

2008 IEEE INFOCOM Workshops

**Phoenix, Arizona, USA
15 – 17 April 2008**



IEEE Catalog Number: CFP0823E-PRT
ISBN: 978-1-4244-2219-7

TABLE OF CONTENTS

On Optimizing Load Balancing of Intrusion Detection and Prevention Systems	1
<i>A. Le, E. Al-Shaer, R. Boutaba</i>	
On Design of Scheduling Algorithms for Advance Bandwidth Reservation in Dedicated Networks	7
<i>Y. Lin, Q. Wu, N.S.V. Rao, M. Zhu</i>	
Profiling Podcast-Based Content Distribution	13
<i>A. Banerjee, M. Faloutsos, L.N. Bhuyan</i>	
A New Access Control Policy on the Uplink of a DS-CDMA System	19
<i>Z. Zhou, Y. Zhang, G. Feng</i>	
A Secure Integrated Routing and Localization Scheme for Broadband Mission Critical Networks	23
<i>U.N. Okorafor, D. Kundur</i>	
Adaptive Kalman Filtering for Anomaly Detection in Software Appliances	29
<i>F. Knorn, D.J. Leith</i>	
Two-Stage IP-Address Lookup in Distributed Routers	35
<i>J. Fu, P. Sjodin, G. Karlsson</i>	
Babel-SIP: Self-learning SIP Message Adaptation for Increasing SIP-Compatibility.....	41
<i>H. Hlavacs, K.A. Hummel, A. Hess, M. Nussbaumer</i>	
A Localization and Routing Framework for Mobile Underwater Sensor Networks	47
<i>M. Erol, S. Oktug</i>	
Covering All Bases with a Short Blanket: A Dynamic Monitoring Resource Allocation Scheme.....	50
<i>C. Elster, D. Raz</i>	
Towards Evolving Sensor Actor Networks	56
<i>R. Eltarras, M. Eltoweissy, M. Youssef</i>	
Towards Improved Connectivity with Hybrid Uni/Omni-Directional Antennas in Wireless Sensor Networks.....	62
<i>S. Shankar, D. Kundur</i>	
Message Efficient Termination Detection in Wireless Sensor Networks.....	66
<i>S. Bapat, A. Arora</i>	
DoS-Resistant Broadcast Authentication Protocol with Low End-to-end Delay.....	72
<i>Y. Huang, W. He, K. Nahrstedt, W.C. Lee</i>	
A New Theoretic Framework for Cross-Layer Optimization with Message Exchanges	78
<i>F. Fu, M. Van Der Schaar</i>	
A Trade-off Study between Efficiency and Fairness in Communication Networks	82
<i>Q. Zhu</i>	
G-E-M Sensor Networks for Mission Critical Surveillance in Hostile Environments	84
<i>A. Czarlinska, W. Luh, D. Kundur</i>	
High-Performance TCAM-Based IP Lookup Engines.....	90
<i>H. Yu, J. Chen, J. Wang, S.Q. Zheng</i>	
Towards a Federated Network Architecture	96
<i>H.M. Hassan, M. Eltoweissy, M. Youssef</i>	

