General Conference

Chair: **Boon Sain Yeo** I Wavex Technologies Pte Ltd, Singapore
Vice Chairs: **Stefano Bregni** Politecnico di Milano, Italy and
Yuming Jiang Norwegian University, Norway

GC01 Sensor Networks I

Tuesday, 29 November 2005 • 10:30AM–12:15PM
Room: Majestic G/Level Two/Renaissance Grand Hotel
Session Chair: **Caimu Tang**, University of Southern California, USA

GC01.1 Terrain-Constrained Mobile Sensor Networks
Shu Zhou, The University of New Mexico, USA, Min-You Wu, Shanghai Jiao Tong University, China, Wei Wei, The University of New Mexico, USA
GC01.2 Multi-Channel Polling in Multi-Hop Clusters of Hybrid Sensor Networks
Ming Ma, State University of New York, USA, Zhenghao Zhang and Yuanyuan Yang, State University of New York, USA
GC01.3 Wireless Sensor Networks with Local Fusion
Hiroshi Yamamoto, Tokyo University of Science, Japan, Tomoaki Ohtsuki, Keio University, Japan
GC01.4 Wavelet Based Source Broadcasting for In-network Processing in Sensor Networks with Unknown Side-Information
Caimu Tang and Cauligi S. Raghavendra, University of Southern California, Los Angeles, USA
GC01.5 Relay Node Deployment Strategies in Heterogeneous Wireless Sensor Networks: Single-Hop Communication Case
Kenan Xu, Hossam Hassanein, Glen Takahara and Quanhong Wang, Queen's University, Canada

GC02 Cellular Systems

Tuesday, 29 November 2005 • 10:30AM–12:15PM
Room: Majestic H/Level Two/Renaissance Grand Hotel
Session Chair: **Nirmala Shenoy**, Rochester Institute of Technology, USA

GC02.1 A Mobility Simulation Platform for UMTS
Wee Cheong Lim, National University of Singapore, Singapore
Yuen Sam Kwok, Boon Sain Yeo and Yong Huat Chew Institute of Infocomm Research, Singapore
GC02.2 Take-Back Schemes in Hierarchical Cellular System
Yan Zhang, National Institute of Information and Communications Technology, Singapore, Boon-Hee Soong, Nanyang Technological University, Singapore
GC02.3 Scheduling for Differentiated Traffic Types in HSDPA Cellular Systems
Flavio De Angelis, Ibrahim Habib, City College of the City University of New York, USA, Giovanni Giambene and Samuele Giannetti, University of Siena, Italy
GC02.4 Cluster Structures in Topology of Large-Scale Social Networks Revealed by Traffic Data
Masaki Aida, Tokyo Metropolitan University, Japan
Keisuke Ishibashi and Chisa Takano, NTT Advanced Technology Corporation, Japan
Hiroyoshi Miwa, Kwansei Gakuin University, Japan
Kaori Muranaka, NTT Advanced Technology Corporation, Japan
Akira Miura, NTT DoCoMo Inc., Japan
GC02.5 Efficient Video Data Recovery for 3G-324M Video Telephony over WCDMA Networks
Yen-Chi Lee, Ming-Chang Tsai and Khaled El-Maleh, Qualcomm Incorporated, USA

GC03 General Conference Session

Tuesday, 29 November 2005 • 2:00–5:00PM
Room: Majestic C/Level Two/Renaissance Grand Hotel
Session Chair: N/A

