**Track 2 Networks**
Organizer: K. C. Chua, Siemens Singapore, Singapore

- **TS14 Medium Access Control I**
  Tuesday, 18 March 2003 (9:30 - 12:30) – Room 211
  **Session Chair:** Jae H. Kim, Boeing Corporation, USA

- **TS14-1: On the Performance of a New 802.11-based Low Latency Power Control MAC Protocol for Ad hoc Networks**
  Farshad Alizadeh-Shabdziz, Suresh Subramaniam, George Washington University, USA

- **TS14-2: ADHOC MAC: a New, Flexible and Reliable MAC Architecture for Ad hoc networks**
  Flaminio Borgonovo, Antonio Capone, Matteo Cesana, Luigi Fratta, Politecnico di Milano, Italy

- **TS14-3: Performance Analysis of UPMA Protocol for Wireless Multihop Mobile Ad hoc Networks**
  Kai Liu, Thomas Wong, Illinois Institute of Technology, USA; Jiandong Li, XiDian University, China, James Han, Motorola Inc., USA

- **TS14-4: Clique-Based Randomized Multiple Access for Energy-Efficient Wireless Ad hoc Networks**
  Paul G. Flikkema, Brent West, Northern Arizona University, USA

- **TS14-5: Performance Evaluation of Multiple Access Protocols for Ad hoc Networks Using Directional Antennas**
  Tamer A. ElBatt, Timothy Anderson, Bo Ryu, HRL Laboratories, LLC, USA

- **TS14-6: Throughput and Fairness in a Hybrid Channel Access Scheme for Ad hoc Networks**
  Yu Wang, Jose J. Garcia-Luna-Aceves, University of California at Santa Cruz, USA

- **TS14-7: A Synchronous, Reservation Based Medium Access Control Protocol for Multihop Wireless Networks**
  Jennifer C. Fang, University of California, San Diego, USA; George Kondylis, Broadcom Corporation, USA

- **TS15 Network and Transport Protocols I**
  Tuesday, 18 March 2003 (14:00 - 15:30) – Room 211
  **Session Chair:** Arek Dadej, University of South Australia, Australia

- **TS15-1: A Flow Control Scheme for Improving TCP Throughput and Fairness for Wireless Networks**
  Heejin Jang, Young-Joo Suh, Pohang University of Science & Technology (POSTECH), Korea

- **TS15-2: ILC-TCP: An Interlayer Collaboration Protocol for TCP Performance Improvement in Mobile and Wireless Environments**
  Madhav Chinta, Citrix Corporation, USA; Abdelslam Sumi Helal, Choonhwa Lee, University of Florida, USA

- **TS15-3: Multi Hop Communication in Global Wireless Framework**
  Anirach Mingkhwan, Omar Abuelma’atti, Madjid Merabti, Bob Askwith, Liverpool John Moores University, United Kingdom

- **TS16 Network and Transport Protocols II**
  Tuesday, 18 March 2003 (16:00 - 17:30) – Room 211
  **Session Chair:** Arek Dadej, University of South Australia, Australia

- **TS16-1: OPNET Simulation Modeling and Analysis of Enhanced Mobile IP**
  Taeyon Park, Arek Dadej, University of South Australia, Australia

- **TS16-2: IP Header Compression: A Study of Context Establishment**
  Cedric Westphal, Rajeev Koodli, Nokia, USA

- **TS16-3: IP Paging Considered Unnecessary: Mobile Ipv6 and IP Paging for Dormant Mode Location Update in Macrocellular and Hotspot Networks**
  James Kempf, DoCoMo USA Communications Labs, USA; Pars Mutaft, INRIA Rhone-Alps, France

- **TS17 QoS and Resource Allocation I**
  Tuesday, 18 March 2003 (9:30 - 12:30) – Room 212
  **Session Chair:** Gang Wu, DoCoMo Labs, USA

- **TS17-1: Dynamic Resource Allocation with Finite Buffer Constraint in Broadband OFDMA Networks**
  Guoqing Li, Hui Liu, University of Washington, USA

- **TS17-2: A Proposal of an Adaptive Channel Allocation and Traffic Engineering Algorithm in Multi-hop Mesh Networks for Broadband Fixed Wireless Access**
  Yoji Kishi, Keita Tabata, Satoshi Konishi, Shinichi Nomoto, KDDI R&D Laboratories, Inc., Japan

