

MASCOTS 2009

Programme

Monday 21 September

0815-0900 Registration, Tea & Coffee (344)

0900-0915 Welcome (311)

0915-1015 Keynote 1: Don Towsley, *Towards a Network Measurement Science, University of Massachusetts* (311, chair: George Riley)

SESSION 1: Parallel/Multicore Systems I (311, chair: George Riley)

1015-1045 Guanying Wang, Ali R. Butt, Prashant Pandey and Karan Gupta. *A Simulation Approach to Evaluating Design Decisions in MapReduce Setups*

1045-1115 Tao Li, Chang-Burm Cho, James Poe and Jingling Yuan. *Accurate, Scalable and Informative Design Space Exploration for Large and Sophisticated Multi-core Oriented Architectures*

1115-1145 Break

SESSION 2: Mixed Topics I (311, chair: Carey Williamson)

1145-1215 Andrzej Kochut. *Power and Performance Modeling of Virtualized Desktop Systems*

1215-1245 Sara Casolari, Michele Colajanni and Francesco Lo Presti. *Runtime state change detector of computer system resources under non-stationary conditions*

1245-1315 Xinyu Xing and Shivakant Mishra. *Where is the Tight Link in Home Wireless Broadband Environment?*

1315-1430 Lunch

SESSION 3a: Wireless Networks I (311, chair: Jim Conrad)

1430-1500 Andrew Symington and Pieter Kritzinger. *A Hardware Test Bed for Measuring IEEE 802.11g Distribution Coordination Function Performance*

1500-1530 Mingwei Gong and Carey Williamson. *Scheduling Issues in Multi-Channel Wireless Networks*

1530-1600 Dong Zhang, Rick Bunt and Nathaniel Osgood. *Capacity Bounds for Cellular Wireless Mesh Networks*

SESSION 3b: Reliability and Availability Modelling (308, chair: Nick Dingle)

1430-1500 Bahman Javadi, Derrick Kondo, Jean-Marc Vincent and David P. Anderson. *Mining for Statistical Models of Availability in Large-Scale Distributed Systems: An Empirical Study of SETI@home*

1500-1530 Taniya Siddiqua and Sudhanva Gurumurthi. *Balancing Soft Error Coverage with Lifetime Reliability in Redundantly Multithreaded Processors*

1530-1600 Ilias Iliadis. *Reliability Modeling of RAID Storage Systems with Latent Errors*

1600-1630 Break

SESSION 4a: Storage I (311, chair: Lucy Cherkasova)

1630-1650 Jehan-Francois Paris, Ahmed Amer and Darrell D. E. Long. *Using storage class memories to increase the reliability of two-dimensional RAID arrays*

1650-1710 Jae-Hong Kim, Dawoon Jung, Jin-Soo Kim and Jaehyuk Huh. *A Methodology for Extracting Performance Parameters in Solid State Disks (SSDs)*

1710-1730 Biplob Debnath, Sunil Subramanya, David Du and David J. Lilja. *Large Block CLOCK (LB-CLOCK): A Write Caching Algorithm for Solid State Disks*

1730-1750 Mohammed G. Khatib and Pieter H. Hartel. *Policies for Probe-Wear Leveling in MEMS-Based Storage Devices*

SESSION 4b: Optimisation and Scheduling (308, chair: Daniel Menasce)

1630-1650 Dinesh Kumar, David P. Olshefski and Li Zhang. *Connection and Performance Model Driven Optimization of Pageview Response Time*

1650-1710 Sebastien Doirieux, Bruno Baynat and Thomas Begin. *Finding the right balance between fairness and efficiency in WiMAX scheduling through analytical modeling*

1710-1730 Hongxia Sun and Carey Williamson. *Service Differentiation in Multi-Rate HSDPA Systems*

1730-1750 Maria Luisa Santamaria, Sebastia Galmes and Ramon Puijaner. *Simulated Annealing Approach to Optimizing the Lifetime of Sparse Time-Driven Sensor Networks*

1900-2100 Poster Session and Prize Giving (Senior Common Room, Physics)

Tuesday 22 September

0830-0900 Tea and Coffee (344)

SESSION 5: Wireless networks II (311, chair: Fanglu Guo)

0900-0930 Shamim Begum, Ahmed Helmy and Sandeep Gupta. *Modeling and Test Generation for Worst-Case Performance Evaluation of MAC Protocols for Wireless Ad Hoc Networks.*

0930-1000 Ashish Raniwala, Pradipta De, Srikant Sharma, Rupa Krishnan and Tzi-cker Chiueh. *Globally Fair Radio Resource Allocation for Wireless Mesh Networks*

1000-1030 Ajay Gopinathan, Zongpeng Li and Carey Williamson. *Optimal Multicast in Multi-Channel Multi-Radio Wireless Networks*