GC03.01 Prioritizing Write Acknowledgment inside Network Fileservers
Takashi Okumura, Ahmed Amer and Daniel Mossé, University of Pittsburgh, USA
GC03.02 Optimal Precompensation for Partial Erasure and Nonlinear Transition Shift in Magnetic Recording using Dynamic Programming
Fabian Lim, National University of Singapore, Singapore
Aleksandar Kavčič, Harvard University, USA
GC03.03 Reliability Assessment of p-Cycles
Piotr Chołda and Andrzej Jajszczyk, AGH University of Science and Technology, Poland
GC03.04 Margin Maximization in Multiuser Interference Digital Subscriber Line Channels
Saswat Panigrahi, Yang Xu and Tho Le-Ngoc, McGill University, Canada
GC03.05 Parallel Packet Classification via Policy Table Pre-Partitioning
Kai Zheng, Tsinghua University, PR China, Zhiyong Liang and Yi Ge, IBM China Research Lab, PR China
GC03.06 Towards a Parlay-Grid Communication Model for NGN Service Convergence
Zhen Liu, Chinese Academy of Sciences, PR China, Jing Yang, UTStarcom Inc., PR China, Guo-Qing Zhang, Chinese Academy of Sciences, PR China
GC03.07 An Approach to Reduce the Erlang B Probability of the M/M/2/2 System
Xian Liu, University of Arkansas at Little Rock, USA
GC03.08 Optimizing Memory Bandwidth of a Multi-Channel Packet Buffer
Sarang Dharmapurikar, Sailesh Kumar,John Lockwood and Patrick Crowley, Washington University in St. Louis, USA
GC03.09 Inter-ring Traffic Management for Global Fairness in Bridged Resilient Packet Rings
Pisai Setthawong, and Surat Tanterdtid, Assumption University, Thailand
GC03.10 Quality Assessment Method for Multiparty Audiovisual Communication Services
Takaaki Kurita and Hideaki Yoshino, NTT Corporation, Japan
GC03.11 On-Line Scheduling Sequential Objects for Dynamic Information Dissemination
Chih-Lin Hu, BenQ Corporation, ROC, Ming-Syan Chen, National Taiwan University, ROC
GC03.12 Survivable Low-Cost Low-Delay Multicast Trees
Venkata S. Irava and Carl Hauser, Washington State University, USA
GC03.13 Tuning Scavenger Service Bottom Bandwidth in a Logarithmical Way
Xiaofeng Chen, Lingdi Ping, Zheng Wan and Yuzen Cui, Zhejiang University, PR China
GC03.14 Receive Buffer Blocking in Concurrent Multipath Transfer
Janardhan R. Iyengar and Paul D. Amer, University of Delaware, USA
Randall Stewart, Cisco Systems, USA
GC03.15 Mediating Interaction Conflicts between Network-provided and Endpoint-provided Telephony Services
Andre Beck and Markus Hofmann, Bell Labs Research, Lucent Technologies, USA
GC03.16 High-SNR Mutual Information of Dense Constellations
Michele Franceschini, Gianluigi Ferrari, and Riccardo Raheli, University of Parma, Italy
GC03.17 Optimal Itinerary Planning for Mobile Agents-based Management
Damianos Gavalas, University of the Aegean, Greece
GC03.18 Distributed Packet Processing in P2P Networks
Jingnan Yao and Laxmi Bhuyan, University of California, Riverside, USA

GC03.19 Optical PPM Detection with Sample Decision Photon Counting
Kevin J. Quirk and Laurence B. Milstein, University of California at San Diego, USA
GC03.20 Hardware-based Precise Time Synchronization on Gb/s Ethernet
Yoshiaki Yamada, Satoru Ohta and Hitoshi Uematsu, NTT Corporation, Japan

GC04 Sensor Networks II

Tuesday, 29 November 2005 • 2:00–3:45PM
Room: Majestic G/Level Two/Renaissance Grand Hotel
Session Chair: **Yang Xiao**, University of Memphis, USA

GC04.1 An Energy-Efficient MAC Protocol for Wireless Sensor Networks
Qingchun Ren and Qilian Liang, University of Texas at Arlington, USA
GC04.2 An Energy-Aware Virtual Backbone Tree for Wireless Sensor Networks
Bosheng Zhou, Alan Marshall and Tsung-Han Lee, Queen's University of Belfast, UK
GC04.3 Energy Efficient Multiple Target Tracking in Sensor Networks
Wai-Leong Yeow, Chen-Khong Tham and Wai-Choong Wong, Institute for Infocomm Research, Singapore
GC04.4 Sensor Placement and Lifetime of Wireless Sensor Networks: Theory and Performance Analysis
Ekta Jain and Qilian Liang, University of Texas at Arlington, USA
GC04.5 Performance Analysis of Wireless Video Sensors in Video Surveillance
Zhihai He and Dapeng Wu, University of Florida, USA

GC05 MIMO and OFDM

Tuesday, 29 November 2005 • 2:00–3:45PM
Room: Majestic H/Level Two/Renaissance Grand Hotel
Session Chair: **Woon Hau Chin**, Institute for Infocomm Research, Singapore

