



# automatica

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

Volume 43

Number 4

ISSN 0005-1098

April 2007

## CONTENTS

### EDITORIAL

- T. Başar 575 **A retirement and a new editor: Book and software reviews**

### REGULAR PAPERS

- A. Levant 576 **Principles of 2-sliding mode design**
- O.L.V. Costa and W.L. de Paulo 587 **Indefinite quadratic with linear costs optimal control of Markov jump with multiplicative noise systems**
- M. Huang and S. Dey 598 **Stability of Kalman filtering with Markovian packet losses**
- Z.-J. Wu, X.-J. Xie and S.-Y. Zhang 608 **Adaptive backstepping controller design using stochastic small-gain theorem**

### BRIEF PAPERS

- R. Pintelon and J. Schoukens 621 **Frequency domain maximum likelihood estimation of linear dynamic errors-in-variables models**
- Ph. Mullhaupt, D. Bucciari and D. Bonvin 631 **A numerical sufficiency test for the asymptotic stability of linear time-varying systems**
- L. Vu, D. Chatterjee and D. Liberzon 639 **Input-to-state stability of switched systems and switching adaptive control**
- G. Pillonetto and C. Cobelli 647 **Identifiability of the stochastic semi-blind deconvolution problem for a class of time-invariant linear systems**
- M. López-Martínez, M.G. Ortega, C. Vivas and F.R. Rubio 655 **Nonlinear  $L_2$  control of a laboratory helicopter with variable speed rotors**
- Z. Ji, L. Wang and X. Guo 662 **Design of switching sequences for controllability realization of switched linear systems**
- S. Liuzzo, R. Marino and P. Tomei 669 **Adaptive learning control of linear systems by output error feedback**

*Continued on outside back cover*

Continued from outside front cover

- |   |     |  |
|---|-----|--|
| H. Ma   | 677 | <b>Finite-model adaptive control using WLS-like algorithm</b>  |
| T. Hu   | 685 | <b>Nonlinear control design for linear differential inclusions via convex hull of quadratics</b>   |
| T. Alamo, D.R. Ramirez,<br>D. Muñoz de la Peña and E.F. Camacho | 693 | <b>Min-max MPC using a tractable QP problem</b>  |
| P. Pepe   | 701 | <b>On Liapunov-Krasovskii functionals under Carathéodory conditions</b>  |
| N. Sebe   | 707 | <b>Unification of independent and sequential procedures for decentralized controller design</b>  |
| I.C. Lestas and G. Vinnicombe                                   | 714 | <b>Scalable robust stability for nonsymmetric heterogeneous networks</b>   |
| P. Apkarian and D. Noll   | 724 | <b>Nonsmooth optimization for multiband frequency domain control design</b>  |
| J.-D. Chang and B.-Z. Guo                                       | 732 | <b>Identification of variable spacial coefficients for a beam equation from boundary measurements</b>  |
| <b>TECHNICAL COMMUNIQUEs</b>                                    |     |  |
| S.-J. Park and K.-H. Cho  | 738 | <b>Decentralized supervisory control of discrete event systems with communication delays based on conjunctive and permissive decision structures</b> |
| G. Feichtinger, R.F. Hartl, P.M. Kort<br>and Y.A. Yegorov       | 744 | <b>A new solution property in optimal control: The lens</b>  |
| <b>BOOK REVIEW</b>  |     |  |
| S.J. Qin  | 748 | <b>Subspace methods for system identification by Tohru Katayama; Springer-Verlag, ISBN: 1-85233-981-0</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(200704)43:4;1-H

ISSN 0005-1098



ELSEVIER