# **IEEE ICCCN2007 Technical Program**

16th International Conference on Computer Communications and Networks

(<a href="http://www.icccn.org/icccn07/">http://www.icccn.org/icccn07/</a>)



# August 13 – 16, 2007



Turtle Bay Resort, Honolulu, Hawaii, USA

|                        |                 | KUILIMA I/II   | KUILIMA III  | SUNSET   | KAHUKU II   |  |  |
|------------------------|-----------------|--|--|--|---|--|--|
|                        | 8:00-8:10       | Open Remarks (Gener  | al Chair: Dr. Katherine Gu   | o, Technical Program Cha   | air: Dr. Haohong Wang)  |  |  |
|                        | 8:10-9:20       | Keynote I: Managing Digital Objects on the Internet (Speaker: Dr. Robert Kahn, CNRI, USA, Chair: Dr. Katherine Guo)  |  |  |   |  |  |
|                        | 9:40-11:40      | MA1:Cross-layer<br>Design and<br>Optimization (Chair:<br>Dr.Lavy Libman)   | MA2: Wireless and<br>Mobile Network<br>Architecture (Chair: Dr.<br>Katherine Guo)  | MA3: Wireless Ad-hoc<br>and Sensor Network I<br>(Chair: Dr. Tian He)   | MA4: Peer-to-Peer and<br>Grid networking<br>(Chair: Dr. Xiang-Gen<br>Xia)   |  |  |
|                        | 13:00-<br>14:20 | MP1: Signal<br>Processing for<br>Communicaitons I<br>(Chair: Dr. Danilo<br>Gligoroski)   | MP2: Computer<br>Architecture for<br>networking (Chair: Dr.<br>Biswanath Mukherjee)  | MP3: Wireless Ad-hoc<br>and Sensor Network II<br>(Chair: Dr. Ivan<br>Stojmenovic)  | MP4: Optical<br>networking I (Chair: Dr.<br>Vinod Vokkarane)  |  |  |
| Monday<br>(August 13)  | 14:40-<br>15:20 | MP5: Distinguished<br>Position Talk I: Space-<br>time coding for MIMO<br>and Cooperative<br>Systems (Speaker: Dr.<br>Xiang-Gen Xia, Chair:<br>Dr. Asis Nasipuri) | MP6: Distinguished Position Talk II: Network coding - Theory and Applications (Speaker: Dr. SY. Robert Li, Chair: Dr. Yiming Ji) | MP7: Distinguished Position Talk III: Sensor actuator networking: Merging wireless sensor and ad hoc networks (Speaker: Dr. Ivan Stojmenovic, Chair: Dr. Jun-Hong Cui) | MP8: Distinguished Position Talk IV: Creating New Services and Service-Level Agreements (SLAs) in Telecom Networks (Speaker: Dr. Biswanath Mukherjee, Chair: Dr. Vinod Vokkarane) |  |  |
|                        | 15:30-<br>16:50 | MP9: Distinguished Position Talk XI: Ethernet vs. Ethernot: Fad or Fashion? (Speaker: Dr. Wu-chun Feng, Chair: Byrav Ramamurthy)                                 | MP10: Broadband<br>Wireless Access<br>(Chair: Dr. Rudra<br>Dutta)  | MP11: Wireless Ad-<br>hoc and Sensor<br>Network III (Chair: Dr.<br>Jun-Hong Cui)   | MP12: Optical<br>networking II (Chair:<br>Dr. Galen Sasaki)   |  |  |
|                        | 17:00-<br>18:00 | Panel Discussion I: Ci   | Panel Discussion I: Cross-Layer Optimized Wireless Networks and Multimedia Communications (Chair: Dr. Xi Zhang)                  |  |   |  |  |
|                        | 18:30-<br>20:00 |  | Conference Reception   |  |   |  |  |
| Tuesday<br>(August 14) | 8:00-9:10       | Keynote II: Research Challenges in Cognitive Radio Networks (Speaker: Dr. Vijay K. Bhargava, University of British Columbia, Canada, Chair:Dr. Xi Zhang)         |  |  |   |  |  |

|                          | 9:30-11:30      | TA1: Qos control and<br>Traffic modeling<br>(Chair: Dr. Qusay H.<br>Mahmoud)  | TA2: Emerging<br>Networking<br>Technology (Chair: Dr.<br>Xingang Guo)  | TA3: Wireless<br>Communications<br>(Chair: Dr. Chang<br>Wen Chen)  | TA4: Best Paper<br>Competition (Chair: Dr.<br>Chin-Tser Huang)  |  |  |
|--------------------------|-----------------|---|--|--|---|--|--|
|                          | 13:00-<br>14:20 | TP1: Multimedia<br>Communications<br>(Chair: Dr. Zhu Li)  | TP2: Pervasive<br>Computing and Mobile<br>Networking I (Chair:<br>Dr. Ben Y. Zhao)   | TP3: Optical<br>Networking III (Chair:<br>Dr. Vincent W. S.<br>Chan)   | TP4: Internet Services<br>(Chair: Dr. Hideki<br>Tode)   |  |  |
|                          | 14:40-<br>15:20 | TP5: Distinguished Position Talk V: Recent Advances in Video Adaptation for Mobile Device Access (Speaker: Dr. Changwen Chen, Chair: Dr. Zhu Li)                  | TP6: Distinguished Position Talk VI: Inhabitant Activity Recognition and Context Modeling in Smart Environments (Speaker: Dr. Sajal Das, Chair: Dr. Ben Y. Zhao) | TP7: Distinguished Position Talk VII: Some Interesting Research Problems in Optical Networks (Speaker: Dr. Vincent W.S. Chan, Chair: Dr. Galen Sasaki) | TP8: Distinguished Position Talk VIII: Multimedia Confererencing in mobile ad hoc networks: Challenges and early approaches (Speaker: Dr. Roch Glitho, Chair: Dr. Naoki Wakamiya) |  |  |
|                          | 15:30-<br>16:50 | TP9: Broadband<br>Networking and<br>Protocols (Chair: Dr.<br>Baek-Young Choi)   | TP10: Pervasive<br>Computing and Mobile<br>Networking II (Chair:<br>Dr. Sajal Das)   | TP11: Network<br>Security I (Chair: Dr.<br>Tilman Wolf)  | TP12: Network Algorithm and Performance Evaluation I (Chair: Dr. Naoki Wakamiya)  |  |  |
|                          | 17:00-<br>18:00 | Panel Discussion II: Convergence of Communication Network with Media and Social Interactions: Technical Challenges and Business Opportunities (Chair: Dr. Zhu Li) |  |  |   |  |  |
| 18:30-<br>21:00          |                 |   | Dinner/Banquet/Awards  |  |   |  |  |
| Wednesday<br>(August 15) | 8:00-9:10       | Keynote III: Challenges and Opportunities in Video Transmission (Speaker: Dr. Aggelos Katsaggelos, Northwestern University, USA, Chair: Dr. Song Ci)              |  |  |   |  |  |
|                          | 9:30-11:30      | WA1: Network Security<br>II (Chair: Dr. K.P.<br>Subbalakshmi)   | WA2: Network<br>Algorithm and<br>Performance<br>Evaluation II (Chair:<br>Dr. Sergey Gorinsky)  | WA3: Parallel and<br>Distributed Computing<br>(Chair: Dr. Debanjan<br>Saha)  | WA4: General Track<br>(Chair: Dr. Arunita<br>Jaekel)  |  |  |
|                          | 11:40-<br>12:20 | WP1: Distinguished Position Talk IX: Tracing and mitigating distrubited denial of service attacks (Speaker: Dr. Nirwan Ansari, Chair: Dr. K.P. Subbalakshmi)      | WP2: Distinguished Position Talk X: Stream processing networks (Speaker: Dr. Zhen Liu, Chair: Dr. Tao Xie)   | WP3: Meet the ICCCN 2008 Chairs (Informal discussion for improving the future ICCCN conferences)   | WP4: Distinguished Position Talk XII: Network Resilience: Using One's Neighbors Wisely in Cooperative Networks (Speaker: Dr. Dan Rubenstein, Chair: Dr. Arunita Jaekel)           |  |  |
|                          | 13:40-<br>14:40 | WP5: Distinguished Position Talk XIII: Internet Applications and Services for Digital Communities (Speaker: Dr. Debanjan Saha, Chair: Dr. Jorge A. Cobb)          | WP6: NSF Funding<br>Forum (Speaker: Dr.<br>Jie Wu, Chair: Dr. E.<br>K. Park)   | WP7: ANC Workshop<br>I: Network Security<br>(Chair: Dr. Nirwan<br>Ansari)  | WP8: ANC Workshop<br>II: Network Security<br>(Chair: Dr. Zhen Liu)  |  |  |
|                          | 15:00-<br>16:00 | Panel Discussion III: Enhanced Multimedia User Experience in 4G Networks (Chair: Dr. Khaled El-Maleh)   |  |  |   |  |  |

|  | 16:20-<br>18:00 | WP9: ANC Workshop<br>III: Multimedia<br>Processing and<br>Communications<br>(Chair: Dr. Chia-Wen<br>Lin) | WP10: ANC Workshop<br>IV: Wireless Ad-hoc<br>and Sensor Networks<br>(Chair: Dr. Tarek<br>Abdelzaher) | WP11: ANC<br>Workshop V: Wireless<br>Communications<br>(Chair: Dr. Lin Guan) | WP12: ANC Workshop<br>VI: Network Algorithms<br>and Systems (Chair:<br>Dr. Dan S. Rubenstein) |
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|                         |                 | KUILIMA I/II  | KUILIMA III  | HAWAII   | KAHUKU II  | KAHUKU I   |
|-------------------------|-----------------|---|--|--|--|--|
|                         | 8:30-9:30       | Keynote IV: Quality Assurance and Adaptation: A Key to Stress-Resilient Internet Services (Speaker: Dr. Cheng-Zhong Xu, Wayne State University, USA, Chair: Dr. Xiaobo Zhou, University of Colorado at Colorado Springs, USA) |  |  |  |  |
|                         | 9:30-9:40       |   | W  | orkshop Open Remarks   |  | _  |
| Thursday<br>(August 16) | 10:00-<br>12:00 | WiMAN I: Routing, Scheduling, and Channel Assignment I (Chair: Dr. Frank Reichenbach)   | WiMAN II: MAC<br>Protocols (Chair:<br>Dr. Alistair<br>Munro)                       | IMAP I: Video Coding<br>and Analysis (Chair:<br>Dr. Gokce Dane)  | PMECT I: Performance Modeling of Internet and QoS (Chair: lain Phillips)   | DSS I: MAC,<br>Mobility and<br>Power<br>Management<br>(Chair: Dr.<br>John<br>McEachen) |
|                         | 13:30-<br>14:30 | WiMAN III: Invited Talk: Ad Hoc<br>Networks for the Cyber-Physical<br>Frontier (Speaker: Dr. Tarek<br>Abdelzaher)   |  | IMAP II: Invited Talk: Perception Is Reality: Visual Quality Evaluation and Beyond (Speaker: Dr. Weisi Lin, Chair: Dr. Shiqian Wu) | Modeling of and  | 51.15.   |
|                         | 14:30-<br>15:30 | WiMAN IV: Wireless Communications and Antennas (Chair: Dr. Edoardo Biagioni)  | WiMAN V: Routing, Scheduling, and Channel Assignment II (Chair: Dr. Karoly Farkas) | IMAP III: Multimedia<br>Quality Evaluation<br>(Chair: Dr. Weisi Lin)   | Mobile Networks<br>(Chair: Dr.<br>Polychroni<br>Koutsakis)                 | Applications<br>(Chair: Dr. Yan<br>Bai)  |
|                         | 16:00-<br>18:00 | WiMAN VI: Architecture, Cross-layer Optimization, and Resource Allocation Models (Chair: Dr. Yong Wang)   | WiMAN Workshop VII: Wireless Sensor and Ad Hoc Networks (Chair: Dr. Liqiang Zhang) | IMAP IV: Media<br>Processing for<br>Intelligent Video<br>Surveillance (Chair:<br>Dr. Chiou-Ting Hsu,<br>Dr.Jun-Wei Hsieh)          | PMECT III: Performance Modeling II and Platforms (Chair: Dr. Xingang Wang) | DSS III:<br>Security and<br>Privacy (Chair:<br>Dr.Junichi<br>Suzuki)                   |

