MobiQuitous 2005
The Second Annual International Conference on Mobile and Ubiquitous Systems: Networking and Services
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www.mobiquitous.org
July 17-21, 2005
University of California, San Diego
La Jolla, California
## MobiQuitous 2005

Second Annual International Conference on Mobile and Ubiquitous Systems: Networking and Services

July 17-21, 2005
University of California, San Diego, La Jolla, CA

http://www.mobiquitous.org

### Organizing Committee

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<thead>
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<th>Role</th>
<th>Name</th>
<th>Institution</th>
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<td>General Co-Chairs</td>
<td>Dr. Ramesh Rao</td>
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<td>Dr. Jennifer Hou</td>
<td>University of Illinois, Urbana Champaign</td>
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Keynote Speakers

July 18, 2005
Dr. Robert Hecht-Nielsen
University of California, San Diego, Calit 2

July 19, 2005
Dr. Martin Cooper
Executive Chairman and Co-founder, ArrrayComm Inc

Panel Discussion -1

Security, cooperation and safety in mobile ubiquitous networks
Lead Panelist: Dr. Ahmed Helmy, University of Southern California, LA

Panel Discussion -2

Challenges – new areas of research
Dr. Tatsuya Suda, Univ. of California, Irvine
Dr. Jennifer Hou, Univ. of Illinois
Dr. Sharad Mehrotra, Univ. of California, Irvine
Dr. Mario Gerla, Univ of California, Los Angeles

Technical Symposium

I. Security and Resource Management
July 18,2005 10:30 AM – 12:00 Noon
A Reputation-based Mechanism for Isolating Selfish Nodes in Ad Hoc Networks
Mohamed Tamer Refaie, Vivek Srivastava, Luiz DaSilva, Mohamed Eltoweissy
Secure Reporting of Traffic Forwarding Activity in Mobile Ad Hoc Networks
Heesook Choi, William Enck, Jaesheung Shin, Patrick McDaniel, Thomas La Porta
Defend Against Cache Consistency Attacks in Wireless Ad Hoc Networks
Wensheng Zhang, Guohong Cao
An ECA-P Policy-based framework for managing ubiquitous computing Environments
Chetan Shiva Shankar, Anand Ranganathan, Roy Campbell

III. Security in Sensor Networks
July 19, 2005 10:30 AM – 12:00 Noon
SWAT: Small World-based Attacker Traceback in Ad-hoc Networks
Yongjin Kim, Ahmed Helmy
Correlation analysis for alleviating effects of inserted data in wireless sensor networks
Sapon Tanachaiwiwat, Ahmed Helmy
Efficient Aggregation of encrypted data in Wireless Sensor Networks
Claude Castelluccia, Einar Mykletun, Gene Tsudik
Practical Broadcast Authentication in Sensor Networks
Donggang Liu, Peng Ning, Sencun Zhu, S Jajodia

II. Routing in Ad Hoc Networks
July 18,2005 3:30 pm – 5:00 pm
Content-Based Routing in Mobile Ad Hoc Networks
Milenko Petrovic, Vinod Muthusamy, Hans-Arno Jacobsen
Multi-Constraint Dynamic Access Selection in Always Best Connected Networks
Bo Xing, Nalini Venkatasubramanian
Extended ZRP: Performance Evaluation of a Routing Layer Based Service Discovery Protocol for Mobile Ad Hoc Networks
Christopher Ververidis, George Polyzos
Market Models and Pricing Mechanisms in a Multihop Wireless Hotspot
Kai Chen, Zhenyu Yang, Christian Wagener, Klara Nahrstedt

IV. Handoff and MAC protocols
July 19, 2005 4:00 PM – 5:30 PM
PPP Migration: A Technique for Low-Latency Handoff in CDMA2000 Networks
Anand Kagalkar, Sarit Mukherjee, Sampath Rangarajan, Katherine Guo
A Relay Based Multi-rate MAC Protocol for Ad-hoc Networks
Wellin Zeng, Haixia Tan, Tatsuya Suda
MPA assisted Optimized Proactive Handoff Scheme
Ashutosh Dutta, Yoshihiro Ohba, Kenichi Taniuchi, Henning Schulzrinne
An Enhanced Dynamic Framed Slotted ALOHA Algorithm for RFID Tag Identification
Su-Ryun Lee, Sung-Don Joo, Chae-Woo Lee
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V. Middleware
July 19, 2005 4:00 PM – 5:30 PM
Loosely Coupling Ontological Reasoning with an Efficient Middleware for Context-awareness
Claudio Bettini, Alessandra Agostini, Daniele Riboni

Contextualizing Applications via Semantic Middleware
Ora Lassila, Deepali Khushraj

Plethora: A Framework for Converting Generic Applications to Run in a Ubiquitous Environment
Zahid Anwar, Jalal Al-Muhtadi, Roy H. Campbell

Exploiting co-location history for efficient service selection in ubiquitous computing systems
Alexandros Karypis, Spyros Lalis