GC05.1 An Algorithm for Exploiting Channel Time Selectivity in Pilot-aided MIMO Systems
W. H. Chin, Institute for Infocomm Research, Singapore
D. B. Ward and A. G. Constantinides, Imperial College London, UK
GC05.2 Reduced QRD-M Detector in MIMO-OFDM Systems with Partial and Embedded Sorting
Yuanbin Guo, Nokia Research Center, USA
Dennis McCain, Nokia Research Center, USA
GC05.3 On the Properties of a Robust Timing Error Detector for Alamouti Space–Time Coding in Rayleigh Fading MIMO Channels with Randomly Distributed Timing Drift
Rayleigh Fading MIMO Channels with Randomly Distributed Timing Drift
Pawel A. Dmochowski and Peter J. McLane, Queen's University, Canada
GC05.4 Constrained Detection for Multiple-Input Multiple-Output Channels
Tao Cui, Chintha Tellambura and Yue Wu, University of Alberta, Canada
GC05.5 A Technique for Sidelobe Suppression in OFDM Systems
Ivan Cosovic, Sinja Brandes and Michael Schnell, German Aerospace Center (DLR), Germany

GC06 Wireless Communications

Tuesday, 29 November 2005 • 4:00–5:45PM
Room: Majestic G/Level Two/Renaissance Grand Hotel
Session Chair: **Giovanni Giambene**, University of Siena, Italy

GC06.1 Multiscale Energy Products for TOA Estimation in IR-UWB Systems
I. Guvenc and Z. Sahinoglu, Mitsubishi Electric Research Labs, USA
GC06.2 Performance Analysis of Differential Receivers with Quaternary Modulation for UWB Transmissions
Marco Di Renzo, Fabio Graziosi, Alessandro Rea and Fortunato Santucci, Università di L'Aquila, Italy
GC06.3 Locally Optimum Detection Performance Analysis for Narrowband Interference Rejection in Spread Spectrum Communications
Arnab Roy and John F. Doherty, The Pennsylvania State University, USA
GC06.4 Adaptive Frequency Correction Method for Enhanced Sensitivity CDMA Acquisition
Andreas Schmid and Andr Neubauer, Infineon Technologies AG, Germany
Christoph Günther, German Aerospace Center (DLR), Germany
GC06.5 Phase Noise Analysis for ICI Self-Cancellation Coded OFDM with Short-Channel Synchronization Devices
Sameer R. Herlekar, Hsiao-Chun Wu, Chi Zhang and Ashok Srivastava, Louisiana State University, USA

GC07 Applications - Video and Speech

Tuesday, 29 November 2005 • 4:00–5:45PM
Room: Majestic H/Level Two/Renaissance Grand Hotel
Session Chair: **Giacomo Verticale**, Politecnico di Milano, Italy

GC07.1 Layer 2.5 SoftMAC: End-System -based Media Streaming Support on Home Networks
Haitao Wu, Yunxin Liu, Microsoft Research Asia, China
Jie Chen, Beijing University of Posts & Telecommunications, China
Qian Zhang, Microsoft Research Asia, China
GC07.2 A Model for Time-Varying Quality of Speech Services
Zhan Chen and Hidenori Nakazato, Waseda University, Japan
GC07.3 Techniques for Efficient Streaming of Layered Video in Heterogeneous Client Environments
Aravindan Raghuveer, University of Minnesota, USA, NamOh Kang, Chung-Ang University, South Korea, David H. C. Du, University of Minnesota, USA
GC07.4 Cooperative Proxy Framework for Layered Video Streaming
Chun-Lung Lin, Hsin-Hua Lee, Chen-Lung Chan and Jia-Shung Wang, National Tsing Hua University, Taiwan
GC07.5 Traffic Models for MPEG-4 Spatial Scalable Video
Wei Zhou, Dilip Sarkar and S. Ramakrishnan, University of Miami, USA

GC08 TCP

Wednesday, 30 November 2005 • 10:30AM–12:15PM
Room: Majestic G/Level Two/Renaissance Grand Hotel
Session Chair: **Ruhai Wang**, Lamar University, USA

