Table of Contents

Strict Priority Scheduler for Rate Controlled Transmission Lukasz Chrost and Agnieszka Brachman	1
Network and Services Monitoring: A Survey in Cloud Computing Environments Guilherme Da Cunha Rodrigues, Vinicius Tavares Guimaraes, Glederson Lessa dos Santos, Lisandro Zambenedetti Granville, and Liane Rockenbach Tarouco	7
The Space-Time Information in the Access Management Jaroslav Kadlec, Radimir Vrba, David Jaros, and Radek Kuchta	14
A High-level Network-wide Router Configuration Language Miroslav Sveda, Michal Sekletar, Tomas Fidler, and Ondrej Rysavy	18
A New Approach to NGN Evaluation Integrating Simulation and Testbed Methodology Marcial Fernandez, Sebastian Wahle, and Thomas Magedanz	22
Impact of Propagation Factors on Routing Efficiency in Wireless Mesh Networks: A Simulation-based Study Ewa Osekowska, Iwona Pozniak-Koszalka, and Andrzej Kasprzak	28
Comparison of Heuristic Methods Applied to Optimization of Computer Networks Tomasz Miksa, Leszek Koszalka, and Andrzej Kasprzak	34
Wireless Home Automation Network Stability Testing Radek Kuchta, Radovan Novotny, Jaroslav Kadlec, Radimir Vrba, and Vladimir Sulc	39
Band-Pass Filters for Direct Sampling Receivers Pavel Zahradnik, Vlcek Miroslav, Simak Boris, and Kopp Michal	44
Comparison of the Fully-Differential and Single-Ended Solutions of the Frequency Filter with Current Followers and Adjustable Current Amplifier Jan Jerabek and Kamil Vrba	50
Precision Full-wave Rectifier Using Current Conveyors and Two Diodes Jaroslav Koton, Norbert Herencsar, and Kamil Vrba	55
Single GCFDITA and Grounded Passive Elements Based General Topology for Analog Signal Processing Applications Norbert Herencsar, Jaroslav Koton, Kamil Vrba, and Abhirup Lahiri	59
How Many Cores Does Parallel BGP Need in a High-Speed Router Yaping Liu, Shuo Zhang, Zexin Lu, and Baosheng Wang	63

Multi-level Machine Learning Traffic Classification System Geza Szabo, Janos Szule, Zoltan Turanyi, and Gergely Pongracz	69
TCP SYN Protection: An Evaluation Pascal Anelli, Fanilo Harivelo, and Richard Lorion	78
Extension of the Shared Regional PACS Center MeDiMed to Smaller Healthcare Institutions Karel Slavicek, Michal Javornik, and Otto Dostal	83
Multi-Tenancy Authorization System with Federated Identity for Cloud-Based Environments Using Shibboleth Marcos A. P. Leandro, Tiago J. Nascimento, Daniel R. dos Santos, Carla M. Westphall, and Carlos B. Westphall	88
A SPIT Avoidance Workflow for SIP-Provider Nicolas Rueger, Sebastian Huebner, and Bettina Schnor	94
Using PGP Signatures for Securing SIP Infrastructures Sebastian Huebner, Nicolas Rueger, and Bettina Schnor	102
Developing Trust and Reputation Taxonomy for a Dynamic Network Environment Tanja Azderska and Borka Jerman Blazic	109
A Reference Model for Future Computer Networks Hoda Hassan	115
Application Design over Named Data Networking with Its Features in Mind Sen Wang, Jianping Wu, and Jun Bi	121
Feedback, Transport Layer Protocols and Buffer Sizing Shankar Raman, Shashank Jain, and Gaurav Raina	125
A Generic Service Model for QoS Management Tatiana Aubonnet and Noemie Simoni	132
Towards Opportunistic Data Dissemination in Mobile Phone Sensor Networks Viet-Duc Le, Hans Scholten, and Paul Havinga	139
Towards A Theoretically Bounded Path Key Establishment Mechanism in Wireless Sensor Networks Aishwarya Mishra, Tibor Gyires, and Yongning Tang	147
Selective Link Cost Alteration in Reservation-Based Multi-Hop Wireless Mesh Networks Christian Kobel, Walter Baluja Garcia, and Joachim Habermann	153

Reliable Technology for Wireless Mesh Networks with Low System Requirements Vladimir Sulc, Radek Kuchta, and Radimir Vrba	159
Forwarding and Routing Stateless Multi-Hop Protocol for Wireless Sensor Networks Rivo S. A. Randriatsiferana, Richard Lorion, Frederic Alicalapa, and Fanilo Harivelo	165
Resource Management for Advanced, Heterogeneous Sensor-Actor-Networks Matthias Vodel, Mirko Lippmann, and Wolfram Hardt	169
Improving Fairness in Wireless Mesh Networks Jorge Peixoto, Marcial Fernandez, and Luis Felipe Moraes	175
An Integrated Location Method using Reference Landmarks for Dead Reckoning System Mingmei Li, Kazuyuki Tasaka, and Kiyohito Yoshihara	181
MANET with the Q-Routing Protocol Ramzi Haraty and Badieh Traboulsi	187
Estimation of Collision Multiplicities in IEEE 802.11-based WLANs Benoit Escrig	193
CTC Turbo Decoding Architecture for LTE Systems Implemented on FPGA Cristian Anghel, Valentin Stanciu, Cristian Stanciu, and Constantin Paleologu	199
Multi-Relay Cooperative NB-LDPC Coding with Non-Binary Repetition Codes David Declercq, Valantin Savin, and Stephan Pfletschinger	205
A Redundancy Information Protocol for P2P Networks in Ubiquitous Computing Environments: Design and Implementation Rafael Araujo, Hiran Ferreira, Pedro Rosa, and Renan Cattelan	215
Kernel Module Implementation of IPv4/IPv6 Translation Mechanisms for IPv4-oriented Applications Katsuhiro Naito, Kazuo Mori, and Hideo Kobayashi	221
A Complementary Approach for Transparent NAT Connectivity Lucas Vella, Lasaro Camargos, and Pedro Rosa	227
Minimization of Branching in the Optical Trees with Constraints on the Degree of Nodes Massinissa Merabet, Sylvain Durand, and Miklos Molnar	235
Mitigating Spoofing Attacks in MPLS-VPNs using Label-hopping Shankar Raman and Gaurav Raina	241