
Contents

| | |
|---|-----|
| Control of Communication Networks Using Infinitesimal Perturbation Analysis of Stochastic Fluid Models <i>Christos Panayiotou, Christos G. Cassandras, Gang Sun, Yorai Wardi</i> | 1 |
| Stabilized Vegas <i>Hyojeong Choe, Steven H. Low</i> | 27 |
| Robust Controller Design for AQM and \mathcal{H}^∞-Performance Analysis <i>Peng Yan, Hitay Özbay</i> | 49 |
| Models and Methods for Analyzing Internet Congestion Control Algorithms <i>Rayadurgam Srikant</i> | 65 |
| Delay Effects on the Asymptotic Stability of Various Fluid Models in High-Performance Networks <i>Silviu-Iulian Niculescu, Wim Michiels, Daniel Melchor-Aguillar, Tatyana Luzyanina, Frédéric Mazenc, Keqin Gu, Fabien Chatté</i> | 87 |
| A Sliding Mode Approach to Traffic Engineering in Computer Networks <i>Bernardo A. Movsichoff, Constantino M. Lagoa, Hao Che</i> | 111 |
| Modeling and Designing the Internet Congestion Control <i>Saverio Mascolo</i> | 137 |
| Saturated Controller Design of an ABR Explicit Rate Algorithm for ATM Switches <i>Sophie Tarbouriech, Marco Ariola, Chaouki T. Abdallah</i> | 159 |
| State-Space Models for Control and Identification <i>Henri-François Raynaud, Caroline Kulcsár, Rim Hammi</i> | 177 |

| | |
|--|-----|
| Global Stability of Nonlinear Congestion Control with Time-Delay <i>Zhikui Wang, Fernando Paganini</i> | 199 |
| On the Optimization of Load Balancing in Distributed Networks in the Presence of Delay <i>Sagar Dhakal, Majeed M. Hayat, Jean Ghanem, Chaouki T. Abdallah, Henry Jerez, John Chiasson, J. Douglas Birdwell</i> | 223 |
| Closed Loop Control of a Load Balancing Network with Time Delays and Processor Resource Constraints <i>Zhong Tang, J. Douglas Birdwell, John Chiasson, Chaouki T. Abdallah, Majeed M. Hayat</i> | 245 |
| Position and Force Tracking in Bilateral Teleoperation <i>Nikhil Chopra, Mark W. Spong, Romeo Ortega, Nikita E. Barabanov</i> | 269 |
| Suboptimal Control Techniques for Networked Hybrid Systems <i>Sorin C. Bengea, Peter F. Hokayem, Ray A. DeCarlo, Chaouki T. Abdallah</i> | 281 |
| Communication Requirements for Networked Control <i>Sekhar Tatikonda, Nicola Elia</i> | 303 |
| An Introduction to Nonlinear Fault Diagnosis with an Application to a Congested Internet Router <i>Michel Fliess, Cédric Join, Hugues Mounier</i> | 327 |
| List of Contributors | 345 |