# Monday, August 13, 2007

7:30 Registration Desk Opens

8:00-8:10 Opening Ceremony (General Chair: Dr. Katherine Guo, Technical Program Chairs: Dr. Haohong Wang, KUILIMA I/II)

8:10 – 9:20 Keynote I: Managing DIGITAL OBJECTS on the Internet (KUILIMA I/II)

Keynote Speaker: Dr. Robert Kahn, Corporation for National Research Initiatives

Chair: Katherine Guo, Alcatel-Lucent Bell-Labs, USA

### Monday 9:40 - 11:40

Session MA1: Cross-layer Design and Optimization (KUILIMA I/II)

Chair: Dr. Lavy Libman, National ICT Australia, Australia

| 1569032861 | A New Perspective of<br>Cross-layer<br>Optimization for<br>Wireless<br>Communication over<br>Fading Channel | Xiaofeng Bai (The University of<br>Western Ontario, CA); Abdallah Shami<br>(The University of Western Ontario,<br>CA)   |
|------------|---|---|
| 1569036705 | Opportunistic<br>Scheduling for Delay<br>Sensitive Flows in<br>Wireless Networks                            | Yu Wu (National University of Defense<br>Technology, CN)  |
| 1569036709 | Computationally Efficient Cross-Layer Algorithm for Fair Dynamic Bandwidth Allocation                       | Antoni Morell (Universitat Autonoma de<br>Barcelona (UAB), ES); Gonzalo Seco<br>Granados (Universitat Autonoma de<br>Barcelona, ES); Maria-Angeles<br>Vazquez Castro (Universidad<br>Autónoma de Barcelona, ES) |
| 1569032181 | Infrastructure for Cross-<br>Layer Designs<br>Interaction   | Zhijiang Chang (Technical University of<br>Delft, NL); Georgi Gaydadjiev<br>(Technical University of Delft, NL);<br>Stamatis Vassiliadis (TU Delft, NL)   |

| 1569036791 | A Unified Software<br>Architecture to Enable<br>Cross-Layer Design in<br>the Future Internet | Ilia Baldine (RTI International, US);<br>Manoj Vellala (North Carolina State<br>University, US); Anjing Wang (North<br>Carolina State University, US); George<br>Rouskas (North Carolina State<br>University, US); Rudra Dutta (North<br>Carolina State University, US); Dan<br>Stevenson (MCNC-RDI, US) |
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Session MA2: Wireless and mobile network architecture (KUILIMA III)

Chair: Dr. Katherine Guo, Alcatel-Lucent Bell-Labs, USA

| 1569033233<br>Invited<br>Paper | Localized detection of k-<br>connectivity for wireless<br>ad hoc, actuator and<br>sensor networks | Ivan Stojmenovic (University of Ottawa, CA)  |
|--------------------------------|---|--|
| 1569030613                     | Interference Mitigation Using Spectrum Sensing  | Srikathyayani Srikanteswara (Intel, US); Christian Maciocco (Intel Corp., US)  |
| 1569032333                     | Global Path-Cache<br>Technique for Fast<br>Handoffs in WLANs                                      | Weetit Wanalertlak (Oregon State<br>University, US); Ben Lee (Oregon<br>State University, US)  |
| 1569032917                     | Efficient Real-Time<br>Support for Hybrid Tasks<br>in a Sensor Node<br>Platform                   | Sungwoo Tak (Pusan National University, KR)  |
| 1569036679                     | MBAL: A Mobile Beacon-<br>Assisted Localization<br>Scheme for Wireless<br>Sensor Networks         | Kyunghwi Kim (Korea University,<br>KR); Wonjun Lee (Korea University,<br>Korea, KR)  |
| 1569036859                     | Travel-light: A Model for<br>the Dynamic Assembly of<br>Mega Machines                             | Li Gao (University of Alabama, US);<br>Jingyuan Zhang (University of<br>Alabama, US); Danyang Zhang (New<br>Mexico Highlands University, US) |

Session MA3: Wireless Ad-hoc and Sensor Networks I (SUNSET)

Chair: Dr. Tian He, University of Minnesota, USA

| 1569041897<br>Invited<br>Paper | A Caching-Based<br>Approach to Routing in<br>Delay-Tolerant<br>Networks                   | Dan Henriksson (University of Illinois at<br>Urbana-Champaign, US); Tarek<br>Abdelzaher (University of Illinois,<br>Urbana Champaign, US); Raghu Kiran<br>Ganti (University of Illinois at Urbana-<br>Champaign, US) |
|--------------------------------|---|--|
| 1569045160<br>Invited<br>Paper | Localized and<br>Configurable Topology<br>Control in Lossy<br>Wireless Sensor<br>Networks | Guoliang Xing (Cityu University of Hong<br>Kong, HK); Chenyang Lu (Washington<br>University in St. Louis, US); Robert<br>Pless (Washington University in<br>St.Louis, US)  |
| 1569031222                     | SpotMAC: A Pencil-<br>Beam MAC for<br>Wireless Mesh<br>Networks                           | Kwan-Wu Chin (University of Wollongong, AU)  |
| 1569032789                     | Channel-Specific<br>Wireless Sensor<br>Network Path Analysis                              | Lance Doherty (Dust Networks, US)  |
| 1569032991                     | Measurement of<br>Energy Costs of<br>Security in Wireless<br>Sensor Nodes                 | Chih-Chun Chang (The George<br>Washington University, US); David<br>Nagel (The George Washington<br>University, US); Sead Muftic (George<br>Washington University, US)   |
| 1569032997                     | Bandwidth-adaptive<br>Clustering for Mobile<br>Ad Hoc Networks                            | Yong Wang (Washington State<br>University, US); Min Kim (Washington<br>State University, US)   |

Session MA4: Peer-to-Peer and Grid networking (KAHUKU II)

Chair: Dr. Xiang-Gen Xia, University of Delaware, USA

| 1569042163 Understanding Peerlevel Performance in BitTorrent: A Paper Measurement Study | Amir Rasti (University of Oregon, US);<br>Reza Rejaie (University of Oregon,<br>US) |
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| 1569029383 | Enabling Keyword<br>Search and Similarity<br>Search in Small-World-<br>based P2P Systems | Ching-Ju Lin (National Taiwan<br>University, TW); Shou-Chun Tsai<br>(National Taiwan University, TW); Yi-<br>Ting Chang (National Taiwan<br>University, TW); Cheng-Fu Chou<br>(National Taiwan University, TW) |
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| 1569032294 | Scalable Peer-to-Peer<br>File Sharing with<br>Efficient Complex Query<br>Support         | Yan Li (University of Connecticut, US),<br>Jyoti Ahuja<br>(Yahoo, India), Li Lao (Google, US),<br>Jun-Hong Cui<br>(University of Connecticut, US)  |
| 1569032971 | SCUBE: A DoS-<br>Resistant Distributed<br>Search Protocol                                | Souvik Ray (Iowa State University, US); Zhao Zhang (Iowa State University, US)   |
| 1569033001 | Grid Computing on<br>Massively Multi-Users<br>Online Platform                            | Allen Yen Cheng Yu (Ryerson<br>University, CA); Eddie Law (Ryerson<br>University in Toronto, CA)   |
| 1569035671 | Network-aware<br>SuperPeers-Peers<br>Geometric Overlay<br>Network                        | Eng Keong Lua (University of Cambridge, UK); Xiaoming Zhou (Delft University of Technology, NL)  |

# Monday 13:00 - 14:20

Session MP1: Signal Processing for Communications I (KUILIMA I/II)

Chair: Dr. Danilo Gligoroski, Norwegian University of Science and Technology, NO

| 1569041281<br>Invited<br>Paper | Adaptive Bit Loading for Coded MIMO-OFDM                                    | Harry Chen (University of British<br>Columbia, CA); Lutz Lampe<br>(University of British Columbia, CA);<br>Robert Schober (University of British<br>Columbia, CA) |
|--------------------------------|---|---|
| 1569032831                     | Serial Sum-product<br>Architecture for Low<br>Density Parity Check<br>Codes | Ruwan Ratnayake (Harvard<br>University, US); Erich Haratsch<br>(Agere Systems, US); Gu-Yeon Wei<br>(Harvard University, US)                                       |
| 1569036799                     | Performance of a Robust   | Asis Nasipuri (University of North  |

|            | Filter-based Approach<br>for Contour Detection in<br>Wireless Sensor<br>Networks | Carolina at Charlotte, US); Hadi Alasti<br>(University of North Carolina at<br>Charlotte, US); William Armstrong<br>(The University of North Carolina at<br>Charlotte, US)                                 |
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| 1569034271 | Error-Correcting Codes<br>Based on Quasigroups                                   | Danilo Gligoroski (Norwegian<br>University of Science and<br>Technology, NO); Smile Markovski<br>(Faculty of Natural Sciences - Skopje,<br>MK); Ljupco Kocarev (University of<br>California San Diego, US) |

Session MP2: Computer Architecture for Networking and Communications (KUILIMA III)