Are Bigger Optical Buffers Necessarily Better?	100
<i>A. Vishwanath, V. Sivaraman, G.N. Rouskas</i>	
Infrastructure-Level Trust-based Protection for Security-Concerned Systems and Their Communications.....	104
<i>Y. Dong, D.H.C. Du, F. Cao</i>	
Channel Access Delay Analysis of IEEE 802-16 Best Effort Services	110
<i>H. Ghaffarian, M. Fathy, M. Soryani</i>	
Distribution of Nodes in Disaster Area Scenarios and its Impact on Topology Control Strategies.....	115
<i>N. Aschenbruck, C. De Waal, P. Martini</i>	
On Reverse Engineering the Management Actions from Observed BGP Data	121
<i>S.M. Tseng, S.F. Wu, X. Zhao, K. Zhang</i>	
Techniques for Flow Inversion on Sampled Data.....	127
<i>R.G. Clegg, R. Landa, H. Haddadi, M. Rio, A.W. Moore</i>	
Secure Hop-by-Hop Aggregation of End-to-End Concealed Data in Wireless Sensor Networks	133
<i>E. Mlaih, S.A. Aly</i>	
mod kaPoW: Protecting the Web with Transparent Proof-of-Work	139
<i>E. Kaiser, W. Feng</i>	
Enhancing the Performance of Mobile Healthcare Systems Based on Task-Redistribution.....	145
<i>H. Mei, B. Van Beijnum, I. Widya, V. Jones, H. Hermens</i>	
A Fast Method for Real-Time Anomaly Detection Using Routing Statistics	151
<i>G. Booker</i>	
SLA-Based SAN Design.....	154
<i>E. Gencay, C. Sinz, W. Kuchlin</i>	
Multi-Agent System for Automation of B2C Processes in the Future Internet	160
<i>V. Podobnik, I. Lovrek</i>	
A Durable Sensor Enabled Lifeline Support for Firefighters	164
<i>H.A. Salam, S.R. Rizvi, S. Ainsworth, S. Olariu</i>	
EKG-based Key Agreement in Body Sensor Networks	170
<i>K.K. Venkatasubramanian, A. Banerjee, S.K.S. Gupta</i>	
Energy Efficient Workforce Selection in Special-Purpose Wireless Sensor Networks	176
<i>H.S. Abdelsalam, S.R. Rizvi</i>	
Multi-Element Free-Space-Optical Spherical Structures with Intermittent Connectivity Patterns	180
<i>M. Bilgi, M. Yuksel</i>	
Utilizing Semantic Policies for Managing BGP Route Dissemination	184
<i>P. Kodeswaran, S.B. Kodeswaran, A. Joshi, F. Perich</i>	
Efficient Algorithms for Index Coding.....	188
<i>M.A.R. Chaudhry, A. Sprintson</i>	
Fast Statistical Relationship Discovery in Massive Monitoring Data	192
<i>H. Zhang, H. Chen, G. Jiang, X. Meng, K. Yoshihira</i>	
Adaptive Optimization of Packet Filtering Devices Performance Ensuring a Conflict-free Network Configuration.....	198
<i>G. Maiolini, L. Cignini, A. Baiocchi</i>	

Qualitative Policies for Bandwidth Priorities in Ad-hoc Networks	204
<i>B. Bjurling, L. Rasmussen, U.M. Johansson</i>	
Empirical Model-based Adaptive Control of MANETs	208
<i>A. Moursy, I. Ajbar, D. Perkins, M. Bayoumi</i>	
Physical Location Awareness for Enterprise IT Assets	214
<i>M. Zedler, D. Gantenbein</i>	
Multi-Resolution Anomaly Detection for the Internet.....	220
<i>L. Zhang, Z. Zhu, K. Jeffay, J.S. Marron, F.D. Smith</i>	
A Topology Management Framework for Wireless Sensor Networks via Power Control.....	226
<i>Z.H. Mir, Y. Ko</i>	
Inference of Network-Wide VLAN Usage in Small Enterprise Networks	230
<i>K. Sripanidkulchai, C. Issariyapat, K. Meesublak</i>	
AORTA: Autonomic Network Control and Management System	234
<i>A. Tizghadam, A. Leon-Garcia</i>	
Hierarchical Up/Down Routing Architecture for Ethernet Backbones and Campus Networks	238
<i>G.A. Ibanez, A. Garcia-Martinez, J.A. Carral, P.A. Gonzalez, A. Azcorra, J.M. Arco</i>	
A Step Towards Understanding Loss Synchronisation Between Concurrent TCP Flows.....	244
<i>Q. Fu, P. Jay</i>	
Contract-Switching Paradigm for Internet Value Flows and Risk Management	250
<i>M. Yuksel, A. Gupta, S. Kalyanaraman</i>	
Control-Plane Congestion and Provisioning Guidelines for OBS Networks	256
<i>N. Barakat, T.E. Darcie</i>	
Secure Capacity of Multi-Hop Wireless Networks with Random Key Pre-distribution	262
<i>V. Bhandari, N.H. Vaidya</i>	
Network Virtualization in High-speed Huge-bandwidth Optical Circuit Switching Network.....	268
<i>K. Shiomoto, I. Inoue, E. Oki</i>	
On the Inadequacy of Link Connectivity Monitoring.....	274
<i>M. Saxena, R.R. Komella</i>	
An Architecture for Context-Driven Self-Management of Services	280
<i>I. Hochstatter, G.D. Rodosek, M. Serrano, J. Serrat, K. Nowak, S. Trocha</i>	
RF-Based Location Determination in Heterogenous Sensor Networks Using Rayleigh Fading Channel	284
<i>S. Ekin, A.I. El-Osery, W. Abd-Almageed</i>	
Rate Control with End-to-End Delay and Rate Constraints	290
<i>Z. Rosberg</i>	
Loss Synchronization and Router Buffer Sizing with High-Speed Versions of TCP	296
<i>S. Hassayoun, D. Ros</i>	
On the Efficiency of using Space-Filling Curves in Network Traffic Representation.....	302
<i>T. Samak, S. Ghanem, M.A. Isamail</i>	
On Congestion in Mission Critical Networks	308
<i>A. Tizghadam, A. Leon-Garcia</i>	
Competitive Advance Reservation with Bounded Path Dispersion	314
<i>R. Cohen, N. Fazlollahi, D. Starobinski</i>	

