

Lecture Notes in Computer Science

3420

Commenced Publication in 1973

Founding and Former Series Editors:
Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

Editorial Board

David Hutchison

Lancaster University, UK

Takeo Kanade

Carnegie Mellon University, Pittsburgh, PA, USA

Josef Kittler

University of Surrey, Guildford, UK

Jon M. Kleinberg

Cornell University, Ithaca, NY, USA

Friedemann Mattern

ETH Zurich, Switzerland

John C. Mitchell

Stanford University, CA, USA

Moni Naor

Weizmann Institute of Science, Rehovot, Israel

Oscar Nierstrasz

University of Bern, Switzerland

C. Pandu Rangan

Indian Institute of Technology, Madras, India

Bernhard Steffen

University of Dortmund, Germany

Madhu Sudan

Massachusetts Institute of Technology, MA, USA

Demetri Terzopoulos

New York University, NY, USA

Doug Tygar

University of California, Berkeley, CA, USA

Moshe Y. Vardi

Rice University, Houston, TX, USA

Gerhard Weikum

Max-Planck Institute of Computer Science, Saarbruecken, Germany

Pascal Lorenz Petre Dini (Eds.)

Networking – ICN 2005

4th International Conference on Networking
Réunion Island, France, April 17-21, 2005
Proceedings, Part I

Volume Editors

Pascal Lorenz
University of Haute Alsace
34 rue du Grillenbreit, 68008 Colmar, France
E-mail: lorenz@ieee.org

Petre Dini
Cisco Systems, Inc.
170 West Tasman Drive, San Jose, CA 95134, USA
E-mail: pdini@cisco.com

Library of Congress Control Number: 2005922556

CR Subject Classification (1998): C.2, K.4.4, H.4.3, H.5.1, H.3, K.6.4-5

ISSN 0302-9743
ISBN 3-540-25339-4 Springer Berlin Heidelberg New York

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German Copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer. Violations are liable to prosecution under the German Copyright Law.

Springer is a part of Springer Science+Business Media

springeronline.com

© Springer-Verlag Berlin Heidelberg 2005
Printed in Germany

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India
Printed on acid-free paper SPIN: 11407065 06/3142 5 4 3 2 1 0

Preface

The International Conference on Networking (ICN 2005) was the fourth conference in its series aimed at stimulating technical exchange in the emerging and important field of networking. On behalf of the International Advisory Committee, it is our great pleasure to welcome you to the proceedings of the 2005 event.

Networking faces dramatic changes due to the customer-centric view, the venue of the next generation networks paradigm, the push from ubiquitous networking, and the new service models. Despite legacy problems, which researchers and industry are still discovering and improving the state of the art, the horizon has revealed new challenges that some of the authors tackled through their submissions.

In fact ICN 2005 was very well perceived by the international networking community. A total of 651 papers from more than 60 countries were submitted, from which 238 were accepted. Each paper was reviewed by several members of the Technical Program Committee. This year, the Advisory Committee revalidated various accepted papers after the reviews had been incorporated. We perceived a significant improvement in the number of submissions and the quality of the submissions.

The ICN 2005 program covered a variety of research topics that are of current interest, starting with Grid networks, multicasting, TCP optimizations, QoS and security, emergency services, and network resiliency. The Program Committee selected also three tutorials and invited speakers that addressed the latest research results from the international industries and academia, and reports on findings from mobile, satellite, and personal communications related to 3rd- and 4th-generation research projects and standardization.

This year we enriched ICN with a series of papers targeting emergency services and disaster recovery (the AICED section); this emerging topic hopefully will lead to more robust and fault-tolerant systems for preventing technical and human disasters.

We would like to thank the International Advisory Committee members and the referees. Without their support, the program organization of this conference would not have been possible. We are also indebted to many individuals and organizations that made this conference possible (Cisco Systems, Inc., France Telecom, IEEE, IARIA, Region Reunion, University of La Reunion, ARP). In particular, we thank the members of the Organizing Committee for their help in all aspects of the organization of this conference.

We hope that the attendees enjoyed this International Conference on Networking on Reunion Island, and found it a useful forum for the exchange of ideas

and results and recent findings. We also hope that the attendees found time to enjoy the island's beautiful countryside and its major cultural attractions.

April 2005

Pascal Lorenz
Petre Dini

International Scientific Committee

Advisory Committee Board

- P. Dini (USA) — Cisco Systems, Inc.
P. Lorenz (France) — University of Haute Alsace
G. Parr (UK) — University of Ulster (for the AICED section on emergency services and disaster recovery)

Tutorial Chairs

- A. Jamalipour (Australia) — University of Sydney
M. Hur (USA) — Microsoft (for the AICED section on emergency services and disaster recovery)

Program Chairs

- M. Freire (Portugal) — University of Beira Interior
H. Debar (France) — France Telecom R&D (for the AICED section on emergency services and disaster recovery)

International Advisory Committee

- H. Adeli (USA) — Ohio State University
K. Al-Begain (UK) — University of Glamorgan
P. Anelli (France) — University of La Reunion
E. Barnhart (USA) — Georgia Institute of Technology
J. Ben Othman (France) — University of Versailles
B. Bing (USA) — Georgia Institute of Technology
D. Bonyuet (USA) — Delta Search Labs
J. Brito (Brazil) — INATEL
M. Carli (Italy) — University of Rome TRE
P. Chemouil (France) — France Telecom R&D
M. Devetsikiotis (USA) — North Carolina State University
P. Dini (USA) — Cisco Systems, Inc.
P. Dommel (USA) — Santa Clara University
Y. Donoso (Colombia) — University del Norte
I. Elhanany (USA) — University of Tennessee