- **TS17-3: Resource Allocation and Fairness for Downlink Shared Data Channels**
  Rao Sudarshan, Subramanian Vasudevan, Lucent Technologies, USA

- **TS17-4: Resource Allocation for Non-Realtime Data Users in UMTS Uplink**
  Bang Wang, National University of Singapore, Singapore; Kee Chiang Chua, National University of Singapore, Singapore; and Siemens Singapore, Singapore; Hans-Peter Schwefel, ICM Mobile Core R&D Siemens Pte. Ltd., Singapore

- **TS17-5: Forward-Link Resource Allocation for a Two-Cell Voice Network with Multiple Service Classes**
  Chi Zhou, Florida International University, USA; Michael Honig, Northwestern University, USA; Scott Jordan, University of California, USA; Randall Berry, Northwestern University, USA

- **TS17-6: A Priority-based Channel Allocation Scheme for Cellular Networks**
  Tsang-Ling Chris Sheu, National Sun-Yat-Sen University, Taiwan

- **TS18 Signaling and Link Configuration**
  Tuesday, 18 March 2003 (14:00 - 15:30) – Room 212
  **Session Chair:** Mehul Motani, National University of Singapore, Singapore

- **TS18-1: An Examination of Signaling Traffic in a Super-Charged Mobile Network**
  Amish Chana, Fambirai Takawira, University of Natal, South Africa

- **TS18-2: Cross-layer Signaling for Next-Generation Wireless Systems**
  Qi Wang, Mosa Ali Abu-Rgheff, University of Plymouth, United Kingdom

- **TS18-3: Co-Link Configuration: Using Wireless Diversity for More Than Just Connectivity**
  Jean Tournihois, Venky Krishnan, Hewlett Packard, USA

- **TS19 Speech Communications and Quality**
  Tuesday, 18 March 2003 (16:00 - 17:30) – Room 212
  **Session Chair:** Irina C. Cotanis, Ericsson NetQual Inc., USA

- **TS19-1: A Framework for Adaptive Voice Communication over Wireless Channels**
  Sandeep K. S. Gupta, Suhaib Obeidat, University of California at Davis, USA

- **TS19-2: Speech in the VQE Device Environment**
  Irina C Cotanis, Ericsson NetQual Inc., USA

- **TS19-3: Speaker Bias in Speech Quality Evaluation over End-to-End Communication Links**
  Irina C Cotanis, Ericsson NetQual Inc., USA

- **TS20 Routing in Ad hoc Networks I**
  Tuesday, 18 March 2003 (9:30 - 12:30) – Room 207
  **Session Chair:** Prasant Mohapatra, University of California at Davis, USA
**TS38-1**: Efficient Media Access Protocols for Wireless LANs with Smart Antennas
Tianmin Ren, Iordanis Keusopulos, Leandros Tassiulas, University of Maryland, USA

**TS38-2**: Enhanced DCF of IEEE 802.11e to Support QoS
Yang Xiao, The University of Memphis, USA

**TS38-3**: Improved MAC protocols for DCF and PCF Modes over Fading Channels in Wireless LANs
Zhiu Chen, Ashfaq Khokhar, University of Illinois at Chicago, USA

**TS38-4**: An Analysis of CSMA/CA Protocol with Capture In Wireless LANs
Zoran Hadzi-Velkov, Boris Spasenovski, Ss. Cyril and Methodius University, Macedonia

**TS38-5**: A Wireless Multimedia LAN Architecture Using DCF with Shortened Contention Window for QoS Provisioning
Kanghee Kim, Aftab Ahmad, Kiseon Kim, Kwang-Ju Institute of Science and Technology, Korea

**TS38-6**: Adaptive Random Access and Resource Allocation Scheme Based on Traffic Load in HiperLAN Type2 System
Hyun-Ho Choi, Gyung-Ho Hwang, Dong-Ho Cho, Korea Advanced Institute of Science and Technology, Korea

**TS38-7**: A Modified PRMA Protocol for Transmission of Multimdia over an Error Free Wireless Channel
Ali Manea Alsayh, Said Mohammed Elnoubi, m. Nazih ElDerini, Alexandria University, Egypt

**TS39 Network and Transport Protocols III**

**TS39-1**: A Proxy Architecture to Enhance the Performance of WAP 2.0 by Data Compression
Zhaping Yin, Victor C.M. Leung, University of British Columbia, Canada