Weeding Spammers at the Root: A Precise Approach to Spam Reduction	319
<i>T. Ouyang, M. Rabinovich</i>	
Bit-Error-Tolerant (512*N)B/(513*N+1)B Code for 40Gb/s and 100Gb/s Ethernet Transport	325
<i>M. Teshima, S. Kobayashi, T. Yamamoto, O. Ishida</i>	
Detection of Low-Rate Attacks in Computer Networks	331
<i>G. Thatte, U. Mitra, J. Heidemann</i>	
Design of AWG-based WDM-PON Architecture with Multicast Capability.....	337
<i>K. Han, K. Yoo, W. Yang, Y. Kim</i>	
Improving User and ISP Experience through ISP-aided P2P Locality.....	343
<i>V. Aggarwal, O. Akonjang, A. Feldmann</i>	
Non-Cooperative Available Bandwidth Estimation Towards ADSL Links	349
<i>D. Croce, T. En-Najjary, G. Urvoy-Keller, E.W. Biersack</i>	
Model-T: Rethinking the OS for Terabit Speeds	355
<i>W. De Brujin, H. Bos</i>	
Resource Management in an Active Measurement Service.....	361
<i>E. Blanton, S. Fahmy, S. Banerjee</i>	
Interference Avoidance in Rapidly Deployed Wireless Ad Hoc Incident Area Networks	367
<i>M.T. Refaei, M.R. Souryal, N. Moayeri</i>	
Towards a Virtualized Data Center Transport Protocol.....	373
<i>K. Kant</i>	
Skype Relay Calls: Measurements and Experiments.....	379
<i>W. Kho, S. Abdul Baset, H. Schulzrinne</i>	
Correlations in End-to-End Network Metrics: Impact on Large Scale Network Monitoring	385
<i>P. Yalagandula, S. Lee, P. Sharma, S. Banerjee</i>	
The Mobile Web is Structurally Different	391
<i>A. Jindal, C. Crutchfield, S. Goel, R. Kolluri</i>	
The eBay Graph: How Do Online Auction Users Interact?	397
<i>Y. Beyene, M. Faloutsos, D.H. Chau, C. Faloutsos</i>	
Proof-of-Relevance: Filtering False Data Via Authentic Consensus in Vehicle Ad-hoc Networks	403
<i>Z. Cao, J. Kong, U. Lee, M. Gerla, Z. Chen</i>	
VDTLS - Providing Secure Communications in Vehicle Networks.....	409
<i>S. Pietrowicz, H. Shim, G. Di Crescenzo, T. Zhang</i>	
ASH: Application-aware SWANS with Highway Mobility	415
<i>K. Ibrahim, M.C. Weigle</i>	
On the Capacity of Information-Guided Channel-Hopping in Multi-Antenna System.....	421
<i>Y. Yang, B. Jiao</i>	
On the Capacity of Maximum Selection in MIMO Multicast Network	426
<i>Y. Yang</i>	
Simulating the Influence of IVC on Road Traffic Using Bidirectionally Coupled Simulators	431
<i>C. Sommer, Z. Yao, R. German, F. Dressler</i>	
To Drop or Not to Drop: On the Impact of Handovers on TCP Performance	437
<i>R. Cohen, A. Levin</i>	

Cooperative Content Retrieval in Nomadic Sensor Networks	443
<i>I. Koukoutsidis, E. Jaho, I. Stavrakakis</i>	
A Vehicle Route Management Solution Enabled by Wireless Vehicular Networks.....	449
<i>K. Collins, G. Muntean</i>	
Reliable Real-Time Data Acquisition for Rapidly Deployable Mission-Critical Wireless Sensor Networks.....	455
<i>M. Soyturk, D.T. Altilar</i>	
Secure V2V Communications: Performance Impact of Computational Overheads.....	461
<i>A. Iyer, A. Kherani, A. Rao, a. Karnik</i>	
Repetition-based Broadcast in Vehicular Ad Hoc Networks in Rician Channel with Capture	467
<i>F. Farnoud, S. Valaee</i>	
Antler: A Multi-Tiered Approach to Automated Wireless Network Management.....	473
<i>R. Raghavendra, P.A.K. Acharya, E.M. Belding, K.C. Almeroth</i>	
Impact of Vehicular Communications Security on Transportation Safety.....	479
<i>P. Papadimitratos, G. Calandriello, J. Hubaux, A. Lioy</i>	

Author Index