GC08.1 Throughput Modeling of TCP with Slow Start and Fast Recovery
Kaiyu Zhou, Kwan L. Yeung and Victor O. K. Li, The University of Hong Kong, China
GC08.2 Improving Efficiency–Friendliness Tradeoffs of TCP Congestion Control Algorithm
Hideyuki Shimonishi and Tutomu Murase, NEC Corporation, Japan
GC08.3 Improved Data Distribution for Multipath TCP Communication
Yohei Hasegawa, Ichiro Yamaguchi, Takayuki Hama, Hideyuki Shimonishi and Tutomu Murase, NEC Corporation, Japan
GC08.4 Statistical Estimation of TCP Packet Loss Rate from Sampled ACK Packets
Yasuhiro Yamasaki, Hideyuki Shimonishi and Tutomu Murase, NEC Corporation, Japan
GC08.5 An Experimental Analysis of Rate-based and Window-based Transmission Mechanisms over Simulated Space-Internet Links
Ru H. Wang, Lamar University, USA, Stephen Horan, New Mexico State University, USA, Bhanu Gutha, Bo Sun and Pranay K. R. Reguri, Lamar University, USA

GC09 Optical Networks

Wednesday, 30 November 2005 • 10:30AM–12:15PM
Room: Majestic H/Level Two/Renaissance Grand Hotel
Session Chair: **Tarek S. El-Bawab**, Jackson State University, USA

GC09.1 Enhanced Multi-Layer Protection in Multi-Service GMPLS Networks
Anna Urra, Eusebi Calle and Jose L. Marzo, University of Girona, Spain
GC09.2 Computing Loss Probability for Dynamic Traffic Grooming in Optical Networks with Wavelength Conversion
Chunsheng Xin, Norfolk State University, USA, Jikai Li, The College of New Jersey, USA, Xiaojun Cao, Rochester Institute of Technology, USA Bin Wang, Wright State University, USA
GC09.3 Closed-Form Expression for the Collision Probability in the IEEE EPON Registration Scheme
Swapnil Bhatia and Radim Barto_, University of New Hampshire, USA
GC09.4 Link Utilization and Comparison of EPON and GPON Access Network Cost
Sami Lallukka and Pertti Raatikainen, VTT Information Technology, Finland
GC09.5 Splitter Placement in All-Optical WDM Networks
Hwa-Chun Lin and Sheng-Wei Wang, National Tsing Hua University, Taiwan

GC10 Wireless Systems and Networks

Wednesday, 30 November 2005 • 2:00–3:45PM
Room: Majestic G/Level Two/Renaissance Grand Hotel
Session Chair: **Nirmala Shenoy**, Rochester Institute of Technology, USA

GC10.1 An Experimental Study on Multi-Channel Multi-Radio Multi-Hop Wireless Networks
Yunxin Liu, Yongqiang Xiong, Yang Yang, Pengzhi Xu and Qian Zhang, Microsoft Research Asia, PR China
GC10.2 Performance of Space Communication Protocol Standards (SCPS) over ACTS Satellite Links
Ru H. Wang Lamar University, USA, Stephen Horan New Mexico State University, USA
GC10.3 Multimedia Content Delivery Using Adaptive Filtering in Time-Varying W-CDMA Networks
Flavio De Angelis and Ibrahim Habib, City College of the City University of New York, USA
GC10.4 Beam Pointing Error of Wideband Phased Array Antennas with Reduced True-Time-Delay Devices
Masanobu Yajima Japan Aerospace Exploration Agency, Japan
Takumi Hasegawa, Space Engineering Development Co., Ltd., Japan
GC10.5 Asymptotic Performance of the Pth Power-Law Phase Estimator
Kenneth V. Cartwright, College of The Bahamas, Bahamas
Edit J. Kaminsky, University of New Orleans, USA

GC11 IP Networks

Wednesday, 30 November 2005 • 2:00–3:45PM
Room: Majestic H/Level Two/Renaissance Grand Hotel
Session Chair: **Erik Perrins**, University of Kansas, USA