**TS39-2**: Transport Discovery in Wireless Multi-Transport Environments
Shannon B. Barnes, Intel Research & Development, USA, Ryan W. Woodings, Charles Knutson, Brigham Young University, USA

**TS39-3**: Rate-control Snoop: A Reliable Transport Protocol for Heterogeneous Networks with Wired and Wireless Links
Young-Joo Suh, Young-Joo Song, Pohang University of Science & Technology, Korea

**TS39-4**: Implementation of Explicit Wireless Loss Notification Using MAC-Layer Information
Bing Zhang, ATR Adaptive Communications Research Laboratories, Japan, Mahdad N. Shirazi, Communications Research Laboratory, Japan

**TS40 Network and Content Management**

**TS40-1**: Noncooperative Content Distribution in Mobile Infostation Networks
Wing Ho Yuen, Roy D. Yates, Siun-Chuon Mau, WINLAB, Rutgers University, USA

**TS40-2**: Policy Based Management for Next Generation Mobile Networks
Salvatore Iacono, Fabrizio Arneodo, Motorola Technology Center of Italy, Italy, Kleucis Cardoso, Marc Girod Genet, Djamel Zeghlache, Institut National des Télécommunications, France

**TS40-3**: A Case Study: Communications Optimizing for Constellation Space Missions
Michael Hadjiiotheodiou, Yingyong Chen, CSHCN, University of Maryland, USA

**TS41 QoS and Resource Allocation II**

**TS41-1**: End-to-end QoS Provision in Mobile Heterogeneous Networks
Xia Gao, Gang Wu, Miki Toshio, DoCoMo Communications Lab USA, USA

**TS41-2**: QoS Provisioning for Adaptive Services with Degradation in Cellular Network
Samrat Ganguly, NEC USA, Inc., USA, Badri Nath, Rutgers University, USA

**TS41-3**: Adaptive EDCF: Enhanced Service Differentiation for IEEE 802.11 Wireless Ad hoc Networks
Lamia Romdhani, Qiang Ni, Thierry Turletti, INRIA, France

**TS41-4**: Relative Service Differentiation for Mobile Ad hoc Networks
Kee Chaing Chua, Hannan Xiao, National University of Singapore, Singapore, Winston Seath, Institute for Infocom Research, Singapore

**TS41-5**: A Code Allocation Protocol for Maximizing Throughput in CDMA based Ad hoc Networks
Saurabh Srivastava, Sachee Tripathi, Dheeraj Sanghi, Ajit Kumar Chaturvedi, Indian Institute of Technology, India

**TS41-6**: Evaluation of an Enhanced Intelligent DCA Technique for Unlicensed wLANs and PAWNs
Giannis Marias, Nikos Fragiadakis, Stathes Hadjiiefthymiades, Lazaros Merakos, University of Athens, Greece

**TS42 Capacity and Network Dimensioning I**

**TS42-1**: Capacity of Multiservice WCDMA Networks with Variable GoS
Nidhi Hegde, Eitan Altman, INRIA, France

**TS42-2**: Uplink Capacity of a CDMA Network
Don Torrieri, US Army Research Laboratory, USA

**TS42-3**: Interference-based Capacity Analysis in CDMA Cellular Systems
Joonhwan Kim, School of Electrical Engineering, Korea, Young-June Choi, Saewoong Bahk, GTC Semiconductor, Korea

**TS43 Capacity and Network Dimensioning II**

**TS43-1**: Microcell-Adjusting for Hierarchical Cellular Systems with Non-Uniformly Distributed Traffic
Szu-Lin Su, Chia-Sheng Tsai, National Cheng Kung University, Taiwan

**TS43-2**: On the Mobility/Capacity Conversion in Wireless Networks
Chin-Tau Lea, Meng Zhang, Hong Kong University of Science and Technology, Hong Kong

**TS43-3**: A Tabu Search Heuristic for the Dimensioning of 3G Multi-service Networks
Alexandre Fortin, Ecole Polytechnique de Montreal, Canada, Noureddine Hall, Brigitte Jaumard, Université de Montréal, Canada

**TS43-4**: Using Measurements Extracted
Technical Sessions

**TS44 Bluetooth and Wireless Personal Area Networks**

**Wednesday, 19 March 2003**
(9:30 - 12:30) – Room 207

**Session Chair:** Victor Leung, University of British Columbia, Canada

**TS44-1: A Two-Phase Scatternet**
Formation Protocol for Bluetooth Wireless Personal Area Networks
Yoji Kawamoto, Sony Corporation, Japan, Vincent W.S. Wong, Victor C.M. Leung, University of British Columbia, Canada

