

# MONDAY 11/6/2012

## WORKSHOPS – MORNING

	GreenMetrics	W-PIN
08:30	Registration opens	
09	<p><b>Keynote</b></p> <p>09:00 <b>Challenges in multi-modal transport planning</b> Jochen Mundinger</p> <p>308</p>	<p><b>Keynote</b></p> <p>09:00 <b>Economics, QoS, and charging in the next great telecom revolution</b> Andrew Odlyzko</p> <p>311</p>
10	<p><b>Greener IT</b></p> <p>10:00 <b>Measuring Energy Consumption for Short Code Paths Using RAPL</b> Marcus Hähnel, Björn Döbel, Marcus Völz, Hermann Härtig</p> <p>10:20 <b>Empirical Evaluation of Power Saving Policies for Data Centers</b> Michele Mazzucco, Isi Mitrani</p> <p>10:40 <b>Evaluating the Need for Complexity in Energy-aware Management for Cloud Platforms</b> Pooja Ghumre, Junwei Li, Mukil Kesavan, Ada Gavrilovska, Karsten Schwan</p> <p>308</p>	<p><b>Neutrality</b></p> <p>10:00 <b>Comparison of Search Engines Non-Neutral and Neutral Behaviors</b> Pierre Coucheney, Patrick Maillé and Bruno Tuffin</p> <p>10:30 <b>Game Theoretic Analysis of Collusions in Nonneutral Networks</b> Manjesh Kumar Hanawal, Eitan Altman and Rajesh Sundaresan</p> <p>311</p>
11	<p>11:00</p> <p>Break</p> <p>344</p>	
12	<p><b>Invited Talks</b></p> <p>11:30 <b>Stochastic Analysis of Real and Virtual Energy Storage in the Smart Grid</b> Jean-Yves Le Boudec</p> <p>12:15 <b>Branch Flow Model: Relaxations, Convexification, Computation</b> Steven Low</p> <p>308</p>	<p><b>Pricing and QoS</b></p> <p>11:30 <b>Guaranteeing User Welfare in Network Service: Comparison of Two Subsidy Schemes</b> Seung Min Yu and Seong-Lyun Kim</p> <p>12:00 <b>Newsvendor Model Of Capacity Sharing</b> Randall Berry, Michael Honig, Thanh Nguyen, Vijay Subramanian, Hang Zhou and Rakesh Vohra</p> <p>12:30 <b>Price Differentiation in the Kelly Mechanism</b> Richard T. B. Ma, Dah Ming Chiu, John Chi Shing Lui, Vishal Misra and Dan Rubenstein</p> <p>311</p>
13	<p>13:00 – 14:00</p> <p>Lunch Break</p> <p>344</p>	

# MONDAY 11/6/2012

## TUTORIALS – MORNING

### SIGMETRICS Tutorials

### SIGMETRICS Tutorials

08:30

Registration opens

09

10

09:30 **Micro and macro views of discrete state Markov models and their application to efficient simulation with Phase-type distributions Part 1**  
Philipp Reinecke, Miklós Telek and Katinka Wolter

145

09:30 **PoTrA: A framework for Building Power Models For Next Generation Multicore Architectures Part 1**  
Ramon Bertran and Marc Gonzalez

343

11

11:00

Break

344

12

11:30 **Micro and macro views of discrete state Markov models and their application to efficient simulation with Phase-type distributions Part 2**  
Philipp Reinecke, Miklós Telek and Katinka Wolter

145

11:30 **PoTrA: A framework for Building Power Models For Next Generation Multicore Architectures Part 2**  
Ramon Bertran and Marc Gonzalez

