

IEEE TRANSACTIONS ON AUTOMATIC CONTROL

A PUBLICATION OF THE IEEE CONTROL SYSTEMS SOCIETY



OCTOBER 2016

VOLUME 61

NUMBER 10

IETAA9

(ISSN 0018-9286)

Scanning the Issue 2753

REGULAR PAPERS

| | | |
|---|--|------|
| A Duality Framework for Stochastic Optimal Control of Complex Systems | <i>A. A. Malikopoulos</i> | 2756 |
| \mathcal{L}_2 -Gain Analysis for a Class of Hybrid Systems With Applications to Reset and Event-Triggered Control: A Lifting Approach | <i>W. P. M. H. Heemels, G. E. Dullerud, and A. R. Teel</i> | 2766 |
| Stability of an Euler-Bernoulli Beam With a Nonlinear Dynamic Feedback System | <i>M. Miletić, D. Stürzer, A. Arnold, and A. Kugi</i> | 2782 |
| A Way to Exploit the Fractional Stability Domain for Robust Chaos Suppression and Synchronization via LMIs | <i>B. Aguiar, T. González, and M. Bernal</i> | 2796 |
| Ensemble Control of Time-Invariant Linear Systems with Linear Parameter Variation | <i>J-S. Li and J. Qi</i> | 2808 |
| Undirected Rigid Formations Are Problematic | <i>S. Mou, M-A. Belabbas, A. S. Morse, Z. Sun, and B. D. O. Anderson</i> | 2821 |
| Nonlinear Moment Matching-Based Model Order Reduction | <i>T. C. Ionescu and A. Astolfi</i> | 2837 |
| Convergence of Nonlinear Observers on \mathbb{R}^n With a Riemannian Metric (Part II) | <i>R. G. Sanfelice and L. Praly</i> | 2848 |
| Formal Verification of Stochastic Max-Plus-Linear Systems | <i>S. Esmail Zadeh Soudjani, D. Adzkiya, and A. Abate</i> | 2861 |
| Necessary and Sufficient Graphical Conditions for Affine Formation Control | <i>Z. Lin, L. Wang, Z. Chen, M. Fu, and Z. Han</i> | 2877 |
| Stochastic Control With Uncertain Parameters via Chance Constrained Control | <i>M. P. Vitus, Z. Zhou, and C. J. Tomlin</i> | 2892 |
| Second-Order-Optimal Minimum-Energy Filters on Lie Groups | <i>A. Saccon, J. Trumpf, R. Mahony, and A. P. Aguiar</i> | 2906 |
| Nash Equilibrium Computation in Subnetwork Zero-Sum Games With Switching Communications | <i>Y. Lou, Y. Hong, L. Xie, G. Shi, and K. H. Johansson</i> | 2920 |
| Price-Based Coordinated Aggregation of Networked Distributed Energy Resources | <i>B. Ghahesifard, T. Başar, and A. D. Domínguez-García</i> | 2936 |
| A Coordinate Descent Primal-Dual Algorithm and Application to Distributed Asynchronous Optimization | <i>P. Bianchi, W. Hachem, and F. Iutzeler</i> | 2947 |
| Clustering-Based Model Reduction of Networked Passive Systems | <i>B. Besselink, H. Sandberg, and K. H. Johansson</i> | 2958 |
| Controller Design for Robust Output Regulation of Regular Linear Systems | <i>L. Paunonen</i> | 2974 |
| Quantitative Supervisory Control Game for Discrete Event Systems | <i>S. Pruekprasert, T. Ushio, and T. Kanazawa</i> | 2987 |
| State Classification of Time-Nonhomogeneous Markov Chains and Average Reward Optimization of Multi-Chains | <i>X-R. Cao</i> | 3001 |
| Lyapunov Stability and Performance Analysis of the Implicit Discrete Sliding Mode Control | <i>O. Huber, V. Acary, and B. Brogliato</i> | 3016 |

TECHNICAL NOTES AND CORRESPONDENCE

| | | |
|---|--|------|
| Singular Perturbation Approximation of Linear Hyperbolic Systems of Balance Laws | <i>Y. Tang, C. Prieur, and A. Girard</i> | 3031 |
| Effects of Mixed-Modes on the Stability Analysis of Switched Time-Varying Delay Systems | <i>Q-K. Li and H. Lin</i> | 3038 |

