

# automatica

A Journal of **IFAC** the International  
Federation of Automatic Control

Volume 43

Number 8

ISSN 0005-1098

August 2007

## CONTENTS

### REGULAR PAPERS

- |   |      |   |
|---|------|---|
| A. Girard and G.J. Pappas                   | 1307 | <b>Approximate bisimulation relations for constrained linear systems</b>                            |
| M. Porfiri, D.G. Roberson and D.J. Stilwell | 1318 | <b>Tracking and formation control of multiple autonomous agents: A two-level consensus approach</b> |
| J.-P. Marmorat and M. Olivi                 | 1329 | <b>Nudelman interpolation, parametrizations of lossless functions and balanced realizations</b>     |
| K. Mahata                                   | 1339 | <b>An improved bias-compensation approach for errors-in-variables model identification</b>          |

### BRIEF PAPERS

- |   |      |   |
|---|------|---|
| R. Herzallah                              | 1355 | <b>Adaptive critic methods for stochastic systems with input-dependent noise</b>                  |
| S. Ko and R.R. Bitmead                    | 1363 | <b>State estimation for linear systems with state equality constraints</b>                        |
| K. Mahata and T. Söderström               | 1369 | <b>Bayesian approaches for identification of the complex modulus of viscoelastic materials</b>    |
| G. Mercère and M. Lovera                  | 1377 | <b>Convergence analysis of instrumental variable recursive subspace identification algorithms</b> |
| D. Putra, H. Nijmeijer and N. van de Wouw | 1387 | <b>Analysis of undercompensation and overcompensation of friction in 1DOF mechanical systems</b>  |
| A. Karimi, H. Khatibi and R. Longchamp    | 1395 | <b>Robust control of polytopic systems by convex optimization</b>                                 |
| M.D. Baumgart and L.Y. Pao                | 1403 | <b>Discrete time-optimal command shaping</b>  |
| P. Zhang and S.X. Ding                    | 1410 | <b>Disturbance decoupling in fault detection of linear periodic systems</b>                       |
| M. Dalai, E. Weyer and M.C. Campi         | 1418 | <b>Parameter identification for nonlinear systems: Guaranteed confidence regions through LSCR</b> |

*Continued on outside back cover*

Continued from outside front cover

- |  |      |  |
|--|------|--|
| T.-H. Kim and T. Sugie                       | 1426 | <b>Cooperative control for target-capturing task based on a cyclic pursuit strategy</b>        |
| S. Ibrir                                     | 1432 | <b>Circle-criterion approach to discrete-time nonlinear observer design</b>                    |
| M. Baglietto, G. Battistelli and L. Scardovi | 1442 | <b>Active mode observability of switching linear systems</b>                                   |
| E. Song, Y. Zhu, J. Zhou and Z. You          | 1450 | <b>Optimal Kalman filtering fusion with cross-correlated sensor noises</b>                     |
| K. Mahata and M. Fu                          | 1457 | <b>On the indirect approaches for CARMA model identification</b>                               |
| A.M. Pertew, H.J. Marquez and Q. Zhao        | 1464 | <b>LMI-based sensor fault diagnosis for nonlinear Lipschitz systems</b>                        |
| Y.B. Shtessel, I.A. Shkolnikov and A. Levant | 1470 | <b>Smooth second-order sliding modes: Missile guidance application</b>                         |
| <b>CORRESPONDENCE</b>                        |      |  |
| W. Zhao and H. Fang                          | 1477 | <b>Comments on "Identification of Hammerstein nonlinear ARMAX systems"</b>                     |
| F. Ding and T. Chen                          | 1479 | <b>Author's reply to "comments on 'identification of Hammerstein nonlinear ARMAX systems'"</b> |

INDEXED/ABSTRACTED IN: *Appl. Mech. Rev.*, *Curr. Cont. ASCA*, *Aqua. Abstr.*, *Cam. Sci. Abstr.*, *Curr. Cont. CompuMath.*, *Curr. Cont./Eng. Tech. & Applied Sci.*, *Comput. Cont.*, *Eng. Ind.*, *INSPEC Data.*, *Info. Sci. Abstr.*, *Math. R.*, *Oper. Res. Manage. Sci.*, *PASCAL-CNRS Data.*, *Curr. Cont. Sci. Cit. Ind.*, *Curr. Cont. SCISEARCH Data.*, *SSSA/CISA/ECA/ISMEC*, *Zentralblatt für Mathematik*. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®

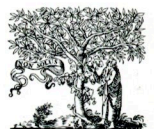
Available online at

 **ScienceDirect**  
www.sciencedirect.com



0005-1098(200708)43:8;1-1

ISSN 0005-1098



ELSEVIER