343

13

13:00 – 14:00

Lunch Break

344

# MONDAY 11/6/2012

## WORKSHOPS – AFTERNOON

	GreenMetrics	W-PIN
14		
		Keynote
		14:00 <b>Unbundling the incumbent: Evidence from UK broadband</b> Tommaso Valletti 311
15	Invited Talks	Transit and Peering
	14:30 <b>Evaluation of the Impacts of Geographically-Correlated Failures on Power Grids</b> Gil Zussman 308	15:00 <b>The price of tussles: bankrupt in cyberspace?</b> Zied Ben Houidi and Hélia Pouyllau
	15:15 <b>Real-time distributed control of electrical vehicle charging</b> Catherine Rosenberg 308	15:30 <b>Peering Strategy adoption by Transit Providers in the Internet: A Game Theoretic approach</b> Aemen Lodhi, Amogh Dhamdhare and Constantine Dovrolis 311
16	16:00	Break
		344
17	Smarter Grids	Infrastructure and Network Formation
	16:30 <b>On the Impact of Storage in Residential Power Distribution Systems</b> Omid Ardakanian, Catherine Rosenberg, S. Keshav	16:30 <b>Pricing of insurance policies against cloud storage price rises</b> Loretta Mastroeni and Maurizio Naldi
	16:50 <b>Electric Grid Balancing through Low-Cost Workload Migration</b> David Chiu, Christopher Stewart, Bart McManus	17:00 <b>ISP vs. ISP+CDN: Can ISPs in Duopoly Profit by Introducing CDN Services?</b> Dongmyung Lee, Jeonghoon Mo and Jinwoo Park
	17:10 <b>Survivability Analysis of Distribution Automation Networks with Reactive Power Compensation</b> D. S. Menasche, R. M. M. Leao, E. de Souza e Silva, A. Avritzer, S. Suresh, K. S. Trivedi, R. Marie, L. Happe, A. Koziolk 308	17:30 <b>On Greedy Network Formation</b> András Gulyás, Attila Körösi, Dávid Szabó and Gergely Biczók 311
18		

# MONDAY 11/6/2012

## TUTORIALS – AFTERNOON

SIGMETRICS Tutorials		SIGMETRICS Tutorials	
14			
15	14:30 <b>Basic Theory and some Applications of Martingales Part 1</b> Richard A. Hayden	14:30 <b>Applications of Machine Learning to Performance Evaluation</b> by Edmundo de Souza e Silva and Daniel Sadoc Menasche	
16	16:00	16:00	
17	16:30 <b>Basic Theory and some Applications of Martingales Part 2</b> Richard A. Hayden	16:30 <b>Introduction to Network Experiments using the GENI CyberInfrastructure</b> Jay Aikat and Kevin Jeffay	
18	18:00	18:00	
19	18:30 – 21:00	18:30 – 21:00	

# TUESDAY 12/6/2012

## SIGMETRICS

08	07:45	Registration opens	
	08:30	Opening Remarks	308
09	Keynote	08:45 <b>Performance Implications of Flash and Storage Class Memories</b> Naresh Patel	308
10	Scheduling & Load Balancing I	09:45 <b>Delay Tails in MapReduce Scheduling</b> Jian Tan, Xiaoqiao Meng and Li Zhang	
		10:15 <b>Optimal Queue-Size Scaling in Switched Networks</b> Devavrat Shah, Neil Walton and Yuan Zhong	308
11	10:45	Break	344
	Scheduling & Load Balancing II	11:15 <b>Minimizing Slowdown in Heterogeneous Size-Aware Dispatching Systems</b> Esa Hyytiä, Samuli Aalto and Aleksi Penttinen	
12		11:45 <b>Bipartite Graph Structures for Efficient Balancing of Heterogeneous Loads</b> Mathieu Leconte, Marc Lelarge and Laurent Massoulié	308
13	12:15	Lunch Break	344
14	Characterization	13:30 <b>Workload Analysis of a Large-Scale Key-Value Store</b> Berk Atikoglu, Yuehai Xu, Eitan Frachtenberg, Song Jiang and Mike Paleczny	
		14:00 <b>A First Look at Cellular Machine-to-Machine Traffic – Large Scale Measurement and Characterization</b> Muhammad Zubair Shafiq, Lusheng Ji, Alex X. Liu, Jeffrey Pang and Jia Wang	
15		14:30 <b>Bundling Practice in BitTorrent: What, How, and Why</b> Jinyoung Han, Seungbae Kim, Taejoong Chung, Ted T. Kwon, Hyun-chul Kim and Yanghee Choi	308
	15:00	Break	344
16	Networking	15:30 <b>Energy-Efficient Congestion Control</b> Lingwen Gan, Anwar Walid and Steven Low	
		16:00 <b>Uniform Approximation of the Distribution for the Number of Retransmissions of Bounded Documents</b> Predrag Jelenkovic and Evangelia D. Skiani	
17		16:30 <b>Fluid Limit of an Asynchronous Optical Packet Switch with Shared per Link Full Range Wavelength Conversion</b> Benny Van Houdt and Luca Bortolussi	
		17:00 <b>Towards Optimal Error-Estimating Codes through the Lens of Fisher Information Analysis</b> Nan Hua, Ashwin Lall, Baochun Li and Jun Xu	308
18	18:00	Poster Session Set Up	Physics Common Room
	18:30 – 21:00	Main Conference Poster Session	Physics Common Room