VIII Organization

- A. Finger (Germany) — Dresden University of Technology
M. Freire (Portugal) — University of Beira Interior
E. Fulp (USA) — Wake Forest University
B. Gavish (USA) — Southern Methodist University
F. Granelli (Italy) — University of Trento
H. Guyennet (France) — University of Franche-Comté
Z. Hulicki (Poland) — AGH University of Science and Technology
A. Jamalipour (Australia) — University of Sydney
A.L. Jesus Teixeira (Portugal) — University of Aveiro
D. Khotimsky (USA) — Invento Networks
R. Komiya (Malaysia) — Faculty of Information Technology
S. Kumar (USA) — University of Texas
J.C. Lapeyre (France) — University of Franche-Comte
P. Lorenz (France) — University of Haute Alsace
M.S. Obaida (USA) — Monmouth University
A. Pescape (Italy) — University of Napoli "Federico II"
D. Magoni (France) — University of Strasbourg
Z. Mammeri (France) — University of Toulouse
A. Molinaro (Italy) — University of Calabria
H. Morikawa (Japan) — University of Tokyo
H. Mouftah (Canada) — University of Ottawa
A. Pandharipande (Korea) — Samsung Advanced Institute of Technology
S. Recker (Germany) — IMST GmbH
F. Ricci (USA) — The Catholic University of America
J. Rodrigues (Portugal) — University of Beira Interior
P. Rolin (France) — France Telecom R&D
B. Sarikaya (Canada) — UNBC
J. Soler-Lucas (Denmark) — Research Center COM
S. Soulhi (Canada) — Ericsson, Inc.
V. Uskov (USA) — Bradley University
R. Valadas (Portugal) — University of Aveiro
L. Vasiu (UK) - Wireless IT Research Centre
E. Vazquez (Spain) — Technical University of Madrid
D. Vergados (Greece) — University of the Aegean
S. Yazbeck (USA) — Barry University
V. Zaborovski (Russia) — Saint-Petersburg Politechnical University
A. Zaslavsky (Australia) — Monash University
H.J. Zepernick (Australia) — Western Australian Telecommunications Research Institute

International Committee for the topics related to the emergency services and disaster recovery

- M. Barbeau (Canada) — Carleton University
G. Candea (USA) — Stanford University

- H. Debar (France) — France Telecom R&D
P. Dini (USA) — Cisco Systems, Inc.
S. Gjessing (Norway) — Simula Research Laboratory
P.-H. Ho (Canada) — University of Waterloo
M. Hur (USA) — Microsoft
N. Kapadia (USA) — Capital One
P. Lorenz (France) — University of Haute Alsace
D. Malagrino (USA) — Cisco Systems, Inc.
M. Moh (USA) — San Jose State University
G. Parr (UK) — University of Ulster
A. Pescapé (Italy) — Università degli Studi di Napoli ”Frederico II”
H. Reiser (Germany) — Ludwig Maximilians University Munich
J. Salowey (USA) — Cisco Systems, Inc.
D. Schupke (Germany) — Siemens, AG
F. Serr (USA) — Cisco Systems, Inc.
C. Becker Westphall (Brazil) — Federal University of Santa Catarina
A. Zaslavsky (Australia) — Monash University

Table of Contents – Part I

GRID

Mobile-to-Grid Middleware: An Approach for Breaching the Divide
Between Mobile and Grid Environments

*Umar Kalim, Hassan Jameel, Ali Sajjad,
Sungyoung Lee* 1

On the Influence of Network Characteristics on Application
Performance in the Grid Environment

*Yoshinori Kitatsuji, Satoshi Katsuno, Katsuyuki Yamazaki,
Hiroshi Koide, Masato Tsuru, Yuji Oie* 9

A Client-Side Workflow Middleware in the Grid

Ying Li, Qiaoming Zhu, Minglu Li, Yue Chen 19

General Architecture of Grid Framework with QoS Implementation

Vit Vrba, Karol Molnar, Lubomir Cvrk 27

Optical Networks (I)

Centralized Versus Distributed Re-provisioning in Optical Mesh
Networks

Chadi Assi, Wei Huo, Abdallah Shami 34

The Role of Meshing Degree in Optical Burst Switching Networks
Using Signaling Protocols with One-Way Reservation Schemes

*Joel J.P.C. Rodrigues, Mário M. Freire,
Pascal Lorenz* 44

Analytical Model for Cross-Phase Modulation in Multi-span WDM
Systems with Arbitrary Modulation Formats

Gernot Göger, Bernhard Spinnler 52

Low-Cost Design Approach to WDM Mesh Networks

Cristiana Gomes, Geraldo Robson Mateus 60

A New Path Protection Algorithm for Meshed Survivable
Wavelength-Division-Multiplexing Networks

Lei Guo, Hongfang Yu, Lemin Li 68

Wireless Networks (I)

Application Area Expansion in Quasi-Millimeter Wave Band Fixed Wireless Access System <i>Shuta Uwano, Ryutaro Ohmoto</i>	76
A Robust Service for Delay Sensitive Applications on a WLAN <i>Fanilo Harivelono, Pascal Anelli</i>	84
17 GHz Wireless LAN: Performance Analysis of ARQ Based Error Control Schemes <i>Giuseppe Razzano, Luca Cecconi, Roberto Cusani</i>	92
Performance Analysis of Mac-hs Protocol <i>Robert Bestak</i>	100
Distributed k-Clustering Algorithms for Random Wireless Multihop Networks <i>Vlady Ravelomanana</i>	109
QoS (I)	
Call Admission Control with SLA Negotiation in QoS-Enabled Networks <i>Iftekhar Ahmad, Joarder Kamruzzaman, Srinivas Aswathanarayanan</i>	117
Enhancing QoS Through Alternate Path: An End-to-End Framework <i>Thierry Rakotoarivelo, Patrick Senac, Aruna Seneviratne, Michel Diaz</i>	125
A Comparison on Bandwidth Requirements of Path Protection Mechanisms <i>Claus G. Gruber</i>	133
Quality of Service Solutions in Satellite Communication <i>Mathieu Gineste, Patrick Sénat</i>	144
QoS-Oriented Packet Scheduling Schemes for Multimedia Traffics in OFDMA Systems <i>Seokjoo Shin, Seungjae Bahng, Insoo Koo, Kiseon Kim</i>	153

Optical Networks (II)

- Packet Delay Analysis of Dynamic Bandwidth Allocation Scheme in an Ethernet PON
Chul Geun Park, Dong Hwan Han, Bara Kim 161
- Inter-domain Advance Resource Reservation for Slotted Optical Networks
Abdelilah Maach, Abdelhakim Hafid, Jawad Drissi 169
- Virtual Source-Based Minimum Interference Path Multicast Routing with Differentiated QoS Guarantees in the Next Generation Optical Internet
Suk-Jin Lee, Kyung-Dong Hong, Chun-Jai Lee, Moon-Kyun Oh, Young-Bu Kim, Jae-Dong Lee, Sung-Un Kim 178
- Multiple Failures Restoration by Group Protection in WDM Networks
Chen-Shie Ho, Ing-Yi Chen, Sy-Yen Kuo 186
- Wavelength Assignment in Route-Fixed Optical WDM Ring by a Branch-and-Price Algorithm
Heesang Lee, Yun Bae Kim, Seung J. Noh, Sun Hur 194