**TS44-2: A Zone Routing Protocol for Bluetooth Scatternets**
Rohit Kapoor, Mario Gerla, University of California at Los Angeles, USA

**TS44-3: Open-Loop Power Control Based on Estimations of Packet Error Rate in a Bluetooth Radio**
Eladio C Arvelo, University of San Diego Research Center, USA

**TS44-4: Capacity Assignment on Asymmetric Bluetooth Link**
Ruiduan Luo, Rob M. Edwards, Gordon A. Manson, The University of Sheffield, United Kingdom

**TS44-5: A Design Methodology for Wireless Personal Area Networks with Power Efficiency**
Qilian Liang, University of Texas at Arlington, USA

**TS44-6: IEEE 802.15.4 Low Rate - Wireless Personal Area Network Coexistence Issues**
Ivan Hovitt, University of North Carolina at Charlotte, USA, Jose A. Gutierrez, Eaton Corporation, USA

**TS44-7: Site Specific WLAN and WPAN Coexistence Evaluation**
Ivan Hovitt, University of North Carolina at Charlotte, USA, Seung-Yong Ham, Samsung Electronics Co. Ltd., USA

• **TS45 Ad hoc Network Organization and Operation I**

  **Wednesday, 19 March 2003**
  (14:00 - 15:30) – Room 207

  **Session Chair:** Damla Turgut, University of Central Florida, USA

**TS45-1: Optimizing Clustering Algorithm in Mobile Ad hoc Networks Using Simulated Annealing**
Damla Turgut, University of Central Florida, USA, Begumhan Turgut, Ramez Elmasri, Than V. Le, University of Texas at Arlington, USA

**TS45-2: Topological Performance of Mobile Backbone Based Wireless Ad hoc Networks with Unmanned Vehicles**
Izhak Rubin, Runhe Zhang, Huei-Ju, University of California at Los Angeles, USA

**TS45-3: Passive Duplicate Address Detection in Mobile Ad hoc Networks**
Killan Alexander Weiger, Universität Karlsruhe, Germany

**TS45-4: Reputation Propagation in Mobile Ad hoc Networks**
Yanbin Liu, The University of Texas at Austin, USA, Yang Richard Yang, Yale University, USA

• **TS46 Ad hoc Network Organization and Operation II**

  **Wednesday, 19 March 2003**
  (16:00 - 17:30) – Room 207

  **Session Chair:** Damla Turgut, University of Central Florida, USA

**TS46-1: RTS/CTS-Induced Congestion in Ad hoc Wireless LANs**
Saikat Ray, Jeffrey B. Carruthers, David Starobinski, Boston University, USA

**TS46-2: A Hybrid Approach for Internet Connectivity for Mobile Ad hoc Networks**
Prashant Ratanchandani, Robin Kravets, University of Illinois, USA

**TS46-3: Average Connectivity Properties of Wireless Ad hoc Networks**
Li Shu, Mukund N. Desai, Rami S. Mangoubi, Charles S. Draper Laboratory, USA

**TS46-4: Data Flushing Data Transfer Protocol for IEEE 802.11 Ad hoc Wireless Network**
Shiann-Tsong Sheu, Jenhui Chen, Tobias Chen, Tamkang University, Taiwan

• **TS47 Call Admission Control**

  **Wednesday, 19 March 2003**
  (9:30 - 12:30) – Room 213

  **Session Chair:** Antonio Capone, Dei-Politecnico di Milano, Italy

**TS47-1: Call Admission Control in Wideband CDMA Cellular Networks by Using Fuzzy Logic**
Jun Ye, Sherman Shen, Jon W. Mark, University of Waterloo, Canada

**TS47-2: Iterative Interference-Increase Estimation (1IE): a CAC Scheme for W-CDMA Systems**
Antonio Capone, Simone Redana, Politecnico di Milano, Italy

**TS47-3: Capacity Analysis and Performance Evaluation of Call Admission Control for Multimedia Packet Transmission in UMTS WCDMA System**
Angela Hernández-Sotela, Antonio Valdivinos-Bardají, University of Zaragoza, Spain, Fernando Casadevall-Palacio, Polytechnic University of Catalonia, Spain

