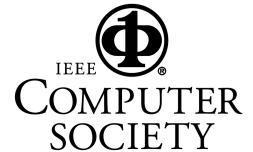




LCN 2006

The 31st Annual IEEE Conference on Local Computer Networks (LCN)



Tampa, Florida
November 14-16, 2006

Conference Web site:
<http://www.ieeelcn.org>

Keynote speakers:
Bob Ianucci, Nokia, USA
Edward Knightly, Rice University, USA

Tuesday, November 14		Workshops	
7:30 - 8:30	Registration		
8:30 - 12:30	Half Day – First IEEE LCN Workshop on Network Measurements		
1:30 - 5:30	Half Day – Second IEEE LCN Workshop on Network Security		
8:30 - 6:00	Full Day – First IEEE International Workshop on Practical Issues in Building Sensor Network Applications (SenseApp 2006)		
8:30 - 6:00	Full Day – Second IEEE International Workshop on Performance and Management of Wireless and Mobile Networks		
8:30 - 6:00	Full Day – Sixth International Workshop on Wireless Local Networks (WLN)		

Wednesday, November 15		LCN 2006		
7:30 - 8:30	Registration			
8:30 - 8:45	Welcome from LCN general chair and program chair			
8:45 - 9:00	Welcome from USF			
9:00 - 10:00	Keynote #1: Bob Ianucci, Nokia, USA (title of talk: "In search of the next big thing")			
10:00 - 10:30	Coffee break			
10:30 - 12:10	Session #1 (tracks A, B, and C)			
	Energy efficiency	Performance evaluation	Scheduling and MAC layer	
12:10 - 1:30	Lunch			
1:30 - 3:10	Session #2 (tracks A, B, and C)			
	P2P and overlay networks	Transport layer	Routing and caching	
3:10 - 3:30	Cookie break			
3:30 - 5:00	Poster session			
5:00 - 6:00	Social hour			
6:00	Buses leave for banquet dinner at Rusty Pelican			

Thursday, November 16		LCN 2006		
8:00 - 9:00	Registration			
9:00 - 10:00	Keynote #2: Dr. Edward Knightly, Rice University, USA (title of talk: "Large-Scale Urban Mesh Networks: from Deployment to Applications")			
10:00 - 10:30	Coffee break			
10:30 - 12:10	Session #3 (tracks A, B, and C)			
	Security and disaster management	Clustering and localization	High-speed interconnects and hardware	
12:10 - 1:30	Lunch			
1:30 - 3:10	Session #4 (tracks A, B, and C)			
	Wireless and ad hoc	Optical networks 1	Modeling and advanced techniques	
3:10 - 3:30	Cookie break			
3:30 - 5:35	Session #5 (tracks A, B, and C)			
	IEEE 802.11	Optical networks 2	Multicast	

Conference supporters:



10:30 - 12:10 Session #1 (Tracks A, B, and C)

>>> Track A – Energy efficiency (Session Chair: TBD)

LEMA: Localized Energy-Efficient Multicast Algorithm based on Geographic Routing by Juan Sanchez and Pedro Ruiz

Energy-efficient Interleaving for Error Recovery in Broadcast Networks by Kyungtae Kang, Yongwoo Cho, and Heonshik Shin

Performance Study of Power Saving Classes of Type I and II in IEEE 802.16e by Lei Kong and Danny H. K. Tsang

Ethernet Adaptive Link Rate: System Design and Performance Evaluation by Chamara Gunaratne and Ken Christensen

>>> Track B – Performance evaluation (Session Chair: TBD)

Performance Aware Design of Communication Systems by Lukas Pustina, Michael Gerharz, Peter Martini, Simon Schwarzer, and Volker Deichmann

Minimizing Cache Misses in an Event-Driven Network Server: A Case Study of TUX by Sapan Bhatia, Charles Consel, and Julia Lawall

Buffer Management for 3D Image-based Rendering over Wireless Network with QoS Adaptation by Azzedine Boukerche and Jing Feng

Efficient Packet Processing in User-Level OSES: A Study of UML by Younggyun Koh, Calton Pu, Sapan Bhatia, and Charles Consel

>>> Track C – Scheduling and MAC layer (Session Chair: TBD)

Fair Scheduling over Multiple Servers with Flow-Dependent Server Rate by Satya Mohanty and Laxmi Bhuyan

