



# automatica

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

Volume 43

Number 7

ISSN 0005-1098

July 2007

## CONTENTS

### REGULAR PAPERS

- |   |      |  |
|---|------|--|
| C. Valentin, M. Magos and B. Maschke                  | 1125 | <b>A port-Hamiltonian formulation of physical switching systems with varying constraints</b>                       |
| M. Neve, G. De Nicolao and L. Marchesi                | 1134 | <b>Nonparametric identification of population models via Gaussian processes</b>                                    |
| D.B. Dačić and D. Nešić                               | 1145 | <b>Quadratic stabilization of linear networked control systems via simultaneous protocol and controller design</b> |
| K. Kashima and Y. Yamamoto                            | 1156 | <b>System theory for numerical analysis</b>  |
| J. Chen, D.M. Dawson, W.E. Dixon and V.K. Chitrakaran | 1165 | <b>Navigation function-based visual servo control</b>  |
| L.Y. Wang and G.G. Yin                                | 1178 | <b>Asymptotically efficient parameter estimation using quantized output observations</b>                           |
| A. Kashyap, T. Başar and R. Srikant                   | 1192 | <b>Quantized consensus</b>   |

### BRIEF PAPERS

- |   |      |   |
|---|------|---|
| T. Boukhobza, F. Hamelin and S. Martinez-Martinez | 1204 | <b>State and input observability for structured linear systems: A graph-theoretic approach</b>                |
| A. Marcos, D.G. Bates and I. Postlethwaite        | 1211 | <b>A symbolic matrix decomposition algorithm for reduced order linear fractional transformation modelling</b> |
| B. Liu and H.J. Marquez                           | 1219 | <b>Razumikhin-type stability theorems for discrete delay systems</b>  |
| S.A.A. Moosavian and E. Papadopoulos              | 1226 | <b>Modified transpose Jacobian control of robotic systems</b>   |
| H.-F. Chen  | 1234 | <b>Recursive identification for multivariate errors-in-variables systems</b>                                  |
| S. Hu and W.-Y. Yan                               | 1243 | <b>Stability robustness of networked control systems with respect to packet loss</b>                          |

*Continued on outside back cover*

Continued from outside front cover

- |   |      |  |
|---|------|--|
| L. Rodrigues  | 1249 | <b>Stability of sampled-data piecewise-affine systems under state feedback</b>   |
| Z.-J. Yang, H. Iemura, S. Kanae and K. Wada               | 1257 | <b>Identification of continuous-time systems with multiple unknown time delays by global nonlinear least-squares and instrumental variable methods</b> |
| D. Hristu-Varsakelis and C. Shao                          | 1265 | <b>A bio-inspired pursuit strategy for optimal control with partially constrained final state</b>  |
| F.O. Hounkpevi and E.E. Yaz                               | 1274 | <b>Robust minimum variance linear state estimators for multiple sensors with different failure rates</b>   |
| Y. Karayiannidis, G. Rovithakis and Z. Doulgeri           | 1281 | <b>Force/position tracking for a robotic manipulator in compliant contact with a surface using neuro-adaptive control</b>                              |
| D. Angeli, C. Manuelli and E. Mosca                       | 1289 | <b>Data-based supervisory control of uncertain systems with application to automatic drug delivery for anesthesia</b>                                  |
| <b>TECHNICAL COMMUNIQUE</b>                               |      |  |
| J. Schoukens, W.D. Widanage, K.R. Godfrey and R. Pintelon | 1296 | <b>Initial estimates for the dynamics of a Hammerstein system</b>  |
| E.M. Navarro-López  | 1302 | <b>Local feedback passivation of nonlinear discrete-time systems through the speed-gradient algorithm</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(200707)43:7;1-5

ISSN 0005-1098



ELSEVIER