# Table of Contents

## Session 1: Protocol Engineering and Energy Efficiency in Wireless Networks

- Distributed MAC Protocol to Improve Energy and Channel Efficiency in MANET .................................................. 1  
  C.-Y. Liu, C.-H. Lin

- CGGC: Cached Greedy Geocast ........................................ 13  
  C. Maihöfer, R. Eberhardt, E. Schoch

- Design of Energy Efficient Wireless Networks Using Dynamic Data Type Refinement Methodology .......................... 26  
  S. Mamagkakis, A. Mpartzas, G. Pouviklis, D. Atienza, F. Catthoorn,  
  D. Soudris, J.M. Mendias, A. Thanailakis

- Context-Aware Group Communication in Mobile Ad-Hoc Networks .......... 38  
  D. Bottazzi, A. Corradi, R. Montanari

## Session 2: Mobility Management and Mobile Devices

- An Empirical Wi-Fi Based Location Mechanism for Urban Search and Rescue Operations ........................................... 48  
  R. Aldunate, M. Nussbaum, F. Pena-Mora

- Mobility-Aware Rendezvous Point for Mobile Multicast Sources .......... 62  
  I. Romdhani, M. Kellil, H.-Y. Lach, A. Bouabdallah, H. Bettahar

- An Address Configuration and Confirmation Scheme for Seamless Mobility Support in IPv6 Network ............................... 74  
  S.-H. Hwang, Y.-H. Han, S.-G. Min, C.-S. Hwang

## Session 3: Transport Layer and Congestion Control

- TCP Optimization through FEC, ARQ, and Transmission Power Tradeoffs ......................................................... 87  
  D. Barman, I. Matta, E. Altman, R. El Azouzi

- Sliding Mode Congestion Control in Differentiated Service Communication Networks ........................................... 99  
  H. Ebrahimirad, M.J. Yazdanpanah

- Application of Robust Fuzzy Adaptive Second-Order Sliding-Mode Control to Active Queue Management ....................... 109  
  M. Jalili-Kharaajoo
Graceful Degradation of Transport Layer in Mobile Internet
Y. Matsushita, T. Matsuda, M. Yamamoto

Session 4: Architecture, Implementation, and Experimentation
Implementing Ad Hoc to Terrestrial Network Gateways
J. McGee, M. Karir, J.S. Baras

Connecting Wireless Sensornets with TCP/IP Networks

Experimental Analysis of Heterogeneous Wireless Networks
G. Iannello, A. Pescapè, G. Ventre, L. Vollero

Session 5: Network and Protocol Modeling
High-Level Behavioral SDL Model for the IEEE 802.15.3 MAC Protocol
D. Dietterle, I. Babanskaja, K. Dombrowski, R. Kraemer

Performance of Phase Modulated Systems Using Fully Saturated Power Amplifiers
Q. Lu, Q. Liu

On Connectivity in Ad Hoc Networks under Jamming Using Directional Antennas and Mobility
G. Noubir

The Ad Hoc On-Demand Distance Vector Protocol: An Analytical Model of the Route Acquisition Process
M. Holück, J.B. Schmitt, C. Seipl, R. Steinmetz

Session 6: Wireless Network Scheduling and Analysis
A Scheduling Algorithm for a QoS Based Satellite Network
A. Saha

A Power-Allocation-Combined Scheduling Algorithm for CDMA-Based High-Rate Packet Data Systems
I. Koo, J. Zander, K. Kim

Analyzing the Performance of Data Users in Packet Switched Wireless Systems with Prioritized Voice Traffic
R. Srinivasan, J.S. Baras

Session 7: Multimedia Distribution and Group Communication
Adaptive Multimedia Streaming for Heterogeneous Networks
J. Korhonen
A Scalable and Adaptive Key Management Protocol for Group Communication ........................................... 260
Y. Challal, H. Bettahar, A. Bouabdallah

Smooth Fast Broadcasting (SFB) for Compressed Videos ................. 272
H.-F. Yu, H.-C. Yang, Y.-M. Chen, L.-M. Tseng, C.-Y. Kuo

Session 8: Service Discovery

Dynamic Management of UDDI Registries in a Wireless Environment of Web Services .................................................. 284
Z. Maamar, H. Yahyaoui, Q.H. Mahmoud, F. Akhter

An Agent-Based Architecture for Service Discovery and Negotiation in Wireless Networks ................................................. 295
E. Bircher, T. Braun

Author Index ................................................................. 307