**TS47-4: An Advanced Admission Control Algorithm Based on SIR Estimation for CDMA Wireless Systems**
Francesco Chiti, Romano Fantacci, Giada Menmuti, Daniele Tarchi, Università di Firenze, Italy

**TS47-5: Traffic Prediction Based Access Control in Wireless CDMA Networks Supporting Integrated Services**
Tejinder S. Randhawa, New Media Innovation Center, Canada, Stephen Hardy, Simon Fraser University, Canada

**TS47-6: Dynamic Call Admission Control and Resource Reservation with Interference Guard Margin (IGM) for CDMA Systems**
Huan Chen, Sunil Kumar, Chung-Chieh Jay Kuo, University of Southern California, USA

**TS47-7: Optimal Medium Access and Admission Controls of Multimedia Traffic Over TD-CDMA Systems**
Oliver T. W. Yu, University of Illinois at Chicago, USA

• **TS48 Sensor Network Organization and Operation II**

  **Wednesday, 19 March 2003**
  (14:00 - 15:30) – Room 213

  **Session Chair:** Joo Ghee Lim, Institute for Infocomm Research, Singapore

**TS48-1: Fault-Tolerant Clustering of Wireless Sensor Networks**
Gaurav Gupta, Mohamed F. Younis, University of Maryland Baltimore County, USA

**TS48-2: Asymptotic Distribution of the Number of Isolated Nodes in Wireless Ad hoc Networks with Bernoulli Nodes**
Chih-Wei Yi, Peng-Jun Wan, Li Xiang-Yang, Ophir Frieder, Illinois Institute of Technology, USA

**TS48-3: A Distributed Self-organization Algorithm for Ad hoc Sensor Networks**
Zhang Jinsong, Kamal Premaratne, Ophir Frieder, Illinois Institute of Technology, USA

**TS48-4: A Distributed Self Spreading Algorithm for Mobile Wireless Sensor Networks**
Nojoeong Heo, Pramod K. Varshney, Syracuse University, USA

• **TS49 Sensor Network Organization and Operation III**

  **Wednesday, 19 March 2003**
  (16:00 - 17:30) – Room 213

  **Session Chair:** Joo Ghee Lim, Institute for Infocomm Research, Singapore

**TS49-1: Message-Efficient Self-Organization of Wireless Sensor Networks**
Rajesh Krishnan, BBN Technologies, USA, David Starobinski, Boston University, USA
 Technical Sessions

**TS49-2:** Sensor Placement for Effective Coverage and Surveillance in Distributed Sensor Networks
Santpal Singh Dhillon, Krishnendu Chakrabarty, Duke University, USA

**TS49-3:** Critical Density Thresholds for Coverage in Wireless Sensor Networks
Sachin Adlakha, Mani B. Srivastava, University of California at Los Angeles, USA

**TS49-4:** Optimal Sensor Management Under Energy and Reliability Constraints
Mark Adam Perillo, Wendi Beth Heinzelman, University of Rochester, USA

- **TS65 Scheduling and Buffer Management**
  Thursday, 20 March 2003 (9:30 - 12:30) – Room 211
  Session Chair: TBA

- **TS65-1:** Delay-Sensitive Packet Scheduling in Wireless Networks
  Peijuan Liu, Randall Berry, Michael Honig, Northwestern University, USA

- **TS65-2:** Performance Tradeoffs in Wireless Scheduling with Flow Aggregation
  Raphael Rom, Hwee Pink Tan, Israel Institute of Technology, Israel

- **TS65-3:** Performance of the Packet Scheduling Schemes in DS/CDMA Systems
  Seokjoo Shin, Electronics and Telecommunications Research Institute, Korea, Yeomin Yoon, Kiseon Kim, Kwangju Institute of Science and Technology, Korea

- **TS65-4:** Scheduling on Uplink of CDMA Packet Data Network with Successive Interference Cancellation
  Krishnan Kumaran, Lijun Qian, Lucent Technologies, USA

- **TS65-5:** Channel Adaptive Fair Queueing for Scheduling Integrated Voice and Data Services in Multicore CDMA Systems
  Li Wang, Ricky Y. K. Kwok, Wing-Chong Lau, Vincent K.N. Lau, The University of Hong Kong, Hong Kong

- **TS65-6:** Applying Active Queue Management to Link Layer Buffers for Real-time Traffic over Third Generation Wireless Networks
  Jian Chen, Victor Leung, University of British Columbia, Canada