(Contents Continued on Back Cover)



| | | |
|--|---|------|
| New Minmax Linear Quadratic Fault-Tolerant Tracking Control for Batch Processes | <i>R. Zhang, R. Lu, A. Xue, and F. Gao</i> | 3045 |
| Foundations of Not Necessarily Rational Negative Imaginary Systems Theory: Relations Between Classes of Negative Imaginary and Positive Real Systems | <i>A. Ferrante, A. Lanzon, and L. Ntogramatzidis</i> | 3052 |
| Inventory Control Over a Short Time Horizon Under Unknown Demand Distribution | <i>K. Kogan and A. Herbon</i> | 3058 |
| Hierarchical Fusion Estimation for Clustered Asynchronous Sensor Networks | <i>W-A. Zhang, B. Chen, and M. Z. Q. Chen</i> | 3064 |
| Finding Optimal Observation-Based Policies for Constrained POMDPs Under the Expected Average Reward Criterion | <i>X. Jiang, H. Xi, X. Wang, and F. Liu</i> | 3070 |
| Global Stabilization of a Class of Nonminimum-Phase Nonlinear Systems by Sampled-Data Output Feedback | <i>W. Lin, W. Wei, and G. Ye</i> | 3076 |
| Adaptive Observer for a Class of Parabolic PDEs | <i>T. Ahmed-Ali, F. Giri, M. Krstic, F. Lamnabhi-Lagarrigue, and L. Burlion</i> | 3083 |
| On the Equivalence Between Strict Positive Realness and Strict Passivity of Linear Systems. | <i>D. de S. Madeira and J. Adamy</i> | 3091 |
| Robustness of Synchronization of Heterogeneous Agents by Strong Coupling and a Large Number of Agents | <i>J. Kim, J. Yang, H. Shim, J-S. Kim, and J. H. Seo</i> | 3096 |
| Network Synchronization With Nonlinear Dynamics and Switching Interactions | <i>T. Yang, Z. Meng, G. Shi, Y. Hong, and K. H. Johansson</i> | 3103 |
| Robust Regulation Theory for Transfer Functions With a Coprime Factorization | <i>P. Laakkonen</i> | 3109 |
| Disturbance Decoupling With Closed-Loop Modes Stability in Switched Linear Systems | <i>E. Zattoni, A. M. Perdon, and G. Conte</i> | 3115 |
| Convexity of Decentralized Controller Synthesis | <i>L. Lessard and S. Lall</i> | 3122 |
| Embedding Internal Model in Disturbance Observer With Robust Stability | <i>Y. Joo, G. Park, J. Back, and H. Shim</i> | 3128 |
| Further Results on the Achievable Delay Margin Using LTI Control | <i>P. Ju and H. Zhang</i> | 3134 |
| Generating Patterns With a Unicycle | <i>T. Tripathy and A. Sinha</i> | 3140 |
| Observer-Based Adaptive Spacecraft Attitude Control With Guaranteed Performance Bounds | <i>A. H. J. de Ruiter</i> | 3146 |
| The Leader-Following Consensus for Multiple Uncertain Euler-Lagrange Systems With an Adaptive Distributed Observer | <i>H. Cai and J. Huang</i> | 3152 |
| Subsidy-Based Control of Heterogeneous Multiagent Systems Modeled by Replicator Dynamics | <i>T. Morimoto, T. Kanazawa, and T. Ushio</i> | 3158 |
| Noise-to-State Stability for a Class of Random Systems With State-Dependent Switching. | <i>D. Zhang, Z. Wu, X-M. Sun, and W. Wang</i> | 3164 |
| Adaptive Model Predictive Control for Unconstrained Discrete-Time Linear Systems With Parametric Uncertainties. | <i>B. Zhu and X. Xia</i> | 3171 |
| Higher Accuracy Output Feedback Sliding Mode Control of Sampled-Data Systems | <i>T. Nguyen, W-C. Su, Z. Gajic, and C. Edwards</i> | 3177 |
| Implicit Iterative Algorithms for Continuous Markovian Jump Lyapunov Equations | <i>A-G. Wu, G-R. Duan, and W. Liu</i> | 3183 |
| Dynamic Quantizer Design Under Communication Rate Constraints | <i>H. Okajima, K. Sawada, and N. Matsunaga</i> | 3190 |
| A Note on Functional Observability | <i>F. Rotella and I. Zambettakis</i> | 3197 |
| A Hybrid-Adaptive Dynamic Programming Approach for the Model-Free Control of Nonlinear Switched Systems. | <i>W. Lu, P. Zhu, and S. Ferrari</i> | 3203 |
| State and Output-Feedback Shared-Control for a Class of Linear Constrained Systems | <i>J. Jiang and A. Astolfi</i> | 3209 |
| Stability Theorems for Delay Differential Inclusions | <i>K-Z. Liu, X-M. Sun, J. Liu, and A. R. Teel</i> | 3215 |
| Event-Triggered H_∞ Control: A Switching Approach | <i>A. Selivanov and E. Fridman</i> | 3221 |
| Tracking Control for a Class of Unknown Nonsquare MIMO Nonaffine Systems: A Deep-Rooted Information Based Robust Adaptive Approach. | <i>Y. Song, X. Huang, and C. Wen</i> | 3227 |