1030-1100 Break

SESSION 6: Storage II (311, chair: William Knottenbelt)

1100-1130 Deepavali Bhagwat, Kave Eshghi, Darrell D. E. Long and Mark Lillibridge. *Extreme Binning: Scalable, Parallel Deduplication for Chunk-based File Backup.*

1130-1200 Avani Wildani, Thomas J. E. Schwarz, Ethan L. Miller and Darrell D. E. Long. *Protecting Against Rare-Event Failures in Archival Storage.*

1200-1230 Ludmila Cherkasova, Roger Lau, Harald Burose and Bernhard Kappler. *Enhancing and Optimizing a Data Protection Solution*

1230-1400 Lunch

SESSION 7a: Load Management and Scheduling (311, chair: TBA)

1400-1430 Ningfang Mi, Giuliano Casale, Qi Zhang, Alma Riska and Evgenia Smirni. *Autocorrelation-Driven Load Control in Distributed Systems.*

1430-1500 John Ewing and Daniel Menasce. *Business-Oriented Autonomic Load Balancing for Multitiered Web Sites*

1500-1530 Greg Franks and Lianhua (Judy) Li. *Performance Modeling of Systems using Fair Share Scheduling with Layered Queueing Networks*

SESSION 7b: Wireless Networks III (308, chair: Uli Harder)

1400-1430 Nouha Baccour, Anis Koubaa, Maissa Ben Jamaa, Habib Youssef, Marco Zuniga and Mario Alves. *A Comparative Simulation Study of Link Quality Estimators in Wireless Sensor Networks*

1430-1500 Johannes Semmler, Katinka Wolter and Philipp Reinecke. *On-line Monitoring for Model-based QoS Management in IEEE 802.11 Wireless Networks*

1500-1530 Fanglu Guo and Tzi-cker Chiueh. *Device-Transparent Network-Layer Handoff for Micro-Mobility*

1530-1600 Break

SESSION 8a: Networks and Distributed Systems (311, chair: Giuliano Casale)

1600-1620 Guosong Tian, Colin Fidge and Yu-Chu Tian. *Hybrid System Simulation of Computer Control Applications over Communication Networks*

1620-1640 Muhammad Asif and Shikharesh Majumdar. *A Graph-based Algorithm for Partitioning of Mobile Web Services*

1640-1700 Eric Anderson, Christopher Hoover, Xiaozhou Li and Joseph Tucek. *Efficient Tracing and Performance Analysis for Distributed Systems*

1700-1720 Konstantinos Katsaros, Vasileios P. Kemerlis, Charilaos Stais and George Xylomenos. *A BitTorrent Module for the OMNeT++ Simulator*

1720-1740 Christos Papageorgiou, Konstantinos Birkos, Tasos Dagiuklas and Stavros Kotsopoulos. *An obstacle-aware human mobility model for ad hoc networks*

SESSION 8b: Parallel/Multicore Systems II (308, chair: Andrzej Kochut)

1600-1620 Stefan Podlipnig. *Applying Ordinal Time Series Methods to Grid Workload Traces*

1620-1640 Jens Happe, Henning Groenda and Ralf H. Reussner. *Performance Evaluation of Scheduling Policies in Symmetric Multiprocessing Environments*

1640-1700 Gul N. Khan and Victor Dumitriu. *Simulation Environment for Design and Verification of Network-on-Chip and Multi-core Systems*

1700-1720 Pratyush Kumar and Madhav P. Desai. *Learning based Address Mapping for improving the Performance of Memory Subsystems*

1720-1740 Jiangtian Li, Amey Deshpande, Jagan Srinivasan and Xiaosong Ma. *Energy and Performance Impact of Aggressive Volunteer Computing with Mutli-core Computers*

1930-2130 Banquet (Bombay Brasserie)

Wednesday 23 September

0845-0915 Tea and Coffee (344)

0915-1015 Keynote 2: Boudewijn Haverkort, *Time---It's Time for a Change*, University of Twente (311, chair: Tony Field)

1015-1045 Break

SESSION 9: Workload modeling (311, chair: Li Zhang)

1045-1115 Himanshu Gupta, Anirban Mahanti and Vinay J. Ribeiro. *Revisiting Coexistence of Poissonity and Self-Similarity in Internet Traffic*

1115-1145 Dror Feitelson and Edi Shmueli. *A Case for Conservative Workload Modeling: Parallel Job Scheduling with Daily Cycles of Activity*

1145-1215 Hyejeong Lee and Hyokyung Bahn. *Characterizing Virtual Memory Write References for Efficient Page Replacement in NAND Flash Memory*

1215-1330 Lunch

SESSION 10a: Mixed Topics II (311, chair: Nigel Thomas)