GC11.1 IP-based HDTV Broadcasting System Architecture with Non-Stop Service Availability
Teruyuki Hasegawa, KDDI R&D Laboratories Inc., Japan
Kazuhiro Kamimura and Haruo Hoshino, Japan Broadcasting Corporation, Japan, Shigehiro Ano and Toru Hasegawa, KDDI R&D Laboratories Inc., Japan
GC11.2 A Simple Analytical Model to Estimate VoIP Signaling Delays in an HFC Access Network
Kiran M. Rege and Dong Sun, Bell Laboratories, Lucent Technologies, USA
GC11.3 Proposals on the Source-Destination Traffic Matrix Estimation for IP-based VPNs
Shigeo Shioda and Kazuya Ohtani, Chiba University, Japan
GC11.4 Efficiently Monitoring Link Bandwidth in IP Networks
Zhiping Cai, Jianping Yin, Fang Liu, Xianghui Liu and Shaohe Lv, National University of Defense Technology, PR China
GC11.5 Performance of DNS as Location Manager for Wireless Systems in IP Networks
Abu Ahmed Sayeem Reaz, Mohammed Atiquzzaman and Shaojian Fu, University of Oklahoma, USA

GC12 Coding and Decoding

Wednesday, 30 November 2005 • 2:00–3:45PM
Room: Complex 226/Level Two/America's Center
Session Chair: **Lingyan Sun**, Carnegie Mellon University, USA

GC12.1 Space–Time Trellis Code Design Based on Super QOSTBC with Minimum Decoding Complexity
Dong Wang, Haiquan Wang and Xiang-Gen Xia, University of Delaware, USA
GC12.2 Improved Analysis of List Decoding and Its Application to Convolutional Codes
Chunlong Bai, Bartosz Mielczarek, Ivan J. Fair and Witold A. Krzymien, University of Alberta, Canada
GC12.3 Cooperative Multimedia Communications: Joint Source Coding and Collaboration
Andres Kwasinski, Zhu Han and K. J. Ray Liu, University of Maryland, USA
GC12.4 Novel Block Coding Method for Rate-Adaptive Optical Wireless Communications Systems
J. M. Garrido-Balsells, A. Garcia-Zambrana and A. Puerta-Notario, University of Málaga, Spain
GC12.5 Multilevel Code for MPSK Modulation using u/u+v LDPC Codes
Jia Hou, Soochow and Moon Ho Lee, Chonbuk National University, Korea

GC13 Digital Communications

Wednesday, 30 November 2005 • 4:00–5:45PM
Room: Majestic G/Level Two/Renaissance Grand Hotel
Session Chair: **Shaohua Yang**, Marvell Semiconductor Inc, USA

GC13.1 Blind Phase Recovery in Cross QAM Communication Systems with Reduced-Constellation Eighth-Order Estimator (RCEOE)
Kenneth V. Cartwright, College of The Bahamas, Bahamas, Edit J. Kaminsky, University of New Orleans, USA
GC13.2 An Optimum Hardware Detector for Constant Envelope Quadrature-Quadrature Phase-Shift Keying (CEQ^{2}PSK)
Kenneth V. Cartwright, College of The Bahamas, Bahamas
Edit J. Kaminsky, University of New Orleans, USA
GC13.3 Channel Reliability Metric for Nakagami-m Fading without Channel State Information
Asri Shaheem, Western Australian Telecommunications Research Institute, Australia, Hans-Jürgen Zepernick, Blekinge Institute of Technology, Sweden, Manora Caldera, Western Australian Telecommunications Research Institute, Australia
GC13.4 A Rate Adaptive Bit-Loading Algorithm for a DMT Modulation System for In-Building Power Line Communications
Simone Morosi, Dania Marabissi, Enrico Del Re, Romano Fantacci and Nicola Del Santo, Università degli Studi di Firenze, Italy
GC13.5 Simple Detectors for Shaped-Offset QPSK Using the PAM Decomposition
Erik Perrins, University of Kansas, USA
Michael Rice, Brigham Young University, USA

GC14 Resource Management and Flow Control

Wednesday, 30 November 2005 • 4:00–5:45PM
Room: Majestic H/Level Two/Renaissance Grand Hotel
Session Chair: **Stein Gjessing**, University of Oslo, Norway