Wireless Networks (II)

- M-MIP: Extended Mobile IP to Maintain Multiple Connections to Overlapping Wireless Access Networks
Christer Åhlund, Robert Brännström, Arkady Zaslavsky 204
- Light-Weight WLAN Extension for Predictive Handover in Mobile IPv6
Soohong Park, Pyung Soo Kim 214
- Algorithms for Energy-Efficient Broad- and Multi-casting in Wireless Networks
Hiroshi Masuyama, Kazuya Murakami, Toshihiko Sasama 221
- Converting SIRCIM Indoor Channel Model into SNR-Based Channel Model
Xiaolei Shi, Mario Hernan Castaneda Garcia, Guido Stromberg 231
- CAWAnalyser: Enhancing Wireless Intrusion Response with Runtime Context-Awareness
Choon Hean Gan, Arkady Zaslavsky, Stephen Giles 239

Evaluation of Transport Layer Loss Notification in Wireless Environments <i>Johan Garcia, Anna Brunstrom</i>	247
End-to-End Wireless Performance Simulator: Modeling Methodology and Performance <i>Sung-Min Oh, Hyun-Jin Lee, Jae-Hyun Kim</i>	258
QoS (II)	
Client-Controlled QoS Management in Networked Virtual Environments <i>Patrick Monsieurs, Maarten Wijnants, Wim Lamotte</i>	268
UML-Based Approach for Network QoS Specification <i>Cédric Teyssié, Zoubir Mammeri</i>	277
Modeling User-Perceived QoS in Hybrid Broadcast and Telecommunication Networks <i>Michael Galetzka, Günter Elst, Adolf Finger</i>	286
Holistic and Trajectory Approaches for Distributed Non-preemptive FP/DP* Scheduling <i>Steven Martin, Pascale Minet</i>	296
Evaluating Evolutionary IP-Based Transport Services on a Dark Fiber Large-Scale Network Testbed <i>Francesco Palmieri</i>	306
Pareto Optimal Based Partition Framework for Two Additive Constrained Path Selection <i>Yanxing Zheng, Turgay Korkmaz, Wenhua Dou</i>	318
Optical Networks (III)	
Joint Path Protection Scheme with Efficient RWA Algorithm in the Next Generation Internet Based on DWDM <i>Jin-Ho Hwang, Jae-Dong Lee, Jun-Won Lee, Sung-Un Kim</i>	326
On Integrated QoS Control in IP/WDM Networks <i>Wei Wei, Zhongheng Ji, Junjie Yang, Qingji Zeng</i>	334
Optical Hybrid Switching Using Flow-Level Service Classification for IP Differentiated Service <i>Gyu Myoung Lee, Jun Kyun Choi</i>	342

Delay Constraint Dynamic Bandwidth Allocation for Differentiated Service in Ethernet Passive Optical Networks <i>Lin Zhang, Lei Li, Huimin Zhang</i>	350
---	-----

Wireless Networks (III)

An Architecture for Efficient QoS Support in the IEEE 802.16 Broadband Wireless Access Network <i>Dong-Hoon Cho, Jung-Hoon Song, Min-Su Kim, Ki-Jun Han</i>	358
A Pragmatic Methodology to Design 4G: From the User to the Technology <i>Simone Frattasi, Hanane Fathi, Frank Fitzek, Marcos Katz, Ramjee Prasad</i>	366
Integrating WMAN with WWAN for Seamless Services <i>Jinsung Cho, Dae-Young Kim</i>	374
Towards Mobile Broadband <i>J. Charles Francis, Johannes Schneider</i>	382
Emulation Based Performance Investigation of FTP File Downloads over UMTS Dedicated Channels <i>Oumer M. Teyeb, Malek Boussif, Troels B. Sørensen, Jeroen Wigard, Preben E. Mogensen</i>	388
Uni-source and Multi-source m -Ary Tree Algorithms for Best Effort Service in Wireless MAN <i>Jin Kyung Park, Woo Cheol Shin, Jun Ha, Cheon Won Choi</i>	397

WPAN

High Rate UWB-LDPC Code and Its Soft Initialization <i>Jia Hou, Moon Ho Lee</i>	406
Cube Connected Cycles Based Bluetooth Scatternet Formation <i>Marcin Bienkowski, André Brinkmann, Mirosław Korzeniowski, Orhan Orhan</i>	413
Design of UWB Transmitter and a New Multiple-Access Method for Home Network Environment in UWB Systems <i>Byung-Lok Cho, Young-Kyu Ahn, Seok-Hoon Hong, Mike Myung-Ok Lee, Hui-Myung Oh, Kwan-Ho Kim, Sarm-Goo Cho</i>	421

Bluetooth Device Manager Connecting a Large Number of Resource-Constraint Devices in a Service-Oriented Bluetooth Network <i>Hendrik Bohn, Andreas Bobek, Frank Golatowski</i>	430
---	-----

Sensor Networks (I)

ESCORT: Energy-Efficient Sensor Network Communal Routing Topology Using Signal Quality Metrics <i>Joel W. Branch, Gilbert G. Chen, Boleslaw K. Szymanski</i>	438
On the Security of Cluster-Based Communication Protocols for Wireless Sensor Networks <i>Adrian Carlos Ferreira, Marcos Aurélio Vilaça, Leonardo B. Oliveira, Eduardo Habib, Hao Chi Wong, Antonio A. Loureiro</i>	449
An Energy-Efficient Coverage Maintenance Scheme for Distributed Sensor Networks <i>Min-Su Kim, Taeyoung Byun, Jung-Pil Ryu, SungHo Hwang, Ki-Jun Han</i>	459

A Cluster-Based Energy Balancing Scheme in Heterogeneous Wireless Sensor Networks <i>Jing Ai, Damla Turgut, Ladislau Böloni</i>	467
--	-----

An Optimal Node Scheduling for Flat Wireless Sensor Networks <i>Fabíola Guerra Nakamura, Frederico Paiva Quintão, Gustavo Campos Menezes, Geraldo Robson Mateus</i>	475
--	-----

Traffic Control (I)