- **TS65-7:** Queue Management for TCP Traffic Over 3G Links
  Mats Sägtors, Oy LM Ericsson Ab, Finland, Reiner Ludwig, Michael Meyer, Ericsson Eurolab Deutschland GmbH, Germany, Jamne Peisa, Oy LM Ericsson Ab, Finland

- **TS66 Load Estimation and Balancing**
  Thursday, 20 March 2003 (14:00 - 15:30) – Room 211
  Session Chair: Laurie Cuthbert, University of London, United Kingdom

- **TS66-1:** Uplink Load Estimation in WCDMA
  Erik Geijer Lundin, Fredrik Gunnarsson, Fredrik Gustafsson, Linköpings Universitet, Sweden

- **TS66-2:** Intelligent Cellular Network Load Balancing Using a Cooperative Negotiation Approach
  Lin Du, John Bigham, Laurie Cuthbert, Petrit Nahi, Olve Parini, Queen Mary University of London, United Kingdom

- **TS66-3:** Adaptive Load Balancing with Preemption for Multimedia Cellular Networks
  Sungwook Kim, Pramod K Varshney, Syracuse University, USA

- **TS67 Medium Access Control III**
  Thursday, 20 March 2003 (16:00 - 17:30) – Room 211
  Session Chair: Wang Yu, University of California at Santa Cruz, USA

- **TS67-1:** A QoS-based Hybrid Multiple Access Transmission Strategy in WCDMA Downlink
  Hsiao-Kuang Wu, Hao-Wei Chang, National Central University, Taiwan, Kevin Chicheng Hsu, Vitria Technology Inc., USA

- **TS67-2:** An Access Control Scheme for Bursty Traffic in CDMA System
  Zhuji Chen, Ashfaq Khokhar, University of Illinois at Chicago, USA

- **TS67-3:** Effects of Multiple Access Alternatives in Heterogeneous Wireless Networks
  Erik Vanem, Stein Svae, Frederic Paint, Telenor R&D, Norway

- **TS67-4:** Colorwave: A MAC for RFID Reader Networks
  James Waldrop, Daniel W. Engels, Sanjay E. Sarma, MIT Auto-ID Center, USA

- **TS68 Performance Analysis and Modeling I**
  Thursday, 20 March 2003 (9:30 - 12:30) – Room 212
  Session Chair: J. Roberto B. de Marca, Cetec - PUC/Rio, Brazil

- **TS68-1:** Further Simulation Results on Hierarchical Cell Structures
  J. Roberto de Marca, Cetec - PUC/Rio, Brazil, Iidelberg Ferreira e Silva, Ericsson, Brazil

- **TS68-2:** Using Information Theory to Optimize Wireless Networks
  Matthew Christopher Bromberg, Private Consultant, USA

- **TS68-3:** Modeling and Analysis of WAP Performance Over Wireless Links
  Humphrey Rutagumwa, Xuemin Shen, University of Waterloo, Canada

- **TS68-4:** Access Delay Analysis of Adaptive Traffic Load - type Protocols for S-ALOHA and CSMA in EDGE
  Mario E Rivero-Angeles, Domingo Lara-Rodriguez, Felipe Alejandro Cruz-Perez, CINVESTAV-IPN, Mexico

- **TS68-5:** The Effect of Code-Multiplexing on the High Speed Downlink Packet Access (HSDPA) in a WCDMA Network
  Raymond Kwan, Nokia Research Center, Finland, Peter H. J. Chong, Nanyang Technological University, Singapore, Eeva Poutiainen, Mika Rinne, Nokia Research Center, Finland

- **TS68-6:** Modeling and Prediction of Session Throughput of Constant Bit Rate Streams in Wireless Data Networks
  Liang Cheng, Lehigh University, USA, Ivan Marsic, Rutgers University, USA

- **TS69 Performance Analysis and Modeling II**
  Thursday, 20 March 2003 (14:00 - 15:30) – Room 212
  Session Chair: J. Roberto B. de Marca, Cetec - PUC/Rio, Brazil

- **TS69-1:** A Multimedia Architecture for 802.11b Networks
  Pascal Berthou, Thierry Gayraud, Olivier Alphand, Michel Diaz, LAAS-CNRS, France

- **TS69-2:** An Experimental Study of Throughput for UDP and VoIP Traffic in IEEE 802.11b Networks
  Sachin Garg, Martin Kappes, Avaya Labs Research, USA