Chair: Dr. Biswanath Mukherjee, UC Davis, USA

| 1569041903<br>Invited<br>Paper | Lagniappe: Multi-*<br>Programming Made<br>Simple                           | Taylor Riche (University of Texas at<br>Austin, US); Greg Lavender<br>(University of Texas at Austin, US);<br>Harrick Vin (University of Texas at<br>Austin, US) |
|--------------------------------|--|--|
| 1569031313                     | Challenges for Scalable<br>Networking in a<br>Virtualized Server           | Greg Regnier (Intel Corp, US); John Wiegert (Intel, US); Jeff Jackson (Intel, US)  |
| 1569032737                     | Bloom Filter Accelerator for String Matching                               | Mehrdad Nourani (University of Texas at Dallas, US)  |
| 1569034419                     | Packet Buffer<br>Management for a High-<br>Speed Network<br>Interface Card | Yul Chu (Mississippi State University, US)   |

Session MP3: Wireless Ad-hoc and Sensor Networks II (SUNSET)

Chair: Dr. Ivan Stojmenovic, University of Ottawa, Canada

| 1569033011 | A Study of Wireless<br>Mesh Network | Youiti Kado (NICT, JP); Azman Lim (National Institute of Information and |
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|            | Routing Protocols<br>for Push-to-Talk<br>Traffic                                      | Communications Technology (NICT), JP);<br>Bing Zhang (National Institute of<br>Information and Communications<br>Technology, JP)   |
|------------|---|--|
| 1569036479 | Distributed Channel<br>Access Scheduling<br>for Ad Hoc Networks<br>using Virtual MIMO | Xin Wang (University of California, Santa<br>Cruz, US); J.j. Garcia-Luna-Aceves<br>(University of California at Santa Cruz,<br>US) |
| 1569036513 | Heartbeat Driven<br>Medium Access<br>Control for Body<br>Sensor Networks              | Jindong Tan (Michigan Technological<br>University, US); Huaming Li (Michigan<br>Technological University, US)                      |

Session MP4: Optical Networking I (KAHUKU II)

Chair: Dr. Vinod Vokkarane, University of Massachusetts-Dartmouth, USA

| 1569043197<br>Invited<br>Paper | Blocking Analysis of<br>Limited-Reconfigurable<br>Optical Networks                      | Onur Turkcu (The George Washington University, US); Suresh Subramaniam (The George Washington University, US)   |
|--------------------------------|---|---|
| 1569043245<br>Invited<br>Paper | Multi-Resource<br>Manycast over Optical<br>Burst Switched<br>Networks                   | Qingya She (University of Texas at Dallas, US); Xiaodong Huang (University of Texas at Dallas, US); Nipatjakorn Kannasoot (University of Texas at Dallas, US); Qiong Zhang (Arizona State University, US); Jason Jue (University of Texas-Dallas, US) |
| 1569032105                     | A Min-Max<br>Optimization Problem<br>on Traffic Grooming in<br>WDM Optical Networks     | Yong Wang (Simon Fraser University, CA); Qianping Gu (Simon Fraser University, CA)  |
| 1569032313                     | New Optical VPN Configuration using Wavelength Routers in a WDM-Passive Optical Network | Kimio Oguchi (Seikei University, JP);<br>Kohei Okada (Seikei University, JP);<br>Shohei Terada (Seikei University, JP);<br>Kunio Tojo (Seikei University, JP)   |

Session MP5: Distinguished Position Talk I (KUILIMA I/II)

Chair: Dr. Asis Nasipuri, University of North Carolina, Charlotte, USA

Speaker: Prof. Xiang-Gen Xia, University of Delaware, USA

Title: Space-time coding for MIMO and Cooperative Systems

Session MP6: Distinguished Position Talk II (KUILIMA III)

Chair: Dr. Yiming Ji, University of South Carolina, Beaufort, USA

Speaker: Prof. S.-Y. Robert Li, Chinese University of Hong Kong, China

Title: Network coding - Theory and Applications

Session MP7: Distinguished Position Talk III (SUNSET)

Chair: Dr. Jun-Hong Cui, University of Connecticut, USA

Speaker: Prof. Ivan Stojmenovic, University of Ottawa, Canada

Title: Sensor actuator networking: Merging wireless sensor and ad hoc networks

Session MP8: Distinguished Position Talk IV (KAHUKU II)

Chair: Dr. Vinod Vokkarane, University of Massachusetts-Dartmouth, USA

Speaker: Prof. Biswanath Mukherjee, Uniersity of California, Davis, USA

Title: Creating New Services and Service-Level Agreements (SLAs) in Telecom

Networks

## Monday 15:30 - 16:50

Session MP9: Distinguished Position Talk XI (KUILIMA I/II)

Chair: Byrav Ramamurthy, University of Nebraska-Lincoln, USA

Speaker: Prof. Wu-chun Feng, Virginia Tech, USA

Title: Ethernet vs. Ethernot: Fad or Fashion?

Session MP10: Broadband Wireless Access (KUILIMA III)

Chair: Dr. Rudra Dutta, North Carolina State University, USA

| 1569026845 | Maintaining Routing<br>Tree in IEEE 802.16<br>Centralized Scheduling<br>Mesh Networks                                    | Yanbin Lu (Institute of Computing<br>Technology, Chinese Academy of<br>Sciences, CN); Guoqing Zhang<br>(Institute of Computing Technology,<br>Chinese Academy of Sciences, CN)   |
|------------|--|--|
| 1569031990 | Interleaving Techniques<br>for W-CDMA Linear<br>Equalization Receivers   | Joao Silva (Lisbon Technical University (IST), PT); Rui Dinis (ISR-IST, Technical University of Lisbon, PT); Nuno Souto (ISCTE/Instituto de Telecomunicações, PT); Francisco Cercas (ISCTE - Instituto Superior das Ciências do Trabalho e da Empresa, PT) |
| 1569032669 | Optimal Sniffers Deployment On Wireless Indoor Localization  | Yiming Ji (University of South Carolina<br>Beaufort, US); Saad Biaz (Auburn<br>University, US); Shaoen Wu (Auburn<br>University, US); Bing Qi (Auburn<br>University, US)   |
| 1569036901 | Human Perceivable Authentication: An Economical Solution for Security Associations in Short-Distance Wireless Networking | Men Long (Intel Corporation, US); David Durham (Intel Corporation, US)   |

Session MP11: Wireless Ad-hoc and Sensor Networks III (SUNSET)

Chair: Dr. Jun-Hong Cui, University of Connecticut, USA

| 1569036514 | Performance            | Lei Pan (University of Louisiana at   |
|------------|------------------------|---------------------------------------|
|            | Evaluation of The SYN- | Lafayette, US); Hongyi Wu (University |

|            | MAC Protocol in<br>Multihop Wireless<br>Networks   | of Louisiana at Lafayette, US)   |
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| 1569036615 | Energy-Efficient Fault-<br>Tolerant Mechanism for<br>Clustered Wireless<br>Sensor Networks   | Lai Yongxuan (Renmin University of<br>China, CN); Chen Chen (Renmin<br>University of China, CN)  |
| 1569036753 | Enhanced<br>Synchronized Medium<br>Access Control<br>Protocol for Wireless<br>Ad Hoc Network | Xiaojun Cao (Rochester Institute of<br>Technology, US); Shenbo Liu<br>(Rochester Institute of Technology,<br>US); Lei Pan (University of Louisiana at<br>Lafayette, US); Hongyi Wu (University<br>of Louisiana at Lafayette, US) |
| 1569036889 | Evaluating Mobile Ad<br>Hoc Networks: A<br>Performance Index and<br>Statistical Model        | Ikhlas Ajbar (University of Louisiana at<br>Lafayette, US); Dmitri Perkins<br>(University of Louisiana at Lafayette,<br>US)  |

Session MP12: Optical Networking II (KAHUKU II)

Chair: Dr. Galen Sasaki, University of Hawaii, USA

| 1569032339 | Protected Working<br>Lightpath Envelope: a<br>New Paradigm for<br>Dynamic Survivable<br>Routing | Rong He (National University of<br>Singapore, SG); Kee Chaing Chua<br>(National University of Singapore, SG);<br>Mohan Gurusamy (National University of<br>Singapore, SG)   |
|------------|---|---|
| 1569032439 | An Approximation Algorithm for Provisioning of Survivable Multicast Sessions in WDM Networks    | Hongbin Luo (University of Electronic<br>Science and Technology of China, CN);<br>Le Min Li (University of Electronic<br>Science and Technology of China, CN)   |
| 1569032580 | New Techniques for<br>Efficient Traffic<br>Grooming in WDM<br>Mesh Networks                     | Arunita Jaekel (School of Computer<br>Science, University of Windsor, CA);<br>Ying Chen (University of Windsor, CA);<br>Ataul Bari (School of Computer Science,<br>University of Windsor, CA); Subir<br>Bandyopadhyay (Scool of Computer<br>Science, University of Windsor, CA) |

1569032893

An overlay approach for enabling access to dynamically shared backbone GMPLS networks Xiuduan Fang (University of Virginia, US); Malathi Veeraraghavan (University of Virginia, US); Mark McGinley (University of Virginia, US); Robert Gisiger (University of Virginia, US)

## Monday 17:00 – 18:00: Panel Session (KUILIMA I/II)

Chair: Dr. Xi Zhang, Texas A&M University, USA

Title: Cross-Layer Optimized Wireless Networks and Multimedia Communications

Panel lists:

Dr. Vijay K. Bhargava, University of British Columbia, Canada (IEEE Fellow)

Dr. Aggelos Katsaggelos, Northwestern University, USA (IEEE Fellow)

TBA (2 more experts)

Conference Reception: Monday, August 13, 2007, 18:30 – 20:00 (KAHUKU Terrace)

# Tuesday, August 14, 2007

8:00-9:10 Keynote II: Research Challenges in Cognitive Radio Networks (KUILIMA I/II)

Keynote Speaker: Dr. Vijay K. Bhargava, University of British Columbia, Canada

Chair: Dr. Xi Zhang, Texas A&M University, USA

## Tuesday 9:30 - 11:30

Session TA1: QoS control and traffic modeling (KUILIMA I/II)

Chair: Dr. Qusay H. Mahmoud, University of Guelph, Canada

| 1569041576<br>Invited<br>paper | Optimal Packet Allocation with Airtime Constraint for Multi- Access Links           | Jong-Ok Kim (ATR, JP)  |
|--------------------------------|---|--|
| 1569043448<br>Invited<br>Paper | A Bio-Inspired Robust<br>Routing Protocol for<br>Mobile Ad Hoc<br>Networks          | Kenji Leibnitz (Osaka University, JP);<br>Naoki Wakamiya (Osaka University,<br>JP); Masayuki Murata (Osaka<br>University, JP)  |
| 1569032179                     | Efficient Timeout<br>Checking Mechanism<br>for Traffic Control                      | Noriaki Kamiyama (NTT Service<br>Integration Laboratories, JP); Tatsuya<br>Mori (NTT Service Integration<br>Laboratories, JP); Ryoichi Kawahara<br>(NTT Service Integration Laboratories,<br>JP); Eng Keong Lua (University of<br>Cambridge, UK) |
| 1569032533                     | Zero Latency<br>Queueing System<br>Based on Deficit<br>Round Robin                  | Byoung Chul Kim (Samsung electronics, KR)  |
| 1569032879                     | Protection Mechanisms for Well- behaved TCP Flows from Tampered-TCP at Edge Routers | Junichi Maruyama (University of Osaka, JP)   |
| 1569032938                     | Decentralized Learning  | Patrick Maillé (GET/ENST Bretagne,   |

| (Stevens Institute of Technology, US) |  | for Pricing a RED<br>Buffer | FR); Bruno Tuffin (IRISA, FR); Yiping Xing (Stevens Institute of Technology, US); Rajarathnam Chandramouli (Stevens Institute of Technology, US) |
|---------------------------------------|--|-----------------------------|--|
|---------------------------------------|--|-----------------------------|--|