GC14.1 Resource Management and Knapsack Formulation in Distributed Multimedia Networks
Abed Elhamid Lawabni and Ahmed H. Tewfik, University of Minnesota, USA
GC14.2 On Scalability of Dynamic Resource Allocation in Policy-enabled Networks: Practical and Analytical Evaluations
Kamel Haddadou and Samir Ghamri-Doudane, Pierre & Marie Curie University, France, Yacine Ghamri-Doudane and Nazim Agoulmine, University of Evry, France
GC14.3 A Revenue-based Dynamic Resource Management Scheme with Advance Reservation Support
Dong-Hoon Yi and JongWon Kim, Gwangju Institute of Science and Technology, Korea
GC14.4 A Fluid-Flow Analytical Model of Networked Multimedia TFRC Traffic Sources
Mario Barbera, Francesco Licandro, Alfio Lombardo and Giovanni Schembra, University of Catania, Italy
GC14.5 Maintaining Flow Isolation in Work-Conserving Flow Aggregation
Jorge A. Cobb and Zhe Xu, The University of Texas at Dallas, USA

GC15 Internet and Security

Wednesday, 30 November 2005 • 4:00–5:45PM
Room: Complex 226/Level Two/America's Center
Session Chair: **Matteo Bertozzi**, i-hub.net, Italy

GC15.1 Minimizing the Impact of Stale Link State Information on QoS Routing
Gang Cheng, and Nirwan Ansari, NJIT, USA
GC15.2 Using XML for Efficient and Modular Packet Processing
M. Baldi, and F. Risso, Politecnico di Torino, Italy
GC15.3 A Multi-Gigabit Rate Deep Packet Inspection Algorithm using TCAM
Jung-Sik Sung, ETRI, Korea, Seok-Min Kang and Youngseok Lee, Chungnam National University, Korea, Taeck-Geun Kwon, Chungnam National University, Korea, Bong-Tae Kim, ETRI, Korea
GC15.4 Network Maps beyond Connectivity
Zhiheng Wang, University of Michigan, USA, Cheng Jin, California Institute of Technology, USA, Sugih Jamin, University of Michigan, USA
GC15.5 Consistent Proportional Delay Differentiation: A Fuzzy Control Approach
Jianbin Wei and Cheng-Zhong Xu, Wayne State University, USA

GC16 Wireless Networks

Thursday, 1 December 2005 • 10:30AM–12:15PM
Room: Majestic G/Level Two/Renaissance Grand Hotel
Session Chair: **Boon Hee Soong**, Nanyang Technological University, Singapore

GC16.1 K-node Connected Power Efficient Topologies in Wireless Networks: A Semidefinite Programming Approach
Arindam K. Das and Mehran Mesbahi, University of Washington, USA
GC16.2 Delta Compression for Fast Wireless Internet Download
Chunpeng Xiao, Benny Bing and G. K. Chang, Georgia Institute of Technology, USA
GC16.3 A Chain Structure Bluetooth Scatternet Topology Formation Algorithm and Simulations
Fan Yang, Ke Wang and Zhihong Qian, Jilin University, China
GC16.4 End-to-End Packet-Channel Bayesian Model Applied to Heterogeneous Wireless Networks
Giulio Iannello, Univ. Campus Bio-Medico di Roma, Italy
Francesco Palmieri and Antonio Pescapè, Seconda Univ. di Napoli, Italy
Pierluigi Salvo Rossi, Univ. di Napoli "Federico II", Italy
GC16.5 A Unified Model of Evaluating the Performance of Route Discovery in Ad hoc Networking
Xian Liu, University of Arkansas at Little Rock, USA

GC17 Congestion and Admission Control and Scheduling

Thursday, 1 December 2005 • 10:30AM–12:15PM
Room: Majestic H/Level Two/Renaissance Grand Hotel
SessionChair: **S.-H. Gary Chan**, HKUST, China

GC17.1 An Near-Optimun Admission Control Algorithm for Multiservices Networks
Cesar A. V. Melo, State University of Campinas, Brazil
Nelson L. S. da Fonseca, State University of Campinas, Brazil
GC17.2 Analysis of Tentative Accommodating and Congestion Confirming Strategy: A Novemberel Admission Control Strategy for Packet Switching Networks
Kenta Yasukawa, Tokyo Institute of Technology, Japan, Ken-ichi Baba, Osaka University, Japan, Katsunori Yamaoka, Tokyo Institute of Technology, Japan
GC17.3 The Effects of NAK-based Loss Recovery Mechanism on Window-based Multicast Congestion Control
Feng Xie, Gang Feng and Chee Kheong Siew, Nanyang Technological University, Singapore
GC17.4 Packet Scheduling with Revenue Optimization and Weighted Delay Minimization
Jyrki Joutsensalo, Ari Viinikainen, Lari Kannisto and Timo Hämäläinen, University of Jyväskylä, Finland
GC17.5 Extending Equation-based Congestion Control to High-Speed Long-Distance Networks: Smoothness Analysis
Lisong Xu, University of Nebraska-Lincoln, USA