A Congestion Control Scheme Based on the Periodic Buffer Information in Multiple Beam Satellite Networks <i>Seungcheon Kim</i>	483
Real-Time Network Traffic Prediction Based on a Multiscale Decomposition <i>Guoqiang Mao</i>	492
Provisioning VPN over Shared Network Infrastructure <i>Quanshi Xia</i>	500

Potential Risks of Deploying Large Scale Overlay Networks <i>Maoke Chen, Xing Li</i>	508
---	-----

Utility-Based Buffer Management for Networks <i>Cedric Angelo M. Festin, Søren-Aksel Sørensen</i>	518
--	-----

Communication Architectures

Design and Implementation of a Multifunction, Modular and Extensible Proxy Server <i>Simone Tellini, Renzo Davoli</i>	527
---	-----

Pass Down Class-LRU Caching Algorithm for WWW Proxies <i>Rachid El Abdouni Khayari</i>	535
---	-----

Delay Estimation Method for N-tier Architecture <i>Shinji Kikuchi, Ken Yokoyama, Akira Takeyama</i>	544
--	-----

A New Price Mechanism Inducing Peers to Achieve Optimal Welfare <i>Ke Zhu, Pei-dong Zhu, Xi-cheng Lu</i>	554
---	-----

Sensor Networks (II)

A Study of Reconnecting the Partitioned Wireless Sensor Networks <i>Qing Ye, Liang Cheng</i>	561
---	-----

Application-Driven Node Management in Multihop Wireless Sensor Networks <i>Flávia Delicato, Fabio Protti, José Ferreira de Rezende, Luiz Rust, Luci Pirmez</i>	569
--	-----

Power Management Protocols for Regular Wireless Sensor Networks <i>Chih-Pin Liao, Jang-Ping Sheu, Chih-Shun Hsu</i>	577
--	-----

Information Fusion for Data Dissemination in Self-Organizing Wireless Sensor Networks <i>Eduardo Freire Nakamura, Carlos Mauricio S. Figueiredo, Antonio Alfredo F. Loureiro</i>	585
--	-----

An Efficient Protocol for Setting Up a Data Dissemination Path in Wireless Sensor Networks <i>Dongkyun Kim, Gi-Chul Yoo</i>	594
---	-----

Traffic Control (II)

Active Traffic Monitoring for Heterogeneous Environments <i>Hélder Veiga, Teresa Pinho, José Luis Oliveira, Rui Valadas, Paulo Salvador, António Nogueira</i>	603
Primary/Secondary Path Generation Problem: Reformulation, Solutions and Comparisons <i>Quanshi Xia, Helmut Simonis</i>	611
A Discrete-Time HOL Priority Queue with Multiple Traffic Classes <i>Joris Walraevens, Bart Steyaert, Marc Moeneclaey, Herwig Bruneel</i>	620
SCTP over High Speed Wide Area Networks <i>Dhinaharan Nagamalai, Seoung-Hyeon Lee, Won-Goo Lee, Jae-Kwang Lee</i>	628
Improving a Local Search Technique for Network Optimization Using Inexact Forecasts <i>Gilberto Flores Lucio, Martin J. Reed, Ian D. Henning</i>	635
Distributed Addressing and Routing Architecture for Internet Overlays <i>Damien Magoni, Pascal Lorenz</i>	646

Audio and Video Communications

On Achieving Efficiency and Fairness in Video Transportation <i>Yan Bai, Yul Chu, Mabo Robert Ito</i>	654
Quality Adapted Backlight Scaling (QABS) for Video Streaming to Mobile Handheld Devices <i>Liang Cheng, Stefano Bossi, Shivajit Mohapatra, Magda El Zarki, Nalini Venkatasubramanian, Nikil Dutt</i>	662
Video Flow Adaptation for Light Clients on an Active Network <i>David Fuin, Eric Garcia, Hervé Guyennet</i>	672
Frequency Cross-Coupling Using the Session Initiation Protocol <i>Christoph Kurth, Wolfgang Kampichler, Karl Michael Göschka</i>	680

IP, ISDN, and ATM Infrastructures for Synchronous Teleteaching - An Application Oriented Technology Assessment <i>Mustafa Soy, Freimut Bodendorf</i>	690
---	-----

Sensor Networks (III)

Two Energy-Efficient Routing Algorithms for Wireless Sensor Networks <i>Hung Le Xuan, Young-koo Lee, Sungyoung Lee</i>	698
An Energy Constrained Multi-hop Clustering Algorithm for Wireless Sensor Networks <i>Navin Kumar Sharma, Mukesh Kumar</i>	706
Maximizing System Value Among Interested Packets While Satisfying Time and Energy Constraints <i>Shu Lei, Sungyoung Lee, Wu Xiaoling, Yang Jie</i>	714
An Optimal Coverage Scheme for Wireless Sensor Network <i>Hui Tian, Hong Shen</i>	722
Routing Protocols Based on Super Cluster Header in Wireless Sensor Network <i>Jae-hwan Noh, Byeong-jik Lee, Nam-koo Ha, Ki-jun Han</i>	731

Traffic Control (III)

An Automatic and Generic Early-Bird System for Internet Backbone Based on Traffic Anomaly Detection <i>RongJie Gu, PuLiu Yan, Tao Zou, Chengcheng Guo</i>	740
On Network Model Division Method Based on Link-to-Link Traffic Intensity for Accelerating Parallel Distributed Simulation <i>Hiroyuki Ohsaki, Shinpei Yoshida, Makoto Imase</i>	749
Network Traffic Sampling Model on Packet Identification <i>Cheng Guang, Gong Jian, Ding Wei</i>	758
An Admission Control and Deployment Optimization Algorithm for an Implemented Distributed Bandwidth Broker in a Simulation Environment <i>Christos Bouras, Dimitris Primpas</i>	766
Impact of Traffic Load on SCTP Failovers in SIGTRAN <i>Karl-Johan Grinnemo, Anna Brunstrom</i>	774

A Novel Method of Network Burst Traffic Real-Time Prediction Based on Decomposition <i>Xinyu Yang, Yi Shi, Ming Zeng, Rui Zhao</i>	784
---	-----