# WEDNESDAY 13/6/2012

## SIGMETRICS

08	08:00	Registration opens	
09	Award Lecture	08:30 <b>SIGMETRICS Achievement Award Winner's Lecture</b> Debasis Mitra	308
10	Pricing	09:30 <b>How Well Can Congestion Pricing Neutralize Denial of Service Attacks?</b> Ashish Vulimiri, Philip B. Godfrey, Karthik Lakshminarayanan and Gul A. Agha	
		10:00 <b>Pricing Cloud Bandwidth Reservations under Demand Uncertainty</b> Di Niu, Chen Feng and Baochun Li	308
11	10:30	Break	344
12	Green Data Centers	11:00 <b>Temperature Management in Data Centers: Why Some (Might) Like It Hot</b> Nosayba El-Sayed, Ioan A. Stefanovici, George Amvrosiadis, Andy A. Hwang and Bianca Schroeder	
		11:30 <b>Renewable and Cooling Aware Workload Management for Sustainable Data Centers</b> Z. Liu, Y. Chen, C. Bash, A. Wierman, D. Gmach, Z. Wang, M. Marwah and C. Hyser	
		12:00 <b>Energy Storage in Datacenters: What, Where, and How much?</b> Di Wang, Chuangang Ren, Anand Sivasubramaniam, Bhuvan Urgaonkar and Hosam Fathy	308
13	12:30	Lunch Break	344
14	Keynote	13:30 <b>High-Performance Computing in Mobile Services</b> Zhen Liu	308
15	Epidemics	14:30 <b>Rumor Centrality: A Universal Source Detector</b> Devavrat Shah and Tauhid Zaman	
		15:00 <b>Learning the Graph of Epidemic Cascades</b> Praneeth Netrapalli and Sujay Sanghavi	
16		15:30 <b>Network Forensics: Random Infection vs Spreading Epidemic</b> Chris Milling, Constantine Caramanis, Shie Mannor and Sanjay Shakkottai	308
17	16:00	Break	344
	Memory and Storage	16:15 <b>What is a Good Buffer Cache Replacement Scheme for Mobile Flash Storage?</b> Hyojun Kim, Moonkyung Ryu and Umakishore Ramachandran	
		16:45 <b>Versatile Refresh: Low Complexity Refresh Scheduling for High-throughput Multi-banked eDRAM</b> Mohammad Alizadeh, Adel Javanmard, Shang-Tse Chuang, Sundar Iyer and Yi Lu	308
18	17:45	Travel to Banquet on London Routemaster bus	Queen's Gate Entrance
19	18:45 – 22:45	Banquet	Westminster Pier

# THURSDAY 14/6/2012

## SIGMETRICS

08			
	08:30	Registration opens	
09	Award Lecture	09:00 <b>SIGMETRICS Rising Star Award Winner's Lecture</b> Winner TBA	308
10			
	System Performance I	10:00 <b>Does Lean Imply Green? A Study of the Power Performance Implications of Java Runtime Bloat</b> Suparna Bhattacharya, Karthick Rajamani, K. Gopinath and Manish Gupta	
		10:30 <b>D-Factor: A Quantitative Model of Application Slow-Down in Multi-Resource Shared Systems</b> Seung-Hwan Lim, Jae-Seok Huh, Youngjae Kim, Galen M. Shipman and Chita R. Das	308
11	11:00 Break		344
	System Performance II	11:30 <b>ADP: Automated Diagnosis of Performance Pathologies Using Hardware Events</b> Wucherl Yoo, Kevin Larson, Lee Baugh, Sangkyum Kim and Roy H. Campbell	
12		12:00 <b>Providing Fairness on Shared-Memory Multiprocessors via Process Scheduling</b> Di Xu, Chenggang Wu, Pen-Chung Yew, Jianjun Li and Zhenjiang Wang	308
13	12:30 Lunch Break		344
	Graphs	13:30 <b>Characterizing Continuous Time Random Walks on Time Varying Graphs</b> Daniel Figueiredo, Philippe Nain, Bruno Ribeiro, Edmundo de Souza e Silva and Don Towsley	
14		14:00 <b>Beyond Random Walk and Metropolis-Hastings Samplers</b> Chul-Ho Lee, Xin Xu and Do Young Eun	
		14:30 <b>Clustered Embedding of Massive Social Networks</b> H. H. Song, B. Savas, T. W. Cho, V. Dave, Z. Lu, I. S. Dhillon, Y. Zhang and L. Qiu	308
15	15:00 Break		344
	Sampling and Ranking	15:30 <b>Don't Let The Negatives Bring You Down: Sampling from Streams of Signed Updates</b> Edith Cohen, Graham Cormode and Nick Duffield	
16		16:00 <b>Efficient Rank Aggregation Using Partial Data</b> Ammar Ammar and Devavrat Shah	
		16:30 <b>Fair Sampling Across Network Flow Measurements</b> Nick Duffield	308
17	17:00 Closing remarks		308
18	17:30 Industrial Fair		
19			308