VI. Querying
July 20, 2005 8:30 AM – 10:00 AM
On Incremental Processing of Continual Range Queries for Location-Aware Services and Applications
Kun-Lung Wu, ShyhKwei Chen, Philip Yu

Decentralizing Query Processing in Sensor Networks
Ross Rosemark, Wang-Chien LEE

Energy Efficient Processing of K Nearest Neighbor Queries in Location-aware Sensor Networks
Julian Winter, Yingqi Xu, Wang-Chien LEE

A location aware mobile tourist guide selecting and interpreting sights and services by context matching
Klaus ten Hagen, Ronny Kramer

IX. Locationing and Mobility
Jul 20, 2005 10:30 AM – 12:30 PM
Multivariate Analysis for Probabilistic WLAN Location Determination Systems
Moustafa Youssef, Mohamed Abdallah, Ashok Agrawala

Proxy-based Hand-Off of Web Sessions for User Mobility
Eugenio Zimeo, Gerardo Canfora, Giuseppe Di Santo, Gabriele Venturi, Maria Vittoria Zito

WebProfiles: A Negotiation Model for User Awareness in Personal Area Networks
Juan Ignacio Vazquez, Diego Lopez de Ipina

A SIP-based Architecture model for Contextual Coalition Access Control for Ubiquitous Computing
Ramiro Liscano, Kaining Wang

A Cooperative Learning Framework for Mobility-Aware Resource Management in Multi-Inhabitant Smart Homes
Nirmalya Roy, Abhishek Roy, S. K. Das, Kalyan Basu

VI. Routing in Ad Hoc Networks
July 20, 2005 8:30 AM – 10:00 AM
A Generalization of the Face Routing Algorithm to Some Non-Planar Networks
Jaroslav Opatrny, Sabeel Ansari, Lata Narayanan

Routing in MANETs with Address Conflicts
Kwan-Wu Chin, Darryn Lowe, William

Transparent Heterogeneous Mobile Ad Hoc Networks
Patrick Stuedi, Gustavo Alonso

SRDP: Securing Route Discovery in DSR
Gene Tsudik, Jihye Kim

VIII. Network Architectures
July 20, 2005 10:30 AM – 12:30 PM
Decentralized Optimization of Dynamic Bluetooth Scatternets
Sewook Jung, Csaba Kiss Kall’o, Mario Gerla, Mauro Brunato

Efficient Continuous Mapping in Sensor Networks Using Isolines
Ignacio Solis, Katia Obrazcza

A Peer-to-Peer Architecture for Context Lookup
Tao Gu

Community-Based Asynchronous Wakeup Protocol for Wireless Peer-to-Peer File Sharing Networks
Yu Kwong Kwok

X. Ad Hoc Networks
July 20, 2005 1:30 PM – 3:00 PM
Multi-path Admission Control for Mobile Ad hoc Networks
Anders Lindgren, Elizabeth Belding-Royer

Personal Access Point for IEEE 802.11 Systems
Lei Zan, Jidong Wang, Lichun Bao

On Upper Bound and Heuristics for Multicast Lifetime Maximization Using Dynamic Routing in Energy-Limited Wireless Ad Hoc Networks
Song Guo

A Feedback Control Scheme for Resource Allocation in Wireless Multi-hop Ad Hoc Networks
Wenbo He, Xue Liu, Klara Nahrstedt
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Workshops

July 19, 2005

**Wireless Sensor Networks** : SenMetrics : senmetrics.org

**Peer-to-Peer Systems** : HOT-P2P : hot-p2p.org
**Peer-to-Peer Knowledge Management** : P2PKM : p2pkm.org

**Vehicle-to-Vehicle Communications** : V2VCOM :: v2vcom.org

Poster Session II
July 19, 2005 10:00 AM – 12:30 PM

**KTR: an Efficient Key Management Scheme For Air Access Control**
Qijun Gu, Peng Liu, Wang-Chien LEE, Chao-Hsien Chu

**Temporal Transcoding for Mobile Video Communication**
Francesca Martelli, Maurizio A. Bonuccelli, Francesca Lonetti

**Smart Components in a Pervasive Messaging Service**
Wolfgang Narzt, Gustav Pomberger, Alois Ferscha, Dieter Kolb, Reiner Muller, Jan Wieghardt, Horst Hortner, Roland Haring, Christopher Lindinger

**Embedded SW Design Issues for Distributed Applications on Mobile Terminals**
Giovanni Perbellini, Stefano Martini, Franco Fummi, Fabio Ricciato, Maura Turolla

**An Efficient Peer-to-Peer Lookup Protocol for Location-Aware Mobile Ad Hoc Networks**
Daewoong Kim, Chanik Park

**Design and Implementation of a Software Infrastructure for Integrating Sentient Artefacts**
Fahim Kawsar, Kaori Fujinami, Tatsuo Nakajima

**Geographically Bound Mobile Agent In MANET**
Kenji Tei, Nobukazu Yoshioka, Yoshiaki Fukazawa, Shinichi Honiden

**Secure Address Auto-configuration for Mobile Ad Hoc Networks**
Pan Wang, Douglas Reeves, Peng Ning