Differentiated Services

An EJB-Based Platform for Policy-Based QoS Management of DiffServ Enabled Next Generation Networks <i>Si-Ho Cha, WoongChul Choi, Kuk-Hyun Cho</i>	794
Determining Differentiated Services Network Pricing Through Auctions <i>Weilai Yang, Henry L. Owen, Douglas M. Blough</i>	802
A Congestion Control Scheme for Supporting Differentiated Service in Mobile Ad Hoc Networks <i>Jin-Nyun Kim, Kyung-Jun Kim, Ki-Jun Han</i>	810
Models and Analysis of TCC/AQM Schemes over DiffServ Networks <i>Jahwan Koo, Jitae Shin, Seongjin Ahn, Jinwook Chung</i>	818

Switching

Choice of Inner Switching Mechanisms in Terabit Router <i>Huaxi Gu, Zhiliang Qiu, Zengji Liu, Guochang Kang, Kun Wang, Feng Hong</i>	826
Effect of Unbalanced Bursty Traffic on Memory-Sharing Schemes for Internet Switching Architecture <i>Alvaro Munoz, Sanjeev Kumar</i>	834
New Layouts for Multi-stage Interconnection Networks <i>Ibrahim Cahit, Ahmet Adalier</i>	842
Packet Scheduling Across Networks of Switches <i>Kevin Ross, Nicholas Bambos</i>	849
New Round-Robin Scheduling Algorithm for Combined Input-Crosspoint Buffered Switch <i>Igor Radusinovic, Zoran Veljovic</i>	857
Scheduling Algorithms for Input Queued Switches Using Local Search Technique <i>Yanfeng Zheng, Simin He, Shutao Sun, Wen Gao</i>	865

Streaming

Multimedia Streaming in Home Environments <i>Manfred Weihs</i>	873
Joint Buffer Management and Scheduling for Wireless Video Streaming <i>Günther Liebl, Hrvoje Jenkac, Thomas Stockhammer, Christian Buchner</i>	882
Performance Analysis of a Video Streaming Buffer <i>Dieter Fiems, Stijn De Vuyst, Herwig Bruneel</i>	892
Feedback Control Using State Prediction and Channel Modeling Using Lower Layer Information for Scalable Multimedia Streaming Service <i>Kwang O. Ko, Doug Young Suh, Young Soo Kim, Jin Sang Kim</i>	901
Low Delay Multiflow Block Interleavers for Real-Time Audio Streaming <i>Juan J. Ramos-Muñoz, Juan M. Lopez-Soler</i>	909
A Bandwidth Allocation Algorithm Based on Historical QoS Metric for Adaptive Video Streaming <i>Ling Guo, YuanChun Shi, Wei Duan</i>	917
Author Index	927

Table of Contents – Part II

MIMO

Decoding Consideration for Space Time Coded MIMO Channel with Constant Amplitude Multi-code System <i>Jia Hou, Moon Ho Lee, Ju Yong Park, Jeong Su Kim</i>	1
MIMO Frequency Hopping OFDM-CDMA: A Novel Uplink System for B3G Cellular Networks <i>Laurent Cariou, Jean-Francois Helard</i>	8
Transient Capacity Evaluation of UWB Ad Hoc Network with MIMO <i>Cheol Y. Jeon, Yeong M. Jang</i>	18
Chip-by-Chip Iterative Multiuser Detection for VBLAST Coded Multiple-Input Multiple-Output Systems <i>Ke Deng, Qinye Yin, Yiwen Zhang, Ming Luo</i>	26

MPLS

The Performance Analysis of Two-Class Priority Queueing in MPLS-Enabled IP Network <i>Yun-Lung Chen, Chienhua Chen</i>	34
Constraint Based LSP Handover (CBLH) in MPLS Networks <i>Praveen Kumar, Niranjan Dhanakoti, Srividya Gopalan, V. Sridhar</i> ..	42
Optimizing Inter-domain Multicast Through DINloop with GMPLS <i>Huaqun Guo, Lek Heng Ngoh, Wai Choong Wong</i>	50
A Fast Path Recovery Mechanism for MPLS Networks <i>Jenhui Chen, Chung-Ching Chiou, Shih-Lin Wu</i>	58
A Study of Billing Schemes in an Experimental Next Generation Network <i>P.S. Barreto, G. Amvame-Nze, C.V. Silva, J.S.S. Oliveira, H.P. de Carvalho, H. Abdalla, A.M. Soares, R. Puttini</i>	66
Overlay Logging: An IP Traceback Scheme in MPLS Network <i>Wen Luo, Jianping Wu, Ke Xu</i>	75

Ad Hoc Networks (I)

Monitoring End-to-End Connectivity in Mobile Ad-Hoc Networks <i>Remi Badonnel, Radu State, Olivier Festor</i>	83
Multi-path Routing Using Local Virtual Infrastructure for Large-Scale Mobile Ad-Hoc Networks: Stochastic Optimization Approach <i>Wonjong Noh, Sunshin An</i>	91
Candidate Discovery for Connected Mobile Ad Hoc Networks <i>Sebastian Speicher, Clemens Cap</i>	99
A Fault-Tolerant Permutation Routing Algorithm in Mobile Ad-Hoc Networks <i>Djibo Karimou, Jean Frédéric Myoupo</i>	107
Policy-Based Dynamic Reconfiguration of Mobile Ad Hoc Networks <i>Marcos A. de Siqueira, Fabricio L. Figueiredo, Flavia M. F. Rocha, Jose A. Martins, Marcel C. de Castro</i>	116

TCP (I)

V-TCP: A Novel TCP Enhancement Technique <i>Dhinaharan Nagamalai, Beatrice Cynthia Dhinakaran, Byoung-Sun Choi, Jae-Kwang Lee</i>	125
Optimizing TCP Retransmission Timeout <i>Alex Kesselman, Yishay Mansour</i>	133
Stable Accurate Rapid Bandwidth Estimate for Improving TCP over Wireless Networks <i>Le Tuan Anh, Choong Seon Hong</i>	141
Performance Analysis of TCP Variants over Time-Space-Labeled Optical Burst Switched Networks <i>Ziyu Shao, Ting Tong, Jia Jia Liao, Zhengbin Li, Ziyu Wang, Anshi Xu</i>	149

Routing (I)

IPv4 Auto-Configuration of Multi-router Zeroconf Networks with Unique Subnets <i>Cuneyt Akinlar, A. Udaya Shankar</i>	156
---	-----