1330-1400 Zhibin Yu, Hai Jin, Jian Chen and Lizy K. John. *TSS: Applying Two-Stage Sampling in Micro-architecture Simulation*

1400-1430 Jing Xie and Yuming Jiang. *Stochastic Service Guarantee Analysis Based on Time-Domain Models*

1430-1500 Fanglu Guo and Tzi-cker Chiueh. *DAFT: Disk Geometry-Aware File System Traversal*

1500-1520 Nils Aschenbruck, Christoph Fuchs and Peter Martini. *Traffic Characteristics and Modeling of Emergency Calls at the PSAP*

1520-1540 George Pallis, Dimitrios Katsaros, Marios D. Dikaiakos, Nicholas Loulloudes and Leandros Tassioulas. *On the Structure and Evolution of Vehicular Networks*

SESSION 10b: Mixed Topics III (308, chair: Peter Harrison)

1330-1400 Andrea Marin and Samuel Rota Buló. *A general algorithm to compute the steady-state solution of product-form cooperating Markov chains*

1400-1430 Richard Hayden and Jeremy T. Bradley. *Shared Transaction Markov Chains for Fluid Analysis of Massively Parallel Systems*

1430-1500 Ghulam Abbas, A. K. Nagar, H. Tawfik and J. Y. Goulermas. *Quality of Service Issues and Nonconvex Network Utility Maximization for Inelastic Services in the Internet*

1500-1520 James Poe, Clay Hughes and Tao Li. *TransPlant: A Parameterized Methodology For Generating Transactional Memory Workloads*

1520-1540 Patrick Maille, Maurizio Naldi and Bruno Tuffin. *Price war with migrating customers*

1540 Conference ends

Poster Session

Monday 21 September, 1900-2100 in the Physics Common Room, level 8 Blackett

Workload Modeling using pseudo2D-HMM, Alessandro Moro, Enzo Mumolo and Massimiliano Nolich

Horizon - Exploiting Timing Information for Parallel Network Simulation, Georg Kunz, Olaf Landsiedel and Klaus Wehrle

A Linear Method for Calibrating LIDAR-and-Camera Systems, Andrew R. Willis, Malcolm J. Zapata and James M. Conrad

Modeling and Simulating a Path Planning and Obstacle Avoidance Algorithm for an Autonomous Robotic Vehicle, Sharayu Ghangrekar and James M. Conrad

Timing Penalties Associated with Cache Sharing, Vlastimil Babka, Peter Libic and Petr Tuma

CETT: A Cross Layer Routing Metric for Cooperative Wireless Ad Hoc Networks, Kumaran Vijayasankar, Lakshmi Narasimhan Kannan, Marco Tacca and Andrea Fumagalli

Anonymous routing protocols: impact on performance in MANETs, Marga Nacher, Carlos T. Calafate, Juan-Carlos Cano and Pietro Manzoni

Models for High-Speed Interconnection Networks Performance Analysis, D. Lugones, D. Franco, E. Argollo and E. Luque

Real-Time Performance Modeling for Adaptive Software Systems with Multi-class Workload, Dinesh Kumar, Asser Tantawi and Li Zhang

CPM: Cooperative Power Management for Object-based Storage Cluster, Qingsong Wei and Bharadwaj Veeravalli and Zhixiang Li

Adaptive Admission Control Algorithm in a QoS-aware Web System, Katja Gilly, Carlos Juiz, Salvador Alcaraz and Ramon Puigjaner

Finding a Simple Path with Multiple Must-include Nodes, Hars Vardhan, Shreejith Billenahalli, Wanjun Huang, Miguel Razo, Arularasi Sivasankaran, Limin Tang, Paolo Monti, Marco Tacca and Andrea Fumagalli

Managing Storage Space in a Flash and Disk Hybrid Storage System, Xiaojian Wu and A. L. Narasimha Reddy

Mitigating Disk Energy Management Delays by Exploiting Peer Memory, Guanying Wang, Ali R. Butt and Chris Gniady

On maximizing the delivery ratio of ultra low duty-cycle WSNs under real-time constraints, Fei Yang and Isabelle Auge-Blum

Presenting Dynamic Markovian Agents with a Road Tunnel Application, Davide Cerotti, Marco Gribaudo and Andrea Bobbio

A Sensitivity Analysis of a New Hardware-Supported Global Synchronization Unit, Elizabeth Whitaker Lynch and George F. Riley

Self-Organized Sink Placement in Large-Scale Wireless Sensor Networks, Wint Yi Poe and Jens Schmitt

Saving power in Flash and Disk Hybrid Storage System, Laura Prada, Jose Daniel Garcia, Jesus Carretero and Felix Garcia

EXtensible Animator for Mobile Simulations: EXAMS, Livathinos S. Nikolaos