GC18 Traffic Engineering

Thursday, 1 December 2005 • 2:00–3:45PM
Room: Majestic G/Level Two/Renaissance Grand Hotel
Session Chair: **Algirdas Pakstas**, London Metropolitean University, UK

GC18.1 Heterogeneous Real-Time Traffic Admission Control in Differentiated Services Domains
S. Georgoulas, P. Trimintzios, G. Pavlou and K. H. Ho, University of Surrey, UK
GC18.2 Performance Comparison between IntServ-based and DiffServ-based Networks
Shigeo Shioda, Chiba University, Japan, Kenichi Mase, Niigata University, Japan
GC18.3 Bandwidth Preemption Algorithms for Differentiated Service-aware Traffic Engineering
Tong Shan, Nortel Networks, Canada, Oliver W. W. Yang, University of Ottawa, Canada
GC18.4 Load Distribution Models of the MPLS Traffic
Xian Liu, University of Arkansas at Little Rock, USA
GC18.5 Hierarchical Max-Flow Routing
Chansook Lim University of Southern California, Los Angeles, USA
Stephan Bohacek University of Delaware, Newark, USA

GC19 Wireless Networks - WiFi and WiMaX

Thursday, 1 December 2005 • 2:00–3:45PM
Room: Majestic H/Level Two/Renaissance
Session Chair: **Fei Dai**, North Dakota State University, USA

GC19.1 Energy Efficient Unicast Routing Protocols over 802.11b
C. Taddia, A. Giovanardi and G. Mazzini, University of Ferrara, Italy
M. Zorzi, University of Padova, Italy
GC19.2 Delay Analysis of IEEE 802.11 PCF MAC -based Wireless Networks
Biplab Sikdar, Rensselaer Polytechnic Institute, USA

GC19.3 Reducing Energy Consumption on Mobile Devices with WiFi Interfaces
Tao Zhang, Sunil Madhani, Provin Gurung and Eric van den Berg, Telcordia Technologies, USA
GC19.4 Spatio-Temporal Schedulers in IEEE 802.16
Sara Motahari, Ehsan Haghani and Shahrokh Valaee, University of Toronto, Canada
GC19.5 On the Performance Enhancement of Wireless LAN—A Multi-
Yue Fang, Northeastern University, USA, Daqing Gu, Mitsubishi Electric Research Laboratories, USA, A. Bruce McDonald, Northeastern University, USA, Jinyun Zhang, Mitsubishi Electric Research Laboratories, USA

GC20 Load Balancing and Resource Fairness

Thursday, 1 December 2005 • 4:00–5:45PM
Room: Majestic G/Level Two/Renaissance Grand Hotel
SessionChair: **Yang Yang**, University of College London, UK

GC20.1 Design of an Optimized Load Sharing and Distributed Multimedia-oriented Streaming System
Min Wang, Beijing University of Posts and Telecommunications, China
Geng-Sheng Kuo, National Chengchi University, Taiwan
GC20.2 Improvement of Resilient Packet Ring Fairness
Fredrik Davik, University of Oslo, Norway
Amund Kvalbein and Stein Gjessing, Simula Research Laboratory, Norway
GC20.3 Location Dependent Dynamic Load Balancing
Evsen Yanmaz and Ozan K. Tonguz, Carnegie Mellon University, USA
GC20.4 An Analytical Model for Fair Rate Calculation in Resilient Packet Rings
Arash Shokrani, Ioannis Lambadaris and Jérôme Talim, Carleton University, Canada
GC20.5 Is There an Optimum Dynamic Load Balancing Scheme?
Evsen Yanmaz, Ozan K. Tonguz and Ragunathan Rajkumar, Carnegie Mellon University, USA

GC21 Switch Architectures

Thursday, 1 December 2005 • 4:00–5:45PM
Room: Majestic H/Level Two/Renaissance Grand Hotel
Session Chair: **Wojciech Kabacinski**, Poznan University of Technology, Poland

