

# Journal of Dynamic Systems, Measurement, and Control

Publication Title History

January, 2010 | Volume 132 | Issue 1

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## Research Papers

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### A Hybrid Nonlinear Adaptive Tracking Controller for a Resonating Fiber Microscanner

Quinn Y. J. Smithwick, Juris Vagners, Richard S. Johnston and Eric J. Seibel

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011001-011001-13. doi:10.1115/1.4000034.

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### Kinematic Analysis of a Swash-Plate Controlled Variable Displacement Axial-Piston Pump With a Conical Barrel Assembly

Zhiru Shi, Gordon Parker and Jonathan Granstrom

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011002-011002-8. doi:10.1115/1.4000067.

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### Virtual Vibration Measurement Using KLT Motion Tracking Algorithm

Joseph Morlier and Guilhem Michon

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011003-011003-8. doi:10.1115/1.4000070.

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### A Novel Internal Model-Based Tracking Control for a Class of Linear Time-Varying Systems

Zhen Zhang and Zongxuan Sun

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011004-011004-10. doi:10.1115/1.4000071.

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### Analytical Coupled Modeling and Model Validation of Hydraulic On/Off Valves

John Mahrenholz and John Lumkes

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011005-011005-10. doi:10.1115/1.4000072.

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### Optimal Web Guiding

Aravind Seshadri and Prabhakar R. Pagilla

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011006-011006-10. doi:10.1115/1.4000074.

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### Stable Controller Interpolation and Controller Switching for LPV Systems

Bryan P. Rasmussen and Young Joon Chang

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011007-011007-12. doi:10.1115/1.4000075.

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### Convergence Analysis of a Steerable Nip Mechanism for Full Sheet Control in Printing Devices

Edgar Ergueta, Rene Sanchez, Roberto Horowitz and Masayoshi Tomizuka

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011008-011008-9. doi:10.1115/1.3117195.

## Real-Time Diagnosis of the Exhaust Recirculation in Diesel Engines Using Least-Squares Parameter Estimation

Javad Mohammadpour, Karolos Grigoriadis, Matthew Franchek and Benjamin J. Zwissler

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011009-011009-8. doi:10.1115/1.4000655.

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## Design and Implementation of a Digital Multimode $H^\infty$ Controller for the Spey Turbofan Engine

Raza Samar and Ian Postlethwaite

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011010-011010-11. doi:10.1115/1.4000656.

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## Model-Based Control of Electroslag Remelting Process Using Unscented Kalman Filter

Seokyoung Ahn, Joseph J. Beaman, Rodney L. Williamson and David K. Melgaard

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011011-011011-9. doi:10.1115/1.4000660.

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## Lateral Vibration and Read/Write Head Servo Dynamics in Magnetic Tape Transport

M. R. Brake and J. A. Wickert

*J. Dyn. Sys., Meas., Control.* 2009;132(1):011012-011012-11. doi:10.1115/1.4000665

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## Technical Briefs

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### Simulation of Droplet Position Control in Digital Microfluidic Systems

Biddut Bhattacharjee and Homayoun Najjaran

*J. Dyn. Sys., Meas., Control.* 2009;132(1):014501-014501-3. doi:10.1115/1.4000077.

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### Computation of Stability Margins for Uncertain Linear Fractional-Order Systems

P. S. V. Nataraj and Rambabu Kalla

*J. Dyn. Sys., Meas., Control.* 2009;132(1):014502-014502-6. doi:10.1115/1.4000073.

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### Output Regulation Design for a Class of Nonlinear Systems With an Unknown Control Direction

Dabo Xu and Jie Huang

*J. Dyn. Sys., Meas., Control.* 2009;132(1):014503-014503-6. doi:10.1115/1.4000076.

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### An Internal Model Control Anti-Windup Scheme With Improved Performance for Input Saturation Via Loop Shaping

Wei Wu and Suhada Jayasuriya

*J. Dyn. Sys., Meas., Control.* 2009;132(1):014504-014504-6. doi:10.1115/1.4000664.

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### Dynamics and Control of Bridge Cranes Transporting Distributed-Mass Payloads

Raymond Manning, Jeffrey Clement, Dooroo Kim and William Singhose

*J. Dyn. Sys., Meas., Control.* 2009;132(1):014505-014505-8. doi:10.1115/1.4000657.

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### Active Position and Vibration Control of a Flexible Links Mechanism Using Model-Based Predictive Control

Paolo Boscariol, Alessandro Gasparetto and Vanni Zanotto

*J. Dyn. Sys., Meas., Control.* 2009;132(1):014506-014506-4. doi:10.1115/1.4000658.