An Adaptive Non-preemptive Scheduling Framework for Delay Bounded Traffic in Cellular Networks by Yaser Khamayseh and Ehab Elmallah

Bandwidth Aware Slot Allocation in Hybrid MAC by Yuvraj Rana, Bao Hua Liu, Alfandika Nyandoro, and Sanjay Jha

A Congestion-aware Medium Access Control Protocol for Multi-rate Ad-hoc Networks by Timo Zauner, Luke Haslett, Wen Hu, Sanjay Jha, and Cormac Sreenan

1:30 - 3:10 Session #2 (Tracks A, B, and C)

>>> Track A – P2P and overlay networks (Session Chair: TBD)

Computing Real Time Jobs in P2P Networks by Jingnan Yao, Jian Zhou, and Laxmi Bhuyan

Achieving Resilient and Efficient Load Balancing in DHT-based P2P Systems by Di Wu, Ye Tian and Kam-Wing Ng

Content-based Packet Marking for Application-Aware Processing in Overlay Networks by Panho Lee, Tarun Banka, Anura Jayasumana, and V. Chandrasekar

>>> Track B – Transport layer (Session Chair: TBD)

Considerations of SCTP Retransmission Delays for Thin Streams by Jon Pedersen, Carsten Griwodz, and Pål Halvorsen

A New Stable AQM Algorithm exploiting RTT Estimation by Hayato Hoshihara, Hisashi Koga, and Toshinori Watanbe

Adapting TCP for Vertical Handoffs in Wireless Networks by Laila Daniel and Markku Kojo

Emulating TCP (A Reliable Internet Protocol) Using the Fixed Point Algorithm by Debessay Fesehaye

>>> Track C – Routing and caching (Session Chair: TBD)

An Interior Path Vector Protocol by Conor Creagh and Cormac Sreenan

Maximum Data Collection Least-Cost Routing in Energy Constrained Wireless Sensor Networks by Ka-Lok Hung, Brahim Bensaou, Junhua Zhu, and Farid Nait-Abdesselam

On Cache Prefetching Strategies for Integrated Infostation-Cellular Network by Jerry Chun-Ping Wang, Hossam ElGindy, and Justin Lipman

3:30 - 5:00 Poster session

Cerco: Supporting Range Queries with a Hierarchically Structured Peer-to-Peer System by Simon Rieche, Klaus Wehrle, Leo Petrak, and Clemens Wrzodek

Performance of Constant Quality Video Applications using the DCCP Transport Protocol by Jeroen Van Velthoven, Kathleen Spaey, and Chris Blondia

BEAM: An Efficient Peer to Peer Media Streaming Framework by Darshan Purandare and Ratan Guha

MPLS Based Approach for Heterogeneous and Scalable Multicast in DiffServ by Mohamed El Hachimi and Abdelhafid Abouaissa

Power-Proxying on the NIC: A Case Study with the Gnutella File-Sharing Protocol by Pradeep Purushothaman, Mukund Navada, Rajagopal Subramaniyan, Casey Reardon, and Alan George

Dynamic Programming-based Energy-Efficient Rate Adaptation for Wireless Ad Hoc Networks by Maciej Jan Zawodniok and Sarangapani Jagannathan

A Multicast Tree Reconstruction Method for Many-to-Many Mobile Communications with Delay Constraint by Tsuyoshi Yamada, Shoji Yoshimura, Keita Kawano, Kazuhiko Kinoshita, and Koso Murakami

Achieving Fairness in IEEE 802.11 Ad Hoc Networks by Fanilo Harivelo and Pascal Anelli

A Traffic Shaping Heuristic for Congestion Control in Optical Burst-Switched Networks by Mushi Jin and Oliver Yang

The Design of Efficient Hashing Techniques for IP Address Lookup by Devang Pandya, Chris Martinez, Wei-Ming Lin, and Parimal Patel

Ethernet Adaptive Link Rate (ALR): Analysis of a MAC Handshake Protocol by Himanshu Anand, Casey Reardon, Rajagopal Subramaniyan, and Alan George

An Enhancement of TCP Veno over High Bandwidth-Delay Product Networks by Bin Zhou and Cheng Peng Fu

Hydra: A Novel Framework for Making High-Performance Computing Offload Capable by Yaron Weinsberg, Danny Dolev, Tal Anker, and Pete Wyckoff

Characterization of Layer-2 Unique Topologies in Multisubnet Local Area Networks by Hassan Gobjuka and Yuri Breitbart