K-Shortest Paths Q-Routing: A New QoS Routing Algorithm in Telecommunication Networks <i>S. Hoceini, A. Mellouk, Y. Amirat</i>	164
Applicability of Resilient Routing Layers for k -Fault Network Recovery <i>Tarik Ćišić, Audun Fosselie Hansen, Stein Gjessing, Olav Lysne</i>	173
Network-Tree Routing Model for Large Scale Networks: Theories and Algorithms <i>Guozhen Tan, Dong Li, Xiaohui Ping, Ningning Han, Yi Liu</i>	184
Failover for Mobile Routers: A Vision of Resilient Ambience <i>Eranga Perera, Aruna Seneviratne, Roksana Boreli, Michael Eyrich, Michael Wolf, Tim Leinmüller</i>	192
Quality of Service Routing Network and Performance Evaluation <i>Lin Shen, Yong Cui, Ming-wei Xu, Ke Xu</i>	202
Ad Hoc Networks (II)	
A Partition Prediction Algorithm for Group Mobility in Ad-Hoc Networks <i>Nam-koo Ha, Byeong-jik Lee, Kyung-Jun Kim, Ki-Jun Han</i>	210
Routing Cost Versus Network Stability in MANET <i>Md. Nurul Huda, Shigeki Yamada, Eiji Kamioka</i>	218
Multipath Energy Efficient Routing in Mobile Ad Hoc Network <i>Shouyi Yin, Xiaokang Lin</i>	226
Performance of Service Location Protocols in MANET Based on Reactive Routing Protocols <i>Hyun-Gon Seo, Ki-Hyung Kim, Won-Do Jung, Jun-Sung Park, Seung-Hwan Jo, Chang-Min Shin, Seung-Min Park, Heung-Nam Kim</i>	234
A New Scheme for Key Management in Ad Hoc Networks <i>Guangsong Li, Wenbao Han</i>	242
TCP (II)	
Robust TCP (TCP-R) with Explicit Packet Drop Notification (EPDN) for Satellite Networks <i>Arjuna Sathiaseelan, Tomasz Radzik</i>	250

Adapting TCP Segment Size in Cellular Networks <i>Jin-Hee Choi, Jin-Ghoo Choi, Chuck Yoo</i>	258
---	-----

AcTMs (Active ATM Switches) with TAP (Trusted and Active PDU Transfers) in a Multiagent Architecture to Better the Chaotic Nature of TCP Congestion Control <i>José Luis González-Sánchez, Jordi Domingo-Pascual, João Chambel Vieira</i>	266
--	-----

AIMD Penalty Shaper to Enforce Assured Service for TCP Flows <i>Emmanuel Lochin, Pascal Anelli, Serge Fdida</i>	275
--	-----

Routing (II)

Name-Level Approach for Egress Network Access Control <i>Shinichi Suzuki, Yasushi Shinjo, Toshio Hirotsu, Kazuhiko Kato, Kozo Itano</i>	284
--	-----

Efficient Prioritized Service Recovery Using Content-Aware Routing Mechanism in Web Server Cluster <i>Euisuk Kang, SookHeon Lee, Myong-Soon Park</i>	297
---	-----

Queue Management Scheme Stabilizing Buffer Utilization in the IP Router <i>Yusuke Shinohara, Norio Yamagaki, Hideki Tode, Koso Murakami</i>	307
--	-----

Two Mathematically Equivalent Models of the Unique-Path OSPF Weight Setting Problem <i>Changyong Zhang, Robert Rodošek</i>	318
---	-----

Fault Free Shortest Path Routing on the de Bruijn Networks <i>Ngoc Chi Nguyen, Nhat Minh Dinh Vo, Sungyoung Lee</i>	327
--	-----

Traffic Control in IP Networks with Multiple Topology Routing <i>Ljiljana Adamovic, Karol Kowalik, Martin Collier</i>	335
--	-----

Ad Hoc Networks (III)

Dynamic Path Control Scheme in Mobile Ad Hoc Networks Using On-demand Routing Protocol <i>Jihoon Lee, Wonjong Noh</i>	343
--	-----

On the Capacity of Wireless Ad-Hoc Network Basing on Graph Theory <i>Qin-yun Dai, Xiu-lin Hu, Hong-yi Yu, Jun Zhao</i>	353
---	-----

Mobile Gateways for Mobile Ad-Hoc Networks with Network Mobility Support

- Ryuji Wakikawa, Hiroki Matsutani, Rajeev Koodli, Anders Nilsson, Jun Murai* 361

Energy Consumption in Multicast Protocols for Static Ad Hoc Networks

- Sangman Moh* 369

Weighted Flow Contention Graph and Its Applications in Wireless Ad Hoc Networks

- Guo-kai Zeng, Yin-long Xu, Ya-feng Wu, Xi Wang* 377

Signal Processing

Automatic Adjustment of Time-Variant Thresholds When Filtering Signals in MR Tomography

- Eva Gescheidtova, Radek Kubasek, Zdenek Smekal, Karel Bartusek* 384

Analytical Design of Maximally Flat Notch FIR Filters for Communication Purposes

- Pavel Zahradník, Miroslav Vlček, Boris Šimák* 392

Iterative Decoding and Carrier Frequency Offset Estimation for a Space-Time Block Code System

- Ming Luo, Qinye Yin, Le Ding, Yiwen Zhang* 401

Signal Processing for High-Speed Data Communication Using Pure Current Mode Filters

- Ivo Lattenberg, Kamil Vrba, David Kubánek* 410

Current-Mode VHF High-Quality Analog Filters Suitable for Spectral Network Analysis

- Kamil Vrba, Radek Sponar, David Kubánek* 417

Control of Digital Audio Signal Processing over Communication Networks

- Jiri Schimmel, Petr Sysel* 425

Routing (III)

Fully-Distributed and Highly-Parallelized Implementation Model of BGP4 Based on Clustered Routers

- Xiao-Zhe Zhang, Pei-dong Zhu, Xi-Cheng Lu* 433

XXVIII Table of Contents – Part II

A Routing Protocol for Wireless Ad Hoc Sensor Networks: Multi-Path Source Routing Protocol (MPSR) <i>Mounir Achir, Laurent Ouvry</i>	442
Generalized Secure Routerless Routing <i>Vince Grolmusz, Zoltán Király</i>	454
A Verified Distance Vector Routing Protocol for Protection of Internet Infrastructure <i>Liwen He</i>	463