Session TA2: Emerging networking techniques and standards (KUILIMA III)

Chair: Dr. Xingang Guo, Intel, USA

| 1569042149<br>Invited<br>Paper | Multi-channel Jamming<br>Attacks using Cognitive<br>Radios   | Ashwin Sampath (UCSB, US); Hui<br>Dai (University of California Santa<br>Barbara, US); Haitao Zheng (Univ.<br>of California, Santa Barbara, US);<br>Ben Zhao (University of California at<br>Santa Barbara, US) |
|--------------------------------|--|---|
| 1569042445<br>Invited<br>Paper | Multi-Radio Coexistence:<br>Challenges and<br>Opportunities  | Jing Zhu (Intel, US); Alan Waltho (Intel Corporation, US); Xue Yang (Intel Corporation, US); Xingang Guo (Intel Corp., US)  |
| 1569032661                     | Pipelined Cyclic<br>Redundancy Check (CRC)<br>Calculation  | Mathys Walma (Intel Corporation, US)  |
| 1569036773                     | Reduce IP Address<br>Fragmentation through<br>Allocation   | Mei Wang (Cisco Systems, US);<br>Larry Dunn (Cisco Systems, US);<br>Wei Mao (CNNIC, CN); Tao Chen<br>(CNNIC, CN)  |
| 1569036897                     | Statistical Bandwidth Sharing in End-to-End Connectivity Management over Bandwidth- Provisioned Networks | Kaliappa Ravindran (City University<br>of New York, US); Mohammad<br>Rabby (City University of New York,<br>US)   |
| 1569037749                     | On the Bounded-Delay<br>Minimum-Cost Path<br>Problem of Quality-of-<br>Service Routing                   | H. k. Dai (Oklahoma State<br>University, US); Y. Du (Oklahoma<br>State University, US)  |

Session TA3: Wireless Communications (SUNSET)

Chair: Dr. Chang Wen Chen, Florida Institute of Technology, USA

| 1569042327<br>Invited<br>Paper | On Short Forward<br>Error-Correcting Codes<br>for Wireless<br>Communication<br>Systems  | Sheng Tong (Xidian University, CN);<br>Dengsheng Lin (University of Electronic<br>Science and Technology,, CN);<br>Aleksandar Kavcic (University of<br>Hawaii, US); Bao-Ming Bai (Xidian<br>University, CN); Li Ping (City University<br>of Hong Kong, HK) |
|--------------------------------|---|--|
| 1569042123<br>Invited<br>Paper | Power Control and<br>Maximum Flows of<br>Wireless Lattice<br>Networks   | Wing Wong (Chinese University of Hong Kong, CN)  |
| 1569031992                     | An Efficient Detection<br>Technique for SC-FDE<br>Systems with Multiple<br>Packet Collisions                                  | Rui Dinis (ISR-IST, Technical<br>University of Lisbon, PT); Paulo<br>Montezuma (FCT-UNL, PT)   |
| 1569031994                     | Impact of Imperfect<br>Channel Estimation on<br>the Performance of M-<br>QAM Hierarchical<br>Constellations with<br>Diversity | Nuno Souto (Instituto Superior Técnico, PT); Rui Dinis (CAPS-IST, PT); Joao Silva (Lisbon Technical University (IST), PT); Francisco Cercas (ISCTE - Instituto Superior das Ciências do Trabalho e da Empresa, PT)   |
| 1569032407                     | Utility Fair Resource<br>Allocation Based on<br>Game Theory in OFDM<br>Systems  | Tiankui Zhang (Beijing University of Posts and Telecommunications, CN)   |
| 1569032471                     | A new parameter for channel identification in UWB indoor environments   | Lorenzo Mucchi (University of Florence, IT)  |

Session TA4: Best Paper Competition (KAHUKU II)

Chair: Dr. Chin-Tser Huang, University of South Carolina, USA

| 1569032778 | Fair Efficiency, or Low<br>Average Delay without<br>Starvation | Sergey Gorinsky (Washington<br>University in St. Louis, US);<br>Christoph Jechlitschek (Washington<br>University in St. Louis, US); |
|------------|--|---|
| 1569036651 | Relay-enhanced Cellular  | Chung Kang (Korea University, KR)   |

|            | Performance of OFDMA-<br>TDD System for Mobile<br>Wireless Broadband<br>Services        |  |
|------------|---|--|
| 1569032957 | Utility-Based Routing in<br>Communication Networks<br>with Unstable Links               | Mingming Lu (Florida Atlantic<br>University, US); Jie Wu (Florida<br>Atlantic University and National<br>Science Foundation, US) |
| 1569033037 | Attack Containment<br>Framework for Large-Scale<br>Critical Infrastructures             | Hoang Nguyen (University of Illinois at Urbana-Champaign, US); Klara Nahrstedt (University of Illinois at Urbana-Champaign, US)  |
| 1569032237 | On the Power and Rate<br>Control in IEEE 802.11<br>WLANs A Game<br>Theoretical Approach | Lin Chen (ENST, FR); Jean<br>Leneutre (Ecole Nationale<br>Supérieure Des<br>Télécommunications, FR)                              |

# Tuesday 13:00 - 14:20

Session TP1: Multimedia Communications (KUILIMA I/II)

Chair: Dr. Zhu Li, Motorola Labs, USA

| 1569033183<br>Invited<br>Paper | Optimization Models for<br>Streaming in Multihop<br>Wireless Networks                   | Zongpeng Li (University of<br>Calgary, CA); Baochun Li<br>(University of Toronto, CA); Mea<br>Wang (University of Toronto, CA) |
|--------------------------------|---|--|
| 1569044727<br>Invited<br>Paper | Analysis of Retry Limit for<br>Supporting VoIP in IEEE<br>802.11e EDCA Wireless<br>LANs | ByungJoon Oh (Florida Institute of<br>Technology, US); Chang Wen<br>Chen (Florida Institute of<br>Technology, US)              |
| 1569033015                     | ICA-based Noise Reduction<br>for Mobile Phone Speech<br>Communication                   | ZHipeng Zhang (Research<br>Laboratories, NTT DoCoMo, JP);<br>Minoru Etoh (NTT DoCoMo, Inc.,<br>JP)                             |
| 1569035613                     | Channel-Adaptive Multiple<br>Description Coding For<br>Wireless Video Streaming         | Joohee Kim (Inha University, KR);<br>Ji-Cheol Hong (Inha University,<br>KR)  |

## Session TP2: Pervasive computing and mobile networking (KUILIMA III)

Chair: Dr. Ben Y. Zhao, University of California, Santa Barbara, USA

| 1569042660<br>Invited<br>Paper | k-hop Backbone<br>Formation and Cluster<br>Maintenance in Ad<br>Hoc Networks                            | Paolo Bellavista (Università degli Studi di<br>Bologna, IT); Eugenio Magistretti<br>(University of Bologna, IT)   |
|--------------------------------|---|---|
| 1569041909<br>Invited<br>paper | Localization of<br>Wireless Sensor<br>Nodes Using<br>Proximity Information                              | Sajal Das (The UniversityTexas at<br>Arlington, US); Ratan Ghosh (Indian<br>Institute of Technology, Kanpur, IN);<br>Piyush Agrawal (IIT Kanpur, IN)  |
| 1569032835                     | Multi-Server Loss<br>System with T-Limited<br>Service for Traffic<br>Control in Information<br>Networks | Yoshitaka Takahashi (Waseda<br>University, JP); Yoshiaki Shikata (Shobi<br>University, JP); Kazunori Okada<br>(National Institute of Information and<br>Communications Technology, JP);<br>Naohisa Komatsu (Waseda University,<br>JP) |
| 1569032965                     | A Voronoi Approach<br>for Scalable and<br>Robust DV-Hop<br>Localization System<br>for Sensor Networks   | Azzedine Boukerche (Univ. of Ottawa, CA); Horacio Oliveira (Univ. of Ottawa, CA); Eduardo Nakamura (FUCAPI - Research and Technological Innovation Center, BR); Antonio A.F. Loureiro (Federal University of Minas Gerais, BR)        |

Session TP3: Optical Networking III (SUNSET)

Chair: Dr. Vincent W. S. Chan, MIT

| 1569033041 | Signaling Transport Options in GMPLS Networks: In-band or Out-of-band | Tao Li (University of Virginia, US);<br>Malathi Veeraraghavan (University of<br>Virginia, US)                                 |
|------------|---|---|
| 1569036581 | Enhancing Robustness<br>Under Dual-Link Failure                       | Sandeep Ahuja (ECE Department<br>university of Arizona, US); Srinivasan<br>Ramasubramanian (The University of<br>Arizona, US) |
| 1569036670 | TCP-ENG: Dynamic<br>Explicit Congestion                               | Basem Shihada (University of Waterloo, CA); Pin-Han Ho (University  |

Session TP4: Internet Services (KAHUKU II)

Chair: Dr. Hideki Tode, Osaka University, Japan

| 1569036843                     | Large-Scale QoS-Aware<br>Service-Oriented<br>Networking with a<br>Clustering-Based<br>Approach                          | Jingwen Jin (Intel, US); Klara<br>Nahrstedt (University of Illinois at<br>Urbana-Champaign, US)   |
|--------------------------------|---|---|
| 1569032765                     | QoS-based Discovery<br>and Ranking of Web<br>Services   | Eyhab Al-Masri (University of Guelph, CA); Qusay Mahmoud (University of Guelph, CA)   |
| 1569042593<br>Invited<br>Paper | WS-Advisor: A Task<br>Memory for Service  | Rosanna Bova (University of Lyon 1, FR); Hye-Young Paik (University of New South Wales, AU); Salima Hassas (University of Lyon 1, FR); Salima Benbernou (Lyon 1 University, FR); Boualem Benatallah (University of New South Wales, AU) |
| 1569032739<br>Invited<br>Paper | Applying Wavelet De-<br>noising to Improve TCP<br>Throughput in AQM<br>queues with Existence of<br>Unresponsive Traffic | Yi Pan (University of California at Irvine, US); Wei Tsai (University of California at Irvine, US); Tatsuya Suda (University of California, Irvine, US)   |