# FRIDAY 15/6/2012

## WORKSHOPS

	MAMA	NetFPGA
08	08:00 Registration opens	
09	08:30 <b>Uptime and Downtime Analysis for Hierarchical Redundant Systems in Telecommunications</b> E.G. Coffman, Jr., Y. Kogan, W. Lai, V. Ramaswami	
	09:00 <b>Optimal Congestion Control of TCP Flows for Internet Routers</b> K. Avrachenkov, U. Ayesta, J. Doncel, P. Jacko	09:00
	09:30 <b>Temporal Load Balancing for Distributed Backup Scheduling</b> A. Schorgendorfer, P.M. van de Ven, B. Zhang	NetFPGA
10	10:00 <b>Efficient Replication in Multi-Regional Peer-Supported VoD Systems</b> Y. Rochman, H. Levy, E. Brosh	
	311	343
	10:30 Break	
		344
11	11:00 <b>Pricing and Queueing</b> C. Borgs, J.T. Chayes, S. Doroudi, M. Harchol-Balter, K. Xu	11:00
	11:30 <b>Stochastic Bounds for Randomized Load Balancing</b> A.S. Godtschalk, F. Ciucu	NetFPGA
12	12:00 <b>Estimating Queue Length Distributions for Queues with Random Arrivals</b> D.S. Myers, M.K. Vernon	
	311	343
	12:30 Lunch Break	
		344
14	13:30 <b>Modeling Response Times in the Google ROADEF/EURO Challenge</b> P. Cremonesi, A. Sansottera	13:30
	14:00 <b>Provisioning for Large Scale Loss Network Systems with Applications in Cloud Computing</b> Y. Tan, Y. Lu, C.H. Xia	NetFPGA
15	14:30 <b>Cyber-Insurance for Cyber-Security: A Topological Take on Modulating Insurance Premiums</b> R. Pal, P. Hui	
	311	343
	15:00 Break	
		344
16	15:30 <b>Meeting the Fairness Deadline in Speed Scaling Systems: Is Turbocharging Enough?</b> M. Elahi, C. Williamson, P. Woelfel	15:30
	16:00 <b>Analysis of the Large Number of Hosts Asymptotics of SITA Queues</b> E. Bachmat, A. Natanzon	NetFPGA
	16:30 <b>Rate-Optimal Scheduling Schemes for Asynchronous Input-Queued Packet Switches</b> T. Bonald, D. Cuda	
17	17:00 <b>Online Optimization with Switching Cost</b> M. Lin, A. Wierman, A. Roytman, A. Meyerson, L.L.H. Andrew	
	311	343
	17:30 Short Break	
		344
18	17:45 <b>Far-Out Vertices in Weighted Repeated Configuration Model</b> B. Błaszczyszyn, K. Gaurav	
	18:15 <b>Replaying the Geometric Growth of Complex Networks and Application to the AS Internet</b> F. Papadopoulos, C. Psomas, D. Krioukov	
19	18:45 <b>Network Criticality in Vehicular Networks</b> A. Tizghadam, W. Li, A. Leon-Garcia	
	311	



# FRIDAY 15/6/212

## WORKSHOPS

08	08:00	Registration opens	
09	Keynote	09:00 <b>Dealing with the digital dilemma – Dodging digital exhaust while delivering trust</b> Malcolm Crompton	308
10	Session I	09:45 <b>Two New Economic Models for Privacy</b> Shah Mahmood, Yvo Desmedt	
		10:07 <b>An architecture for ethical and privacy-sensitive social network experiments</b> Luke Hutton, Tristan Henderson	308
	10:30	Break	344
11	Keynote	11:00 <b>Addressing the privacy management crisis in online social networks</b> Krishna P. Gummadi	308
12	Session II	11:45 <b>On the Privacy Risks of Linking Complementary Information from Free Versions of People Databases</b> Minaxi Gupta, Yuqing Wu, Swapnil S. Joshi, Aparna Tiwari, Ashish Nair, Ezhilan Ilangovan	
		12:07 <b>How (not) to Build a Transport Layer for Anonymity Overlays</b> Florian Tschorsch, Bjorn Scheuermann	308
13	12:30	Lunch Break	344