Data Aggregation System for Distributing Inter-Vehicle Warning Messages by Stephan Eichler, Christian Merkle, and Markus Strassberger

TA2I: Time Slot Access with Acknowledge Insertion by Marcel Wille and Harald Richter

Towards Minimizing Service Degradation during MIPv6 Handoffs by Yan Cheng and J. William Atwood

VoIP Capacity over Wireless Mesh Networks by Bin Hong Lee, Guan Yan Cai, Yu Ge, and Winston Seah

Traffic shaping and dimensioning of an external overload controller in service architectures by Jens Andersson, Christian Nyberg, and Maria Kihl

Mitigating Worm Propagation on Virtual LANs by Saeed Rajput, Xiaoguang Sun, and Sam Hsu

QoS Differentiation Provisioning & Management System Exploiting Mobile Agent Technology by Angelos Michalas, Malamati Louta, Vassilis Loumos, Dimitrios Zisopoulos, and Georgia Charitoudi

A New Bandwidth Access Framework in Slotted-OPS Networks by Akbar Ghaffarpour Rahbar and Oliver Yang

Improved Collaborative Environment Control Using Mote-based Sensor/Actuator Networks by Masayuki Nakamura, Atsushi Sakurai, Toshio Watanabe, Jiro Nakamura, and Hiroshi Ban

Communication-assisted Topology Control of Semi-autonomous Robots by Miguel Labrador

Scalability of Location Sensor Data Fusion by Tom Pfeifer, Kieran Sullivan, and Mícheál Ó Foghlú

Port-based Multihomed Mobile IPv6 for Heterogeneous Networks by Christer Ahlund, Robert Brannstrom, Karl Andersson, and Orjan Tjernstrom

Performance of TCP with Directional Antennas by Sivaram Cheekiralla and Daniel Engels

Needles in Haystacks: Practical Intrusion Detection from Theoretical Results by Gerald Marin and William Allen

Viral IP Address Assignment by Sivaram Cheekiralla and Daniel Engels

Thursday - November 16, 2006 (LCN 2006)

10:30 - 12:10 Session #3 (Tracks A, B, and C)

>>> Track A – Security and disaster management (Session Chair: TBD)

Detecting Botnets with Tight Command and Control by W. Timothy Strayer, Robert Walsh, Carl Livadas, and David Lapsley

Can CRLs Provide Bandwidth-Efficient Online Certificate Status? by A. Lakshminarayanan, Aditya Liviandi, Lim Tong Lee, and William Chui

Modelling Voice Communication in Disaster Area Scenarios by Nils Aschenbruck, Michael Gerharz, Matthias Frank, and Peter Martini

Security for FTTx Optical Access Networks by Walid Shawbaki and Ahmed Kamal

>>> Track B – Clustering and localization (Session Chair: TBD)

Clustered Mobility Model for Scale-Free Wireless Networks by Sunho Lim, Chansu Yu, and Chita Das

Landscape-3D: A Robust Localization Scheme for Sensor Networks over Complex 3D Terrains by Liqiang Zhang, Xiaobo Zhou, and Qiang Cheng

Adaptive Location Update Area Design for PCS Networks under 2D Markov Walk Model by Jun Zheng, Yan Zhang, Ling Wang, and Jinlin Chen

>>> Track C – High-speed interconnects and hardware (Session Chair: TBD)

Design of a Giga-bit Hardware Accelerator for the iSCSI Initiator by Chung-Ho Chen, Yi-Cheng Chung, Chen-Hua Wang, and Han-Chiang Chen

Efficient Java Communication Protocols on High-speed Cluster Interconnects by Guillermo Taboada, Juan Touriño, and Ramón Doallo

An integrated Hardware Solution for MAC Address Translation, MPLS-UNI, and Traffic Management in Access Networks by Harald Widiger, Stephan Kubisch, Thomas Bahls, and Dirk Timmermann

Effect of Hash Collisions on the Performance of LAN Switching Devices and Networks by Chris Huntley, Galina Antonova, and Paul Guinand

1:30 - 3:10 Session #4 (Tracks A, B, and C)

>>> Track A – Wireless and ad hoc (Session Chair: TBD)

Exploiting Rate Diversity for Multicasting in Multi-Radio Wireless Mesh Networks by Junaid Qadir, Chun Tung Chou, and Archan Misra