## Tuesday 14:40 - 15:20

Session TP5: Distinguished Position Talk V (KUILIMA I/II)

Chair: Dr. Zhu Li, Motorola Labs, USA

Speaker: Prof. Chang Wen Chen, Florida Institute of Technology, USA

Title: Recent Advances in Video Adaptation for Mobile Device Access

Session TP6: Distinguished Position Talk VI (KUILIMA III)

Chair: Dr. Ben Y. Zhao, University of California, Santa Barbara, USA

Speaker: Dr. Sajal Das, University of Texas at Arlington, USA

Title: Inhabitant Activity Recognition and Context Modeling in Smart

**Environments** 

Session TP7: Distinguished Position Talk VII (SUNSET)

Chair: Dr. Galen Sasaki, University of Hawaii, USA

Speaker: Prof. Vincent W.S. Chan, MIT, USA

Title: Some Interesting Research Problems in Optical Networks

Session TP8: Distinguished Position Talk VIII (KAHUKU II)

Chair: Dr. Naoki Wakamiya, Osaka University, Japan

Speaker: Dr. Roch Glitho, Ericsson, Canada

Title: Multimedia Confererencing in mobile ad hoc networks: Challenges and

early approaches

## Tuesday 15:30 - 16:50

Session TP9: Broadband networking and protocols (KUILIMA I/II)

Chair: Dr. Baek-Young Choi, University of Missouri, Kansas City, USA

| 1569032 | 2363 | Design and Empirical Evaluation of Control Scheme for End-to-End Delay Stabilization and Packet Loss Improvement in Broadband IP Network | Dai Yamamoto (Osaka University,<br>JP); Hideki Tode (Osaka<br>University, JP); Toshihiro Masaki<br>(Osaka University, JP); Koso<br>Murakami (Osaka University, JP) |
|---------|------|--|--|
| 1569036 | 813  | Load-Balanced Routing in   | Sudharsan Rangarajan (University   |

|            | Ad hoc Networks  | of California, Santa Cruz, US); J.j.<br>Garcia-Luna-Aceves (University of<br>California at Santa Cruz, US)   |
|------------|--|--|
| 1569036781 | Network-Aware State<br>Update in Large Scale<br>Mobile Games   | Yang Yu (Motorola Labs, US); Zhu<br>Li (Motorola Labs, US); Weidong<br>Shi (Georgia Institute of<br>Technology, US); Yi-Chiun Chen<br>(Motorola, US); Hua Xu (Motorola,<br>Inc., US)             |
| 1569032979 | Packet Scheduling with<br>Buffer Management for Fair<br>Bandwidth Sharing and<br>Delay Differentiation | Dennis Ippoliti (University of<br>Colorado at Colorado Springs,<br>US); Xiaobo Zhou (University of<br>Colorado at Colorado Springs,<br>US); Liqiang Zhang (Indiana<br>University South Bend, US) |

Session TP10: Pervasive computing and mobile networking (KUILIMA III)

Chair: Dr. Sajal Das, University of Texas at Arlington, USA

| 1569036277 | Joint Modeling of Mobility<br>and Communication in a<br>V2V Network for<br>Congestion Amelioration                       | Pritesh Patwa (North Carolina<br>State University, US); Rudra Dutta<br>(North Carolina State University,<br>US)   |
|------------|--|---|
| 1569036649 | On the Suitability of Framed<br>Slotted Aloha based RFID<br>Anti-collision Protocols for<br>use in RFID-Enhanced<br>WSNs | Dheeraj Klair (University of<br>Wollongong, AU); Kwan-Wu Chin<br>(University of Wollongong, AU);<br>Raad Raad (University of<br>Wollongong,, AU)  |
| 1569036914 | Packet Scheduling for<br>Scalable Video Streaming<br>over Lossy Networks   | Ehsan Maani (Northwestern<br>university, US); Yijing Luo<br>(Motorola, US); Peshala<br>Pahalawatta (Northwestern<br>University, US); Aggelos K.<br>Katsaggelos (Northwestern<br>University, US) |

Session TP11: Network Security I (SUNSET)

Chair: Dr. Tilman Wolf, University of Massachusetts, Amherst, USA

| 1569032963 | SIP Vulnerabilities<br>and Anti-Spit<br>Mechanisms<br>Assessment              | Giannis Marias (Athens University Economics and Business, GR); Stelios Dritsas (Athens University of Economics and Business, GR); Marianthi Theoharidou (Dept. of Informatics, Athens University of Economics and Business, Greece, GR); John Mallios (Dept. of Informatics, Athens University of Economics and Business, Greece, GR); Dimitris Gritzalis (Dept. of Informatics, Athens University of Economics and Business, Greece, GR) |
|------------|---|---|
| 1569032995 | Fates: A Granular<br>Approach to Real-<br>Time Anomaly<br>Detection           | Jeff Janies (University of South Carolina, US); Chin-Tser Huang (University of South Carolina, US)  |
| 1569033003 | Evaluation of<br>Security Protocols<br>for the Session<br>Initiation Protocol | Hyoung-Kee Choi (Sungkyunkwan<br>University, KR); Eun-Chul Cha<br>(SungKyunKwan University, KR)   |

Session TP12: Network Algorithm and Performance Evaluation (KAHUKU II)

Chair: Dr. Naoki Wakamiya, Osaka University, Japan

| 1569031211 | On IP Traffic Matrix<br>Estimation                                  | Liansheng Tan (The Australian National<br>University, AU); Xiangjun Wang (Central<br>China Normal University, CN)  |
|------------|---|--|
| 1569032391 | Greedy Face<br>Routing with Face ID<br>Support                      | Shao Tao (National Unversity of<br>Singapore, SG); Akkihebbal L. Ananda<br>(National University of Singapore, SG);<br>Mun Choon Chan (National University of<br>Singapore, SG) |
| 1569032945 | Ethernet Topology<br>for Networks with<br>Incomplete<br>Information | Hassan Gobjuka (Kent State University, US); Yuri Breitbart (Kent State University, US)   |

# Tuesday 17:00 – 18:00: Panel Session (KUILIMA I/II)

Chair: Dr. Zhu Li, Motorola Labs, USA

Title: Convergence of Communication Network with Media and Social Interactions: Technical Challenges and Business Opportunities

#### Panel lists:

- Dr. Fred Kitson, Motorola Labs, USA (Vice President)
- Dr. Minoru Etoh, NTT DoCoMo Research Laboratories, Japan (Deputy Managing Director)
  - Dr. Klara Nahrstedt, MONET Research Group, UIUC, USA (Director)
- Dr. Changwen Chen, Wireless Center of Excellence, FIT, USA (Director, IEEE Fellow)

Conference Dinner Banquet/Awards: August 14, 2007, 18:30 – 21:00 (KAHUKU Terrace)

# Wednesday, August 15, 2007

8:00-9:00 Keynote III: Challenges and Opportunities in Video Transmission (KUILIMA I/II)

Keynote Speaker: Dr. Aggelos K. Katsaggelos, Northwestern University, USA

Chair: Dr. Song Ci, University of Nebraska, Lincoln, USA

### Wednesday 9:30 - 11:30

Session WA1: Network Security II (KUILIMA I/II)

Chair: Dr. K.P. Subbalakshmi, Stevens Institute of Technology, USA

| 1569041969<br>Invited<br>Paper | A Proactive Test Based<br>Differentiation Technique to<br>Mitigate Low Rate DoS<br>Attacks | Amey Shevtekar (New Jersey<br>Institute of Technology, US);<br>Nirwan Ansari (NJIT, US)                                   |
|--------------------------------|--|---|
| 1569036233                     | Safeguarding Mutable<br>Fields in AODV Route<br>Discovery Process                          | Kulasekaran Sivakumar<br>(Mississippi State University, US);<br>Mahalingam Ramkumar<br>(Mississippi State University, US) |
| 1569036657                     | Containing Hitlist-Based<br>Worms with Polymorphic<br>Signatures                           | Theodor Richardson (Towson<br>University, US); Chin-Tser Huang<br>(University of South Carolina, US)                      |
| 1569044767<br>Invited<br>Paper | Economics of Security:<br>Research Challenges  | Rajarathnam Chandramouli (Stevens Institute of Technology, US)  |

| 1569036803 | Interplay of Security<br>and Reliability<br>using Non-Uniform<br>Checkpoints | Xiao Qin (New Mexico Institute of Mining and Technology, US); Kiranmai Bellam (New Mexico Institute of Mining and Technology, US); Mais Nijim (New Mexico Institute of Mining and Technology, US); Ziliang Zong (New Mexico Institute of Mining and Technology, US); Xiaojun Ruan (New Mexico Tech, US); Raghava Vudata |
|------------|--|---|
|------------|--|---|

|            |  | (New Mexico Tech, US)  |
|------------|--|--|
| 1569034509 | Exploring Load-<br>Balance to<br>Dispatch Mobile<br>Sensors in Wireless<br>Sensor Networks | Min-Hsien Chang (Chiao-Tung University, TW); You-Chiun Wang (National Chiao-Tung University, TW); Wen-Chih Peng (National Chiao Tung University, TW); Yu-Chee Tseng (National Chiao-Tung University, TW) |

Session WA2: Network Algorithm and Performance Evaluation (KUILIMA III)

Chair: Dr. Sergey Gorinsky, Washington University, USA

| 1569046245<br>Invited<br>Paper | Outage Analysis of a<br>University Campus<br>Network  | Baek-Young Choi, Sejun Song,<br>George Koffler, Deep Medhi<br>(University of Missouri, Kansas City,<br>US)  |
|--------------------------------|---|---|
| 1569033281                     | Diffusion Approximations for the GI/G/c/K queue   | Akira Takahashi (Waseda<br>University, JP); Yoshitaka<br>Takahashi (Waseda University, JP);<br>Shigeru Kaneda (NTT DoCoMo,<br>Inc., JP); Noriteru Shinagawa (NTT<br>DoCoMo, Inc., JP) |
| 1569035311                     | C3P: A Cooperant<br>Congestion Control<br>Protocol in High<br>Bandwidth-Delay Product<br>Networks | Jianxin Wang (Central South<br>University, CN); Hao Gong (Central<br>South University, CN); Jianer Chen<br>(Texas A&M University, US)   |
| 1569035687                     | Efficient Call Admission<br>Control for MPEG-4<br>Wireless Videoconference<br>Traffic             | Polychronis Koutsakis (McMaster University, CA)   |
| 1569037187                     | SHM:Scalable and<br>Backbone Topology-Aware<br>Hybrid Multicast                                   | Shaofei Lu (Hunan University, CN);<br>Guanzhong Yang (Hunan<br>University, CN); Jianxin Wang<br>(Central South University, CN);<br>Chao Guo (Hunan University, CN)                    |
| 1569033005                     | Coordinate-Based Routing for Overlay Networks   | Vasileios Pappas (IBM Research, US); Volker Hilt (Bell Laboratories / Lucent Technologies, US); Markus  |

