. Tsao served the UCLA Mechanical & Aerospace Engineering Department as Vice Chair 2002-05 and Chair 2011-16. He is a Fellow of American Society of Mechanical Engineers. His current research interest includes control systems, mechatronics, and robotics. Recognitions of his research work include ASME Journal of Dynamic Systems, Measurement, and Control Best Paper Award, ASME Dynamic Systems and Control Division Outstanding Young Investigator Award, American Automatic Control Council Hugo S. Shuck Best Paper Award, International Symposium on Flexible Automation Best Paper Award, and International Federation of Automatic Control (IFAC) Mechatronic Systems Award.

WEITERE INFORMATIONEN:
o. Univ.-Prof. Dr. Andreas KUGI, Institut für Automatisierungs- und Regelungstechnik, kugi@acin.tuwien.ac.at, Tel. 58801 - 37614