Replay Attacks in Mobile Wireless Ad Hoc Networks: Protecting the OLSR Protocol <i>Eli Winjum, Anne Marie Hegland, Øivind Kure, Pål Spilling</i>	471
S-Chord: Hybrid Topology Makes Chord Efficient <i>Hui-shan Liu, Ke Xu, Ming-wei Xu, Yong Cui</i>	480

Mobility

Hierarchical Multi-hop Handoff Architecture for Wireless Network Mobility <i>Yunkuk Kim, Sangwook Kang, Donghyun Chae, Sunshin An</i>	488
Mobility Adaptation Layer Framework for Heterogeneous Wireless Networks Based on Mobile IPv6 <i>Norbert Jordan, Alexander Poropatich, Joachim Fabini</i>	496
MiSC: A New Availability Remote Storage System for Mobile Appliance <i>Joo-Ho Kim, Bo-Seok Moon, Myong-Soon Park</i>	504
A Logical Network Topology Design for Mobile Agent Systems <i>Kazuhiko Kinoshita, Nariyoshi Yamai, Koso Murakami</i>	521
Reduced-State SARSA Featuring Extended Channel Reassignment for Dynamic Channel Allocation in Mobile Cellular Networks <i>Nimrod Lilith, Kutluaylı Doğançay</i>	531
Call Admission Control for Next Generation Cellular Networks Using on Demand Round Robin Bandwidth Sharing <i>Kyungkoo Jun, Seokhoon Kang</i>	543

Performance (I)

Performance Evaluation and Improvement of Non-stable Resilient Packet Ring Behavior <i>Fredrik Davik, Amund Kvalbein, Stein Gjessing</i>	551
Load Distribution Performance of the Reliable Server Pooling Framework <i>Thomas Dreibholz, Erwin P. Rathgeb, Michael Tüxen</i>	564
Performance of a Hub-Based Network-Centric Application over the Iridium Satellite Network <i>Margaret M. McMahon, Eric C. Firkin</i>	575
Performance Evaluation of Multichannel Slotted-ALOHA Networks with Buffering <i>Sebastià Galmés, Ramon Puigjaner</i>	585
Towards a Scalable and Flexible Architecture for Virtual Private Networks <i>Shashank Khanvilkar, Ashfaq Khokhar</i>	597

Peer-to-Peer (I)

A Simple, Efficient and Flexible Approach to Measure Multi-protocol Peer-to-Peer Traffic <i>Holger Bleul, Erwin P. Rathgeb</i>	606
Secure Identity and Location Decoupling Using Peer-to-Peer Networks <i>Stephen Herborn, Tim Hsin-Ting Hu, Roksana Boreli, Aruna Seneviratne</i>	617
Live Streaming on a Peer-to-Peer Overlay: Implementation and Validation <i>Joaquín Caraballo Moreno, Olivier Fourmaux</i>	625
Distributed Object Location with Queue Management Provision in Peer-to-Peer Content Management Systems <i>Vassilios M. Stathopoulos, Nikolaos D. Dragios, Nikolas M. Mitrou</i>	634
An Approach to Fair Resource Sharing in Peer-to-Peer Systems <i>Yongquan Ma, Dongsheng Wang</i>	643

Discovery and Routing in the HEN Heterogeneous Peer-to-Peer Network <i>Tim Schattkowsky</i>	653
--	-----

Security (I)

Scalable Group Key Management with Partially Trusted Controllers <i>Himanshu Khurana, Rafael Bonilla, Adam Slagell, Raja Afandi, Hyung-Seok Hahn, Jim Basney</i>	662
H.323 Client-Independent Security Approach <i>Lubomir Cvrk, Vaclav Zeman, Dan Komosny</i>	673
Architecture of Distributed Network Processors: Specifics of Application in Information Security Systems <i>V.S. Zaborovskii, Y.A. Shemanin, A. Rudskoy</i>	681
Active Host Information-Based Abnormal IP Address Detection <i>Gaeil Ahn, Kiyoung Kim</i>	689
Securing Layer 2 in Local Area Networks <i>Hayriye Altunbasak, Sven Krasser, Henry L. Owen, Jochen Grimminger, Hans-Peter Huth, Joachim Sokol</i>	699
A Practical and Secure Communication Protocol in the Bounded Storage Model <i>E. Savaş, Berk Sunar</i>	707

Performance (II)

Measuring Quality of Service Parameters over Heterogeneous IP Networks <i>A. Pescapé, L. Vollero, G. Iannello, G. Ventre</i>	718
Performance Improvement of Hardware-Based Packet Classification Algorithm <i>Yaw-Chung Chen, Pi-Chung Wang, Chun-Liang Lee, Chia-Tai Chan</i>	728
Analyzing Performance Data Exchange in Content Delivery Networks <i>Davide Rossi, Elisa Turrini</i>	737
Passive Calibration of Active Measuring Latency <i>Jianping Yin, Zhiping Cai, Wentao Zhao, Xianghui Liu</i>	746

Peer-to-Peer (II)

Application-Level Multicast Using DINPeer in P2P Networks <i>Huaqun Guo, Lek Heng Ngoh, Wai Choong Wong</i>	754
Paradis-Net: A Network Interface for Parallel and Distributed Applications <i>Guido Malpohl, Florin Isailă</i>	762
Reliable Mobile Ad Hoc P2P Data Sharing <i>Mee Young Sung, Jong Hyuk Lee, Jong-Seung Park, Seung Sik Choi, Sungtek Kahng</i>	772
The Hybrid Chord Protocol: A Peer-to-Peer Lookup Service for Context-Aware Mobile Applications <i>Stefan Zöls, Rüdiger Schollmeier, Wolfgang Kellerer, Anthony Tarlano</i>	781
LQPD: An Efficient Long Query Path Driven Replication Strategy in Unstructured P2P Network <i>Xi-Cheng Lu, Qianbing Zheng, Pei-Dong Zhu, Wei Peng</i>	793

Content Distribution in Heterogenous Video-on-Demand P2P Networks with ARIMA Forecasts <i>Chris Loeser, Gunnar Schomaker, André Brinkmann, Mario Vodisek, Michael Heidebuer</i>	800
--	-----

Security (II)

Critical Analysis and New Perspective for Securing Voice Networks <i>Carole Bassil, Ahmed Serhrouchni, Nicolas Rouhana</i>	810
Architecture of a Server-Aided Signature Service (SASS) for Mobile Networks <i>Liang Cai, Xiaohu Yang, Chun Chen</i>	819
Password Authenticated Key Exchange for Resource-Constrained Wireless Communications <i>Duncan S. Wong, Agnes H. Chan, Feng Zhu</i>	827
An Efficient Anonymous Scheme for Mutual Anonymous Communications <i>Ray-I Chang, Chih-Chun Chu</i>	835