Session WA3: Parallel and Distributed Computing (SUNSET)

Chair: Dr. Debanjan Saha, IBM Research, USA

| 1569033567<br>Invited<br>Paper | Use of Dependency<br>Information for<br>Memory<br>Optimizations in<br>Distributed<br>Streaming<br>Applications | Nissim Harel (Georgia Institute of<br>Technology, US); Hasnain Mandviwala<br>(Georgia Institute of Technology, US);<br>Umakishore Ramachandran (Georgia<br>Institute of Technology, US); Kathleen<br>Knobe (HP Labs - Cambridge Reseach<br>Laboratory, US)  |
|--------------------------------|--|---|
| 1569033413                     | On Improving the<br>Reliability of Packet<br>Delivery in Dense<br>Wireless Sensor<br>Networks                  | Junsuk Shin (Georgia Institute of<br>Technology, US); Umakishore<br>Ramachandran (Georgia Institute of<br>Technology, US); Mostafa Ammar<br>(Georgia Institute of Technology, US)   |
| 1569035173                     | An Error-aware and<br>Energy Efficient<br>Routing Protocol in<br>MANETS  | Liansheng Tan (The Australian National<br>University, AU); Sammy Chan (City<br>University of Hong Kong, HK)   |
| 1569036499                     | A Fast Delivery<br>Protocol for Total<br>Order Broadcasting  | Li Ou (Tennessee Technological<br>University, US); Xubin He (Tennessee<br>Technological University, US); Christian<br>Engelmann (Oak Ridge National<br>Laboratory, US); Stephen Scott (Oak<br>Ridge National Laboratory, US)  |
| 1569036811                     | An Energy-Efficient<br>Scheduling Algorithm<br>Using Dynamic<br>Voltage Scaling                                | Xiao Qin (New Mexico Institute of Mining and Technology, US); Xiaojun Ruan (New Mexico Tech, US); Mais Nijim (New Mexico Institute of Mining and Technology, US); Ziliang Zong (New Mexico Institute of Mining and Technology, US); Kiranmai Bellam (New Mexico Institute of Mining and Technology, US) |

Session WA4: General Track (SUNSET)

Chair: Dr. Arunita Jaekel, University of Windsor, Canada

| 1569032296                     | An FEC-based<br>Reliable Data<br>Transport Protocol for<br>Underwater Sensor<br>Networks                                | Peng Xie (University of Connecticut, US), Jun-Hong Cui (University of Connecticut, US)   |
|--------------------------------|---|--|
| 1569032705                     | Design of a Network<br>Service Architecture   | Tilman Wolf (University of<br>Massachusetts, US); Sivakumar<br>Ganapathy (University of<br>Massachusetts, US)  |
| 1569032845                     | Node-Replacement<br>Policies to Maintain<br>Threshold-Coverage in<br>Wireless Sensor<br>Networks                        | Sachin Parikh (University of Massachusetts Dartmouth, US); Vinod Vokkarane (University of Massachusetts Dartmouth, US); Liudong Xing (University of Massachusetts Dartmouth, US); Dayalan Kasilingam (University of Massachusetts Dartmouth, US) |
| 1569036343                     | IEEE 802.11e EDCA<br>QoS Provisioning with<br>Dynamic Fuzzy Control<br>and Cross-Layer<br>Interface                     | Chao-Lieh Chen (Kun-Shan University, TW)   |
| 1569037135                     | Ringed Filters for Peer-<br>to-Peer Keyword<br>Searching  | Yuichi Sei (University of Tokyo, JP);<br>Shinichi Honiden (University of Tokyo,<br>National Institute of Informatics, JP)  |
| 1569040867<br>Invited<br>Paper | Provisioning Link Layer<br>Proportional Service<br>Differentiation in<br>Wireless Ad Hoc<br>Networks with MIMO<br>links | Amrit Kumar (University of<br>Massachusetts Amherst, US); Aura<br>Ganz (University of Massachusetts at<br>Amherst, US)   |

#### Wednesday 11:40 - 12:20

Session WP1: Distinguished Position Talk IX (KUILIMA I/II)

Chair: Dr. K.P. Subbalakshmi, Stevens Institute of Technology, USA

Speaker: Prof. Nirwan Ansari, New Jersey Institute of Technology, USA

Title: Tracing and mitigating distrubited denial of service attacks

Session WP2: Distinguished Position Talk X (KUILIMA III)

Chair: Dr. Tao Xie, San Diego State University, USA

Speaker: Dr. Zhen Liu, IBM Research, USA

Title: Stream processing networks

Session WP3: Meet the ICCCN 2008 Chairs

(Informal discussions for improving the future ICCCN conferences)

Session WP4: Distinguished Position Talk XII (KAHUKU II)

Chair: Dr. Arunita Jaekel, University of Windsor, Canada

Speaker: Dan Rubenstein, Columbia University, USA

Title: Network Resilience: Using One's Neighbors Wisely in Cooperative

Networks

## Wednesday 13:40 - 14:40

Session WP5: Distinguished Position Talk XIII (KUILIMA I/II)

Chair: Dr. Jorge A. Cobb, University of Texas at Dallas, USA

Speaker: Dr. Debanjan Saha, IBM Research, USA

Title: Internet Applications and Services for Digital Communities

Session WP6: NSF Founding Forum (KUILIMA III)

Chair: Dr. E. K. Park, University of Missouri, USA

Speaker: Dr. Jie Wu, Program Director, NSF

Session WP7: Workshop on Advanced Networking I: Network Security I (SUNSET)

Chair: Dr. Nirwan Ansari, NJIT, USA

| 1569049659 | A New Network Layer for<br>Mobile Ad Hoc Wireless<br>Networks Based on<br>Assignment Router Identity<br>Protocol | Chaorong Peng (Florida<br>Institute of Technology, US);<br>Chang Wen Chen (Florida<br>Institute of Technology, US) |
|------------|--|--|
| 1569049529 | Generalized Aho-Corasick<br>Algorithm for Signature Based<br>Anti-Virus Applications                             | Tsern-Huei Lee (National Chiao Tung University, TW)  |

Session WP8: Workshop on Advanced Networking II: Network Security II (KAHUKU II)

Chair: Dr. Zhen Liu, IBM, USA

| 1569049661 | A Heuristic DDoS Flooding<br>Attack Detection Mechanism<br>Analyses based on the<br>Relationship between Input<br>and Output Traffic Volumes | Zhang Fengxiang (The Graduate<br>University for Advanced Studies,<br>Japan, JP)   |
|------------|--|---|
| 1569049729 | NEKAP: Intruder Resilient and<br>Energy Efficient Key<br>Establishment in Sensor<br>Networks   | Sergio Oliveira (Federal<br>University of Minas Gerais, BR);<br>José-Marcos Nogueira (Federal<br>University of Minas Gerais, BR);<br>Wong Hao Chi (Federal<br>University of Minas Gerais, BR) |

1569049827

### Wednesday 15:00 – 16:00: Panel Session (KUILIMA I/II)

Chair: Dr. Khaled El-Maleh, Qualcomm Inc, USA

Title: Enhanced Multimedia User Experience in 4G Networks

#### Panel lists:

Mr. Atul Suri, Qualcomm, USA (Director)

Mr. Toshio Miki, NTT DoCoMo, Japan (Managing Director)

Dr. Sujit Dey, Ortiva Wireless, USA (Founder and CTO)

Mr. Ziad Asghar, Texas Instruments, USA (Operator and Strategy

Manager, CTO Office)

### Wednesday 16:20 - 18:00

Session WP9: Workshop on Advanced Networking III: Multimedia Processing and Communications (KUILIMA I/II)

Chair: Dr. Chia-Wen Lin, National Tsing Hua University, Taiwan

| 1569049519 | Reduction of Frame<br>Memory Accesses and<br>Motion Estimation<br>Computation in MPEG-4<br>Video Encoder | Wei-Cheng Lin (National Cheng-<br>Kung University, TW); Chung-Ho<br>Chen (National Cheng-Kung<br>University, TW)  |
|------------|--|---|
| 1569049653 | MPEG Video Bit-Rate<br>Shaping Technique Using<br>Smooth-Transcoding<br>Algorithm                        | I Gusti Bagus Baskara Nugraha<br>(The University of Electro-<br>Communications, JP); Hiroyoshi<br>Morita (University of Electro-<br>Communications, JP) |
| 1569049657 | Water Level Detection<br>from Video with FIR<br>filtering  | Masahiro Iwahashi (Nagaoka<br>University of Technology, JP); Sakol<br>Udomsiri (Nagaoka University of<br>Technology, JP)                                |

| 1569049581 | Facts of Life   | Angela Isabel Barbero Diez<br>(University of Valladolid, ES);<br>Oyvind Ytrehus (University of<br>Bergen, NO) |
|------------|---|---|
| 1569049867 | A Novel Disk Layout<br>Optimization for<br>Networked Storage<br>Systems | Tao Xie (San Diego State University, US)  |

Session WP10: Workshop on Advanced Networking IV: Wireless Ad-hoc and Sensor Networks (KUILIMA III)

Chair: Dr. Tarek Abdelzaher, UIUC, USA

| 1569049624 | Layered Clustering<br>Communication Protocol<br>for Wireless Sensor<br>Networks   | Yong Wang (University of<br>Nebraska-Lincoln, US); Byrav<br>Ramamurthy (University of<br>Nebraska-Lincoln, US)   |
|------------|---|--|
| 1569049706 | A Network flow based<br>Integral Optimal Algorithm<br>for Lexicographic<br>Maximum Lifetime Routing<br>in Wireless Sensor<br>Networks | Maulin Patel (Philips Research N. A., US); Subbarayan Venkatesan (University of Texas at Dallas, US); Ramaswamy Chandrasekaran (University of Texas at Dallas, US)   |
| 1569049721 | Broadcast Collision<br>Avoidance in Wireless<br>Packet Networks   | Jun Peng (UTPA, US)  |
| 1569049745 | Mesh-Enhanced Vehicular<br>Wireless Networks  | Niranjan Potnis (Florida State<br>University, US); Atulya Mahajan<br>(Florida State University, US); Kartik<br>Gopalan (State University of New<br>York at Binghamton, US); An-I Andy<br>Wang (Florida State University, US) |
| 1569049781 | A SpaceTime Oriented<br>Macro Programming<br>Paradigm for Push-Pull<br>Hybrid Sensor Networking                                       | Hiroshi Wada (University of<br>Massachusetts, Boston, US); Pruet<br>Boonma (University of<br>Massachusetts, Boston, US);<br>Junichi Suzuki (University of<br>Massachusetts, Boston, US)                                      |

| 1569049815 | Sensitivity Study of<br>Sensors' Coverage within<br>Wireless Sensor Networks | Sami Habib (Kuwait University,<br>KW); Maytham Safar (Kuwait<br>University, KW) |
|------------|--|---|
|------------|--|---|