- **TS69-3:** Analysis of the Stability and Performance of Exponential Backoff
  Byung-Jae Kwak, Nah-Oak Song, Leonard E. Miller, National Institute of Standards and Technology, USA

- **TS69-4:** Analyzing Interaction Between Network Protocols, Topology and Traffic in Wireless Radio Networks
  Christopher L Barrett, Los Alamos National Laboratory, USA, Martin Drozda, Slovak Academy of Sciences, Slovakia, Achla Marathe, Madhav V. Marathe, Los Alamos National Laboratory, USA

- **TS70 ARQ and Congestion Control**
  Thursday, 20 March 2003 (16:00 - 17:30) – Room 212
  Session Chair: Mehul Motani, National University of Singapore, Singapore

- **TS70-1:** Accurate Approximation of ARQ Packet Delay Statistics Over Markov Channels with Finite Round-trip Delay
  Michele Rossi, Leonardo Badia, Michele Zorzi, University of Ferrara, Italy

- **TS70-2:** On the Delay Statistics of an Aggregate of SR-ARQ Packets Over Markov Channels with Finite Round-trip Delay
  Michele Rossi, Leonardo Badia, Michele
Technical Sessions

Zorzi, University of Ferrara, Italy

TS70-3: Soft Combining Hybrid ARQ Schemes Application to Reliable Communications within 3G Wireless Networks
Francesco Chiti, Romano Fantacci, Francesco Versaci, Università di Firenze, Italy

TS70-4: Using Receiver-Based Rate Matching for Congestion Detection in Rate-Based Protocols
Stephan Baucke, Ericsson Research, Germany

• TS71 Mobility, Multicasting and Security
Thursday, 20 March 2003
(9:30 - 12:30) – Room 207
Session Chair: Brian Mark, George Mason University, USA

TS71-1: A Mobility Tracking Model for Wireless Ad hoc Networks
Zainab R. Zaidi, Brian L. Mark, George Mason University, USA

TS71-2: Performance Evaluations of SRMTP for Reliable Multicasting over Satellite Networks
Chen Wang, Victor C.M. Leung, University of British Columbia, Canada

TS71-3: ARP Considered Harmful: Manycast Transactions in Ad hoc Networks
Casey Carter, Seung Yi, Robin Kravets, University of Illinois at Urbana-Champaign, USA

TS71-4: Reliable Multicast in Mobile Networks
Ravi Prakash, University of Texas at Dallas, USA, Andre Schiper, Ecole Polytechnique Federale de Lausanne, Switzerland, Mansoor Mohsin, University of Texas at Dallas, USA

TS71-5: The Implementation of Multicast in Mobile IP
Min-hua Ye, Ly-yun Yang, Yu Liu, Hui-min Zhang, Beijing University of Posts and Telecommunications, China

TS71-6: Secure Candidate Access Router Discovery
Eunsoo Shim, Jens-Peter Redlich, Richard D. Gitlin, NEC Laboratories America, Inc., USA

TS71-7: An Analysis of Bluetooth Security Vulnerabilities
Creighton T. Hager, Scott F. Midkiff, Virginia Polytechnic Institute and State University of Maryland, USA

• TS72 Developments in Ad hoc Networks
Thursday, 20 March 2003
(14:00 - 15:30) – Room 207
Session Chair: Samir Das, State University of New York at Stony Brook, USA

TS72-1: Mobility-enhanced Positioning in Ad hoc Networks
Joo Ghee Lim, S. V. Rao, Institute for Communications Research, Singapore

TS72-2: Dead Reckoning in Mobile Ad hoc Networks
Aarti Agarwal, University of Cincinnati, USA, Samir R. Das, SUNY at Stony Brook, USA

TS72-3: EWANT: The Emulated Wireless Ad hoc Network Testbed
Sagar Sanghani, Timothy X. Brown, Shweta D Bhandare, Sheetalkumar R. Doshi, University of Colorado at Boulder, USA

• TS73 Resource Allocation
Thursday, 20 March 2003
(16:00 - 17:30) – Room 207
Session Chair: A.S. Madhukumar, Institute for Infocomm Research, Singapore

TS73-1: Performance Analysis of Adaptive Resource Allocation Strategies with Service Time Dependence on the Allocated Bandwidth
Hercilio Heredia-Ureta, Felipe Alejandro Cruz-Perez, CINVESTAV-IPN, Mexico, Lauro Ortigoza-Guerrero, WFI, USA