GDS Resource Record: Generalization of the Delegation Signer Model <i>Gilles Guette, Bernard Cousin, David Fort</i>	844
--	-----

Secure Initialization Vector Transmission on IP Security <i>Yoon-Jung Rhee</i>	852
---	-----

Multicast (I)

Multicast Receiver Mobility over Mobile IP Networks Based on Forwarding Router Discovery <i>Takeshi Takahashi, Koichi Asatani, Hideyoshi Tominaga</i>	859
---	-----

Secure Multicast in Micro-Mobility Environments <i>Ho-Seok Kang, Young-Chul Shim</i>	868
---	-----

Scalability and Robustness of Virtual Multicast for Synchronous Multimedia Distribution <i>Petr Holub, Eva Hladká, Ludek Matyska</i>	876
--	-----

Mobile Multicast Routing Protocol Using Prediction of Dwelling Time of a Mobile Host <i>Jae Keun Park, Sung Je Hong, Jong Kim</i>	884
---	-----

A Group Management Protocol for Mobile Multicast <i>Hidetoshi Ueno, Hideharu Suzuki, Norihiro Ishikawa</i>	892
---	-----

CDMA

Propagation Path Analysis for Location Selection of Base-Station in the Microcell Mobile Communications <i>Sun-Kuk Noh, Dong-You Choi, Chang-kyun Park</i>	904
--	-----

Efficient Radio Resource Management in Integrated WLAN/CDMA Mobile Networks <i>Fei Yu, Vikram Krishnamurthy</i>	912
---	-----

A Study on the Cell Sectorization Using the WBTC and NBTC in CDMA Mobile Communication Systems <i>Dong-You Choi, Sun-Kuk Noh</i>	920
--	-----

DOA-Matrix Decoder for STBC-MC-CDMA Systems <i>Yanxing Zeng, Qinye Yin, Le Ding, Jianguo Zhang</i>	928
---	-----

Erlang Capacity of Voice/Data CDMA Systems with Service Requirements of Blocking Probability and Delay Constraint <i>Insoo Koo, Jeongrok Yang, Kiseon Kim</i>	936
--	-----

Security and Network Anomaly Detection

A Simplified Leakage-Resilient Authenticated Key Exchange Protocol with Optimal Memory Size <i>SeongHan Shin, Kazukuni Kobara, Hideki Imai</i>	944
The Fuzzy Engine for Random Number Generator in Crypto Module <i>Jinkeun Hong</i>	953
A Packet Marking Scheme for IP Traceback <i>Haipeng Qu, Purui Su, Dongdai Lin, Dengguo Feng</i>	964
Securing Admission Control in Ubiquitous Computing Environment <i>Jong-Phil Yang, Kyung Hyune Rhee</i>	972
Detecting the Deviations of Privileged Process Execution <i>Purui Su, Dequan Li, Haipeng Qu, Dengguo Feng</i>	980
Dynamic Combination of Multiple Host-Based Anomaly Detectors with Broader Detection Coverage and Fewer False Alerts <i>Zonghua Zhang, Hong Shen</i>	989
Impact of Distributed Denial of Service (DDoS) Attack Due to ARP Storm <i>Sanjeev Kumar</i>	997

Multicast (II)

Design of Network Management System Employing Secure Multicast SNMP <i>Deuk-Whee Kwak, JongWon Kim</i>	1003
Multi-rate Congestion Control over IP Multicast <i>Yuliang Li, Alistair Munro, Dritan Kaleshi</i>	1012
A TCP-Friendly Multicast Protocol Suite for Satellite Networks <i>Giacomo Morabito, Sergio Palazzo, Antonio Pantò</i>	1023
An Enhanced Multicast Routing Protocol for Mobile Hosts in IP Networks <i>Seung Jei Yang, Sung Han Park</i>	1031

Analysis of Handover Frequencies for Predictive, Reactive and Proxy Schemes and Their Implications on IPv6 and Multicast Mobility

Thomas C. Schmidt, Matthias Wählisch 1039

802.11 Networks

Design Architectures for 3G and IEEE 802.11 WLAN Integration

F. Siddiqui, S. Zeadally, E. Yaprak 1047

Eliminating the Performance Anomaly of 802.11b

See-hwan Yoo, Jin-Hee Choi, Jae-Hyun Hwang, Chuck Yoo 1055

Energy Efficiency Analysis of IEEE 802.11 DCF with Variable Packet Length

Bo Gao, Yuhang Yang, Huiye Ma 1063

Scheduling MPEG-4 Video Streams Through the 802.11e Enhanced Distributed Channel Access

Michael Ditze, Kay Klobedanz, Guido Kämper, Peter Altenbernd 1071

IEEE 802.11b WLAN Performance with Variable Transmission Rates: In View of High Level Throughput

Namgi Kim, Sunwoong Choi, Hyunsoo Yoon 1080

Emergency, Disaster, Resiliency

Some Principles Incorporating Topology Dependencies for Designing Survivable WDM Optical Networks

Sungwoo Tak 1088

Resilient Routing Layers for Network Disaster Planning

*Audun Fosselie Hansen, Amund Kvalbein, Tarik Cičić,
Stein Gjessing* 1097

Design of a Service Discovery Architecture for Mobility-Supported Wired and Wireless Networks

Hyun-Gon Seo, Ki-Hyung Kim 1106

Research on Fuzzy Group Decision Making in Security Risk Assessment

Fang Liu, Kui Dai, Zhiying Wang, Jun Ma 1114

A Resilient Multipath Routing Protocol for Wireless Sensor Networks

*Ki-Hyung Kim, Won-Do Jung, Jun-Sung Park,
Hyun-Gon Seo, Seung-Hwan Jo, Chang-Min Shin,
Seung-Min Park, Heung-Nam Kim* 1122

A Multilaterally Secure, Privacy-Friendly Location-Based Service for Disaster Management and Civil Protection <i>Lothar Fritsch, Tobias Scherner</i>	1130
Survivability-Guaranteed Network Resiliency Methods in DWDM Networks <i>Jin-Ho Hwang, Won Kim, Jun-Won Lee, Sung-Un Kim</i>	1138
Author Index	1147