Session WP11: Workshop on Advanced Networking V: Wireless Communications (SUNSET)

Chair: Dr. Lin Guan, Loughborough University, UK

| 1569049575 | Helper Node Trajectory Control<br>for Connection Assurance in<br>Proactive Mobile Wireless<br>Networks                    | Lillian Dai (Massachusetts<br>Institute of Technology, US);<br>Vincent Chan (Massachusetts<br>Institute of Technology, US) |
|------------|---|--|
| 1569049631 | An Efficient Multi-Mode Channel<br>Tracking Scheme under<br>Different Velocities in OFDM<br>Systems                       | Yu-Tao Hsieh (Industrial<br>Technology Research Institute,<br>TW); Pangan Ting (Tsing Hua<br>University, TW)               |
| 1569049787 | A Performance Evaluation of<br>Vertical Handoff Scheme<br>between Mobile -WiMax and<br>Cellular Networks                  | SeongSoo Park (SK Telecom, KR)   |
| 1569050135 | Quantitative Dynamic<br>Interdependency Measure and<br>Significance Analysis for Cross-<br>Layer Design under Uncertainty | Song Ci (University of<br>Nebraska-Lincoln, US), Hai-<br>feng Guo, (University of<br>Nebraska, Omaha, US)                  |

Session WP12: Workshop on Advanced Networking VI: Network Algorithms and Systems (KAHUKU II)

Chair: Dr. Dan S. Rubenstein, Columbia University, USA

| 1569049555 | Loop-Free Link-State<br>Routing   | Pierre Fransson (Luleå University of Technology, SE)  |
|------------|---|---|
| 1569049611 | Delay Analysis of<br>Combined Input-<br>Crosspoint Queueing<br>Switches | Ge Nong (Sun Yat-Sen University,<br>CN); Ning Situ (University of<br>Houston, US); Mounir Hamdi (CS<br>Dept., HKUST, KLN, Hong Kong,<br>CN) |

| 1569049679 | Adaptive Performance<br>Control of Internet-based<br>Grids in a Dynamic<br>Environment    | Paolo Vercesi (University of Trieste, IT); Alberto Bartoli (Univ. of Trieste, IT)           |
|------------|---|---|
| 1569049682 | THON: A Tessellation<br>based Hierarchical Overlay<br>Network for DGET Grid<br>Middleware | Benoit Hudzia (University college<br>Dublin, IE)  |
| 1569049873 | Work-Conserving Fair-<br>Aggregation Across<br>Multiple Core Networks                     | Jorge Cobb (University of Texas at Dallas, US); Zhe Xu (The University of Texas Dallas, US) |

## Thursday, August 16, 2007

8:30 - 9: 30 Keynote IV, KUILIMA I/II

Quality Control: A Key to Stress-Resilient Internet Services

Keynote Speaker: Dr. Cheng-Zhong Xu, Wayne State University, US Chair: Dr. Xiaobo Zhou, University of Colorado at Colorado Springs, USA

9:30 – 9: 40 Workshops Opening Remarks

9:40 - 10:00 Coffee Break

International Workshop on Wireless Mesh and Ad Hoc Networks (WiMAN) KUILIMA I/II & KUILIMA III, Thursday

10:00 - 12:00

Session WiMAN I: Routing, Scheduling, and Channel Assignment (I),

KUILIMA I/II

Chair: Dr. Frank Reichenbach (University of Rostock, Germany)

Distributed Channel Allocation In Multi-Radio Wireless Mesh Networks
Jeroen Avonts (University of Antwerp, Belgium); Nik Van den Wijngaert
(University of Antwerp, Belgium); Chris Blondia (University of Antwerp, Belgium)

Resource Planning and Packet Forwarding for Next-generation Multi-hop Wireless Mesh Networks

Ting-Yu Lin (University of Illinois at Urbana-Champaign, USA); Gary Fan (National Chiao-Tung University, Taiwan)

Routing in Heterogeneous Wireless Ad Hoc Networks
Sivaram Cheekiralla (Massachusetts Institute of Technology, USA); Daniel
Engels (MIT Auto-ID Center, USA)

Efficient Routing Tree Construction Algorithms for Multi-Channel WiMax Networks

Mohammad nekoui (university of tehran, Iran); Alireza Ghiamatyoun (University of Tehran, Iran); Said Nader-Esfahani (University of Tehran, Iran); Mehdi Soltan (Stanford University, USA)

The Impact of Interference in a Distributed Base Station Scheme Managed by an Agent System

Philippe Leroux (Université Laval, Canada); Sebastien Roy (Laval University, Canada); Jean-Yves Chouinard (Laval University, Canada)

A Mobility Management and Routing Protocol using Tree Architecture for Internet Connectivity

Hoon Oh, Phan Anh Tan (University of Ulsan, Korea)

10:00 - 12:00

Session WiMAN II: MAC Protocols, KUILIMA III

Chair: Dr. Alistair Munro (University of Bristol, United Kingdom)

MAC-ASA Protocol for Wireless Mesh Networks
Roberto Santamaria (Illinois Institute of Technology, USA); Olivier Bourdeau (Illinois Institute of Technology, USA); Tricha Anjali (Illinois Institute of Technology, USA)

Performance of 802.11b/g in the Interference Limited Regime Vinay Sridhara (University of Delaware, USA); Hweechul Shin (University of Delaware, USA); Stephan Bohacek (University of Delaware, USA)

A tradeoff between power efficiency and scheduling updating responsiveness in a TDMA paradigm

Valeria Loscrì (University of Calabria, Italy)

Providing Quality of Service for Mesh Networks Using Link Delay Measurements Weverton Cordeiro (Federal University of Rio Grande do Sul, Brazil); Waldir Moreira (Federal University of Pará, Brazil); Elisangela Aguiar (Universidade Federal do Para, Brazil); Antonio Jorge Abelém (UFPA - Federal University of Pará, Brazil); Michael Stanton (UFF - Universidade Federal Fluminense, Brazil)

A Delay-aware Auto Sleep Mode Operation for Power Saving WiMAX Shengqing Zhu (Nanjing University, China, P.R. China); Tianlei Wang (South China University of Technology, P.R. China)

Principles of IEEE 802.11s
Guido Hiertz (RWTH Aachen University, Germany)

12:00 - 13:20 Lunch Break

13:20 - 14:10

WiMAN Keynote Address, KUILIMA I/II

Ad Hoc Networks for the Cyber-Physical Frontier

Dr. Tarek Abdelzaher (University of Illinois at Urbana-Champaign, USA)

14:10 - 15:30

Session WiMAN III: Wireless Communications and Antennas, KUILIMA I/II Chair: Dr. Edoardo Biagioni (University of Hawaii at Manoa, USA)

A Codesign Prototyping Framework for Wireless LAN Transceivers with Smart Antennas Sebastien Roy (Laval University, Canada)

Application of Cooperative Diversity in 802.11a Ad-hoc Networks
Zhipeng Zhao (COMSIS, France); Jean-Claude Belfiore (Ecole Nationale
Supérieure des Télécommunications, France)
Implementation of a Wireless Mesh Network Testbed for Traffic Control
Kun-chan Lan (National ICT Australia Ltd., Australia)

Multiple Access Interference Cancellation and Link Multiplexing for MIMO Mesh Network

Kei Sakaguchi (Tokyo Institute of Technology, Japan)

14:10 - 15:30

Session WiMAN IV: Routing, Scheduling, and Channel Assignment (II), KUILIMA III

Chair: Dr. Karoly Farkas (University of West Hungary, Hungary)

A Channel Assignment Algorithm for Multi-Radio Wireless Mesh Networks Stefano Avallone (University of Naples, Italy)

Load-aware Traffic Engineering for Mesh Networks
Devu Manikantan Shila (Illinois Institute of Technology, USA); Tricha Anjali (Illinois Institute of Technology, USA)

Traffic Oriented Topology Formation and Load-balancing Routing in Wireless Mesh Networks

Han Zhang (Hong Kong University of Science and Technology, Hong Kong); Danny Tsang (HKUST, Hong Kong)

A Scalable Link Quality Routing Protocol for Multi-radio Wireless Mesh Networks Rachel Paschoalino (State University of Campinas - UNICAMP, Brazil); Edmundo Madeira (State University of Campinas, Brazil)

#### 15:30 - 16:00 Coffee Break

16:00 - 18:00

Session WiMAN V: Architecture, Cross-layer Optimization, and Resource Allocation Models, KUILIMA I/II

Chair: Dr. Yong Wang (University of Northern British Columbia, Canada)

NWC: Node Weight Computation in MANETs
Karoly Farkas (University of West Hungary, Hungary); Theus Hossmann (ETH Zurich, Switzerland)

Price-Based Resource Allocation Strategies for Wireless Ad Hoc Networks with Transmission Rate and Energy Constraints Jen-Hung Huang (National Chiao Tung University, Taiwan); Yu-Fen Kao (National Chiao Tung University, Taiwan)

Evaluating Fairness In Heterogeneous Wireless Ad Hoc Networks
Ra'ed Awdeh (University of Sharjah, UAE)
Context Awareness through Cross-Layer Network Architecture
Mohammad Razzaque (UCD, Dublin, Ireland); Simon Dobson (UCD Dublin, Ireland); Paddy nixon (University College Dublin (UCD), Ireland)

Low-Latency Multichannel Wireless Mesh Networks
Robert McTasney (University of Colorado at Boulder, USA)

Iterative Cross Layer Schemes for Throughput Maximization in Multi-Channel Wireless Mesh Networks

Mohammad nekoui (university of tehran, Iran); Alireza Ghiamatyoun (University of Tehran, Iran); Said Nader-Esfahani (University of Tehran, Iran); Mehdi Soltan (Stanford University, USA)

#### 16:00 - 18:00

Session WiMAN VI: Wireless Sensor and Ad Hoc Networks, KUILIMA III Chair: Dr. Liqiang Zhang (Indiana University South Bend, USA)

On Improving the Precision of Localization with Minimum Resource Allocation Frank Reichenbach (University of Rostock, Germany); Dirk Timmermann (University of Rostock, Germany)

Applying Design Patterns to Wireless Sensor Network Programming Kenji Tei (University of Waseda, Japan); Yoshiaki Fukazawa (University of Waseda, Japan); Shinichi Honiden (University of Tokyo, National Institute of Informatics, Japan)

Adaptive Probabilistic Epidemic Protocol for Wireless Sensor Networks in an Urban Environment

Siok Kheng Tan (University of Bristol, United Kingdom); Alistair Munro (University of Bristol, United Kingdom)

Algorithms for communication in wireless multi-hop ad hoc networks using broadcasts in Opportunistic Large Arrays (OLA) Edoardo Biagioni (University of Hawaii at Manoa, USA)