GC21.1 Reducing the Implementation Complexity of Combined Input and Output Queued Switches by Using Extended Maximal Matching Algorithm
Yang Xu, Wei Li, Tsinghua, Beibei Wu, Tsinghua, Wenjie Li, Tsinghua and Bin Liu, Tsinghua University, PR China
GC21.2 Performance Evaluation of the Multiple Output Queueing Switch under Different Traffic Patterns
Anna Baranowska, Grzegorz Danilewicz, Wojciech Kabaci_ski, Janusz Kleban, Damian Parniewicz and Patryk Abrowski Pozna_ University of Technology, Poland
GC21.3 Scheduling in Switches with Small Internal Buffers
Nikos Chrysos and Manolis Katevenis, FORTH-ICS, Greece
GC21.4 Achieving Fairness and Throughput for Best-Effort Traffic in Input-Queued Crossbar Switches
Xiao Zhang and Laxmi N. Bhuyan, University of California, Riverside, USA
GC21.5 Guaranteed Smooth Switch Scheduling with Low Complexity
Satya R. Mohanty and Laxmi N. Bhuyan, University of California, Riverside, USA

Advances for Network and Internet Symposium

Chair: John Lockwood, Washington University in St. Louis, USA
Vice Chairs: George Kesidis, Pennsylvania State University, USA and Changcheng Huang, Carleton University, Canada

NI01 Overlays Peer to Peer

Tuesday, 29 November 2005 • 10:30AM–12:15PM
Room: Landmark 7/Level One/Renaissance Grand Hotel
Session Chair: **Todd Sproull**, Washington University in St. Louis

NI01.1 Multimedia Object Placement for Hybrid Transparent Data Replication
Keqiu Li, Japan Advanced Institute of Science and Technology, Japan
Hong Shen, Japan Advanced Institute of Science and Technology, Japan; University of Science and Technology of China, China
Francis Y. L. Chin and Liusheng Huang, University of Science and Technology of China, China
NI01.2 Constructing a Proximity-Aware Power Law Overlay Network
Jianjun Zhang, Ling Liu and Calton Pu, Georgia Institute of Technology, USA
NI01.3 Preference-Aware Overlay Topologies for Group Communication
Tianying Chang, Jinliang Fan and Mustaque Ahamad, Georgia Institute of Technology, USA, George Popescu and Zhen Liu, IBM T.J. Watson Research Center, USA
NI01.4 A Dynamic SSM Source Discovery Protocol
Mickaël Hoerdt and Jean-Jacques Pansiot, Université Louis Pasteur, France
NI01.5 Shaking Service Requests in Peer-to-Peer Video Systems
Ying Cai, Ashwin Natarajan and Johnny Wong, Iowa State University, USA

NI02 Multicast, Multimedia

Tuesday, 29 November 2005 • 4:00–5:45PM
Room: Portland/Benton/Mezzanine Level/Renaissance Grand Hotel
Session Chair: **Yanping Zhao**, Univ. of Arkansas at Little Rock

NI02.1 An Auto-Configurable Hybrid Approach to Multicast Congestion Control
M. Rodríguez-Pérez, S. Herrería-Alonso, M. Ferández-Veiga and C. López-García, E.T.S.E. Telecomunicación, Spain
NI02.2 Optimization Method of Spanning Tree Aggregation for Hierarchical QoS Routing
Lei Lei, Yuefeng Ji and Kan Zheng, Beijing University of Posts and Telecommunications, PR China
NI02.3 Impact of Receiver Cheating on the Stability of ALM Tree
Dan Li, Yong Cui, Ke Xu and Jianping Wu, Tsinghua University, China
NI02.4 Aggregation of Bitmapped Feedback for Improved Reliable Multicast Scalability
Oliver Holland and A. Hamid Aghvami, King's College London, UK
NI02.5 Profit Oriented Multichannel Resource Management for Integrated Internet and DVB-T Network
Guowang Miao and Zhisheng Niu, Tsinghua University, PR China

NI03 Scheduling

Wednesday, 30 November 2005 • 10:30AM–12:15PM
Room: Landmark 7/Level One/Renaissance Grand Hotel
Session Chair: **James Moscola**, Washington University in St. Louis

NI03.1 On Optimizing Token Bucket Parameters at the Network Edge under Generalized Processor Sharing (GPS) Scheduling
Dusit Niyato,Jeffrey Diamond and Ekram Hossain, University of Manitoba and TRLabs, Canada