TS73-2: Resource Sharing in Integrated Voice and Data Services
José Roberto B. de Marca, Talles Alexandre Camilo, Cetuc - PUC/Rio, Brazil

TS73-3: Channel Allocation and Performance Study for the Integrated GSM/GPRS System
Huei-Wen Ferng, Yi-Chou Tsai, National Taiwan University of Science and Technology, Taiwan

TS73-4: Capacity Enhancement of a Multi-User OFDM System Using Dynamic Frequency Allocation
Teo Choon Heng Alen, National University of Singapore, Singapore, A.S. Madhukumar, Francois Chin, Institute for Communications Research, Singapore

• TS74 Energy Efficiency
Thursday, 20 March 2003
(9:30 - 12:30) – Room 213
Session Chair: Abbas Jamalipour, University of Sydney, Australia

TS74-1: Energy Balance in Wireless Networks Using Connection Segmentation and Range Control
Nitin Kumar Singh, Rahul Simha, Bhagi Narahari, George Washington University, USA

TS74-2: Exploiting Macrodiversity in Dense Multihop Networks and Relay Channels
Matthew C Valenti, West Virginia University, USA, Nievor Correal, Motorola, USA

TS74-3: The Case for a Flexible-Header Protocol in Power Constrained Networks
Ignacio Solis, Katia Obrazcka, University of California at Santa Cruz, USA

TS74-4: Power Efficient Range Assignment in Ad hoc Wireless Networks
Ernst Althaus, Max-Planck Instut fur Informatik, Germany, Gruia Calinescu, Illinois Institute of Technology, USA, Ion Mandoiu, University of California at San Diego, USA, Sushil Prasad, Georgia State University, USA, Nickolay Tchervenski, Illinois Institute of Technology, USA, Alexander Zelikovsky, Georgia State University, USA

TS74-5: Energy Consumption Behavior and Performance of Directional Virtual Carrier Sensing Schemes
Chavalit Srithathaporn, Chien-Chung Shen, University of Delaware, USA

TS74-6: Power Distribution and Soft Handoff for Downlink Channels in Cellular CDMA Systems
Dongmel Zhao, McMaster University, Canada

TS74-7: A Novel Broadband Wireless OFDMA Scheme for Downlink in Cellular Communications
Jungiang Li, Hojin Kim, Yongseok Lee, Youngsoo Kim, Samsung Advanced Institute of Technology, Korea

• TS75 Data Forwarding in Sensor Networks I
Thursday, 20 March 2003
(14:00 - 15:30) – Room 213
Session Chair: Hongyi Wu, University of Louisiana, USA

TS75-1: Meshed Multipath Routing: an Efficient Strategy in Sensor Networks
Stefan Dulman, Tim Nieberg, Jian Wu, Paul Havinga, University of Twente, The Netherlands

TS75-2: Trade-Off between Traffic Overhead and Reliability in Multipath Routing for Wireless Sensor Networks
Sudas De, Chunming Qiao, State University of New York at Buffalo, USA, Hongyi Wu, University of Louisiana at Fayetteville, USA

TS75-3: Energy Efficient Routing with Guaranteed Delivery in Wireless Sensor Networks
Di Tian, Nicolas D. Georganas, University of Ottawa, Canada

TS75-4: Energy and Latency Performance of Geographic Random Forwarding for Ad hoc and Sensor Networks
Michele Zorzi, University of Ferrara, Italy, Ramesh Rask, University of California at San Diego, USA

• TS76 Data Forwarding in Sensor Networks II
Thursday, 20 March 2003
(16:00 - 17:30) – Room 213
Session Chair: Chunming Qiao, State University of New York at Buffalo, USA

TS76-1: VLM2: A Very Lightweight Mobile Multicast System For Wireless Sensor Networks
Anmol Sheth, Brian D Shucker, Richard Han, University of Colorado, USA

TS76-2: On Tree-Based Convergecasting in Wireless Sensor Networks
Valliappan Annamali, Sandeep K. S. Gupta, Arizona State University, USA, Loren Schwiebert, Wayne State University, USA

TS76-3: An Efficient Clustering-based Heuristic for Data Gathering and Aggregation in Sensor Networks
Koustuv Dasgupta, Konstantinos Kalpakis, Parag Namjoshi, University of Maryland Baltimore County, USA

TS76-4: Efficient Location Tracking Using Sensor Networks
H.T. Kung, Dario Vlah, Harvard University, USA