Achieving robustness through caching and retransmissions in IEEE 802.15.4-based WSNs

Daniele Messina (University of Palermo, Italy); Marco Ortolani (University of Palermo, Italy); Giuseppe Lo Re (University of Palermo, Italy)

Improved Low-Complexity Fusion Receivers for Synchronous DS-CDMA Sensor Networks

Justin Dyer (Stanford University, USA); Bala Natarajan (Kansas State University, USA)

# International Workshop on Multimedia Analysis and Processing (IMAP) HAWAII, Thursday

10:00 - 12:00

#### Session IMAP I: Video coding and analysis, HAWAII

Chair: Dr. Gokce Dane, Qualcomm Inc, USA

Functionally Layered Video Coding for River Surveillance Masahiro Iwahashi (Nagaoka University of Technology, JP)

A Multi-mode Video Object Segmentation Scheme for Wireless Video Applications

Gokce Dane (Qualcomm Inc., US); Haohong Wang (Marvell Semiconductors, US); Khaled El-Maleh (Qualcomm Inc., US)

A Post Deblocking Filter for H.264 Video

Yao-Min Huang (National Chung Cheng University, TW); Jin-Jang Leou (National Chung Cheng University, TW); Ming-Hui Cheng (National Chung Cheng University, TW)

Robust Region-of-Interest Determination Based on User Attention Model Through Visual Rhythm Analysis

Ming-Chieh Chi (National Dong-Hwa University, TW); Chia-Hung Yeh (National Dong Hwa University, TW); Mei-Juan Chen (National Dong-Hwa University, TW); Ching-Ting Hsu (National Dong-Hwa University, TW)

Fast Motion Estimation using Hexagon-based Search Pattern in Predicted Search Range

Jui-chiu Chiang (Chung Cheng University, TW)

#### 12:00 - 13:30 Lunch Break

13:30-14:30

#### **IMAP Keynote Address, HAWAII**

Invited Talk: Perception Is Reality: Visual Quality Evaluation and Beyond Speaker: Dr. Weisi Lin, Nanyang Technological University, Singapore Chair: Dr. Shiqian Wu (Institute for Infocomm Research, SG)

14:30- 15:30

Session IMAP II: Multimedia Quality Evaluation, HAWAII Chairs: Dr. Weisi Lin (Nanyang Technological University, SG)

A Fidelity Metric for Assessing Visual Quality of Color Images Kuo-Cheng Liu (Tatung University, TW)

Temporal Quality Evaluation for Enhancing Compressed Video Kai-Chieh Yang (University of California, San Diego, US); Gokce Dane (Qualcomm Inc., US); Khaled El-Maleh (Qualcomm Inc., US)

#### 15:30-16:00 Coffee Break

16:00- 18:00

Session IMAP III: Media Processing for Intelligent Video Surveillance, HAWAII

Chairs: Chiou-Ting Hsu (National Tsing Hua University, TW)
Jun-Wei Hsieh (Yuan Ze University, TW)

Blind image blur identification in cepstrum domain Shiqian Wu (Institute for Infocomm Research, SG); Weisi Lin (Nanyang Technological University, SG); Zhongkang Lu (Institute for Infocomm Research, SG)

Automatic Fall Incident Detection in Compressed Video for Intelligent Homecare Chia-Wen Lin (Natl. Chung-Cheng Univ., TW); Zhi-Hong Ling (National Chiao Tung University, TW)

Motion-based Background Modeling for Moving Object Detection on Moving Platforms

Yao-Jen Chang (Industrial Technology Research Institute, TW)

Online Selection of Tracking Features using AdaBoost Ying-Jia Yeh (National Tsing Hua University, TW); Chiou-Ting Hsu (National Tsing Hua University, TW)

Suspicious Object Detection for Robbery Event Analysis Using Ratio Histogram Jun-Wei Hsieh (Yuan Ze University, TW)

International Workshop on Performance Modeling and Evaluation in Computer and Telecommunication Networks (PMECT-2007) KAHUKU II, Thursday

10:00 - 12:00

Session PMECT I: Performance Modeling of Internet and QoS, KAHUKU II Chair: Iain Phillips, Loughborough University, UK

A Mathematical Model for the Admission Control Problem in MPLS Networks with End-to-End delay guarantees

Hichem Ayed Harhira (École polytechnique de Montreal, CA); Samuel Pierre (Ecole Polytechnique de Montreal, CA)

Performance of a Priority-Weighted Round Robin Mechanism for Differentiated Service Networks

Helen Yu-Zhang and Peter Harrison (Imperial College, UK)

Bottleneck Bandwidth Estimation Using Frequency Analysis
Talal Edwan; Bogdan Ghita; Xingang Wang (University of Plymouth, UK)

Two-Phase Modeling of QoS Routing in Communication Networks Chia-Hung Wang; Hsing Luh (National Chengchi University, TW)

Active Queue Management Design and Development based on the Correlation of Internet Traffic

Khalid Alawfi, Mike Woodward (University of Bradford, UK)

Automated Detection of Changes in Computer Network Measurements using Wavelets

Konstantinos Kyriakopoulos; David Parish (Loughborough University, UK)

#### 12:00 - 13:30 Lunch Break

13:30 - 15:30

Session PMECT II: Performance Modeling of Mobile Networks, KAHUKU II Chair: Dr. Polychroni Koutsakis

Resource Allocation for High Quality H.264 Streams Integrated with Web and MP3 Traffic over High-Speed Cellular Networks with Capture Polychronis Koutsakis (McMaster University, CA)

Bayesian Learning of Neural Networks for Mobile User Position Prediction Ahmed Sameh; Sherif Akoush (The American University in Cairo, EG)

A Network Selection Algorithm considering Power Consumption in Hybrid Wireless Networks

Inwhee Joe, Seokjoon Hong (Hanyang University, US)

An assessment of maximum interleaving in Reed-Solomon coding for 3G broadcasting

Kyungtae Kang (Seoul National University, KR)

Analysis of a Cell-based Call Admission Control Scheme for QoS Support in Multimedia Wireless Networks

Nidal Nasser (University of Guelph, CA); Sghaier Guizani (Qatar University, QA)

#### 15:30-16:00 Coffee Break

16:00 - 17:50

Session PMECT III: Performance Modeling II and Platforms, KAHUKU II Chairs: Xingang Wang (University of Plymouth, UK)

Evaluating Xen for Virtual Routers

Norbert Egi (Lancaster University, UK); Adam Greenhalgh (University College London, UK); Mark Handley (University College London, UK); Mickael Hoerdt (University of lancaster, UK); Laurent Mathy (Lancaster University, UK); Tim Schooley (University College London, UK)

Honey Plotter and the Web of Terror Mark Withall, M. Shirantha de Silva, David Parish, and Iain Phillips (Loughborough University, UK)

Investigating QoS Performance on a Testbed Network
Jumpot Phuritatkul (National Institute of Information and Communications
Technology (NICT), JP); Kien Nguyen (Hanoi University of Technology, VN);
Michihiro Koibuchi (National Institute of Informatics, JP); Yusheng Ji (National Institute of Informatics, JP); Kensuke Fukuda (National Institute of Informatics, JP); Shunji Abe (National Institute of Informatics, JP); Jun Matsukata (National Institute of Informatics, JP); Shigeki Yamada (National Institute of Informatics, JP)

Analysis of Discrete Time Queueing Networks under Buffer Threshold Scheme Irfan Awan (University of Bradford), Lin Guan (Loughborough University, UK), Xingang Wang (University of Plymouth)

A Service Level Agreement-based Web Services Performance Guarantee Model Chuanchang Liu (Beijing University of Posts and Telecommunications, CN)

# International Workshop on Distributed Sensor Networks (DSS) KAHUKU I, Thursday

10:00 - 12:00

Session DSS I: MAC, Mobility and Power Management, KAHUKU I Chair: John McEachen, Naval Postgraduate School, US

A Patterned Preamble MAC Protocol for Wireless Sensor Networks

Inwhee Joe (Hanyang University, US)

A Framework for Querying Sensor Networks Using Mobile Devices Shourui Tian (University of Illinois at Chicago, US); Sol Shatz (University of Illinois at Chicago, US); Yang Yu (Motorola Labs, US)

Dual-Sink: Using Mobile and Static Sinks for Lifetime Improvement in Wireless Sensor Networks

Xiaobing Wu (Nanjing University, CN); Guihai Chen (Nanjing University, CN)

A Comparison of Power Management Techniques in Wireless RF Direction Finding Sensor Networks
John McEachen (Naval Postgraduate School, US)

#### 12:00 - 13:30 Lunch Break

13:30 - 15:30

Session DSS II: NeTRA and Applications, KAHUKU I

Chair: Yan Bai, Columbus State University, USA

A novel signal reconstruction algorithm for perception based data reduction in haptic signal communication

Julius Kammerl (Munich University of Technology, Germany), Peter Hinterseer(Munich University of Technology, Germany), and Eckehard Steinbach (Munich University of Technology, Germany)

Transport Protocols for remote programming of network robots within the context of Telelaboratories for Education: A comparative analysis
Raul Wirz (Jaume I University of Castellon, Spain), Raul Marin (Jaume I University of Castellon, Spain), Jose M Claver (University of Valencia, Spain), and Josep Fernandez (University Politecnique of Catalonia, Spain)

A virtual decomposition control based communication network for modular robots applications

Tom Lamarche (Canadian Space Agency, Canada) and Wen-Hong Zhu (Canadian Space Agency, Canada)

Sensor Response and Sensor Network Development for Practical Combustors Kenneth Bryden (Iowa State University, US)

Sensor Network with Delay Tolerance (SeNDT)
Paul McDonald (Trinity College Dublin, IE); Dermot Geraghty (Trinity College Dublin, IE); Stephen Farrell (Trinity College Dublin, IE); Vinny Cahill (Trinity College Dublin, IE)

#### 15:30-16:00 Coffee Break

16:00 - 17:30

#### Session DSS III: Security and Privacy, KAHUKU I

Chair: Junichi Suzuki, University of Massachusetts, Boston, US

Design Techniques for Streamlined Integration and Fault Tolerance in a Distributed Sensor System for Line-crossing Recognition Chung-Ching Shen (University of Maryland, US)

Reducing Communication Overhead of Key Distribution Schemes for Wireless Sensor Networks

Christina Park (University of Toronto, CA); Ian Blake (University of Toronto, CA)

A Study of Context-aware Privacy Protection for Personal Information Qingsheng Zhang, Yong Qi, Jizhong Zhao, Di Hou, Tianhai Zhao (Electronics and Information Engineering School Xi'an Jiaotong University, CN), Liang Liu (IBM China Research Lab, China)

Security and Privacy Analysis of RFID Authentication Protocol for Ubiquitous Computing

Hyun-Seok Kim (Korea University, KOREA, KR)