Link Availability and Its Effects on the Capacity of Mobile Ad Hoc Wireless Networks – an Analytical Approach by Ruchi Sharma, Ravi Bhagavathula, Kamesh Namuduri, and Ravi Pendse

Toward a Seamless Communication Architecture for In-building Networks at the 60 GHz band by Bao Linh Dang, R. Venkatesha Prasad, Ignas Niemegeers, M. Garcia Larrode, and A. M. J. Koonen

Hybrid Distributed Coordination Function for Next-Generation High-Bandwidth WLANs by Nakjung Choi, Seongil Han, Yongho Seok, Yanghee Choi, and Taekyoung Kwon

>>> Track B – Optical networks 1 (Session Chair: TBD)

A Transceiver Saving Auxiliary Graph Model for Dynamic Traffic Grooming in WDM Mesh Networks by Huaxiong Yao, Zongkai Yang, Liang Ou, and Xiansi Tan

Integration of Differentiated Services in Optical Burst Switching Metro Ring Networks by Hui-Tang Lin and Wang-Rong Chang

Traffic Grooming in Statistically Shared Optical Networks by Srivatsan Balasubramanian and Arun Somani

Optical CDMA Code Collision and Translation Performance Analysis by Anh Nguyen and Deniz Gurkan

>>> Track C – Modeling and advanced techniques (Session Chair: TBD)

Ontology Modeling of a Dynamic Protocol Stack by LiFeng Zhou, Hung Keng Pung, Lek Heng Ngoh, and Tao Gu

Towards Semantic Modeling for QoS Specification by Lifeng Zhou, Hung Keng Pung, and Lek Heng Ngoh

Training on Multiple Sub-Flows to Optimise the use of Machine Learning Classifiers in Real-World IP Networks by Thuy Nguyen and Grenville Armitage

Biologically-Inspired Data Aggregation for Multi-Modal Wireless Sensor Networks by Pruet Boonma and Junichi Suzuki

3:30 - 5:35 Session #5 (Tracks A, B, and C)

>>> Track A – IEEE 802.11 (Session Chair: TBD)

Real-Time Communication in 802.11 Networks: The Virtual Token Passing VTP-CSMA Approach by Ricardo Moraes, Francisco Vasques, Paulo Portugal, and José Fonseca

Experimental Investigation on VoIP Performance and the Resource Utilization in 802.11b WLANs by Miroslaw Narbutt and Mark Davis

Delay Distribution Analysis of the RTS/CTS mechanism of IEEE 802.11 by P. Raptis, A. Banchs, V. Vitsas, K. Paparrizos, and P. Chatzimisios

Maximizing Differentiated Throughput in IEEE 802.11e Wireless LANs by Jongwon Yoon, Sangki Yun, Hyogon Kim, and Saewoong Bahk

Performance Limits and Analysis of Contention-based IEEE 802.11 MAC by Shao-Cheng Wang and Ahmed Helmy

>>> Track B – Optical networks 2 (Session Chair: TBD)

Residual Admission Capacity in Optical Burst Switching Networks and its Application in Routing Loss-Guaranteed Flows by Qian Chen, Gurusamy Mohan, and Kee Chaing Chua

Embedding Hypercube Communications on Optical Chordal Ring Networks by Yawen Chen, Hong Shen, and Haibo Zhang

Delay Constrained Traffic Grooming in WDM Ring Networks by Arun Vishwanath and Weifa Liang

Rerouting Schemes with Inter-layer Backup Resource Sharing for Differentiated Survivability in IP-over-WDM Optical Networks by Krishanthmohan Ratnam, Mohan Gurusamy, and Luying Zhou

An Efficient MAC Protocol for Optical WDM Networks with Simulation Evaluation by Ge Nong, S. Zhang, and XiaoLa Lin

>>> Track C – Multicast (Session Chair: TBD)

Protecting Multicast Sessions in Wireless Mesh Networks by Xin Zhao, Chun Tung Chou, Jun Guo, and Sanjay Jha

The Internet Group Management Protocol with Access Control (IGMP-AC) by Salekul Islam and J. William Atwood

Making Application Layer Multicast Reliable is Feasible by Bin Rong, Ibrahim Khalil, and Zahir Tari

Performance of multicast over bidirectional slotted ring networks by Mohamad Chaitou, Gerard Hebuterne, and Hind Castel

Detecting Malicious Peers in Overlay Multicast Streaming by Samarth Shetty, Patricio Galdames, Wallapak Tavanapong, and Ying Cai