

# **2013 IEEE Conference on Computer Communications Workshop**

## **(INFOCOM WKSHPS 2013)**

**Turin, Italy  
14-19 April 2013**



**IEEE Catalog Number: CFP1323E-POD**  
**ISBN: 978-1-4799-0055-8**

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### 2013 IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS)

#### INFOCOM'2013 Student Posters: 2013 IEEE INFOCOM Student Poster Session

##### Student Poster Session

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# GI'2013: 16th IEEE Global Internet Symposium

## Global Datasets

### *Modeling and Characterization of Vehicular Density at Scale*

Gautam Thakur (Oak Ridge National Laboratory, USA), Pan Hui (Hong Kong University of Science and Technology, Hong Kong), Ahmed Helmy (University of Florida, USA) ..... &

### *On the Usage Patterns of Multimodal Communication: Countries and Evolution*

Yi Wang (University of California, Riverside, USA), Michalis Faloutsos (University of California, Riverside, USA), Hui Zang (Sprint, USA) ..... ' %

### *DHT-based Traffic Localization in the Wild*

Matteo Varvello (Bell Labs, Alcatel-Lucent, USA), Moritz Steiner (Bell Labs / Alcatel-Lucent, USA) ..... ' +

# TMA 2013: The 5th IEEE International Traffic Monitoring and Analysis Workshop (TMA 2013)

## DNS Analysis

### *Check-Repeat: A New Method of Measuring DNSSEC Validating Resolvers*

Yingdi Yu (UCLA, USA), Duane Wessels (Verisign Labs, USA), Matt Larson (Verisign Labs, USA), Lixia Zhang (University of California at Los Angeles, USA) ..... ( '

### *Modeling DNS Agility with DNSMap*

Andreas Berger (FTW Telecommunications Research Center Vienna, Austria), Wilfried Gansterer (University of Vienna, Austria)..... (-

### *Trapping Botnets by DNS failure graphs: Validation, Extension and Application to a 3G Network*

Arian Bär (Telecommunications Research Center Vienna (FTW), Austria), Antonio Paciello (Telecommunications Research Center Vienna (FTW), Austria), Peter Romirer-Maierhofer (Telecommunications Research Center Vienna (ftw.), Austria)..... ))

# NetSciCom 2013: Fifth International Workshop on Network Science for Communication Networks 2013

## Session 1B

### *Robust QoS-Guaranteed Network Engineering in Interference-Aware Wireless Networks*

Ali Tizghadam (University of Toronto, Canada), Ali Shariat (University of Toronto, Canada), Alberto Leon-Garcia (University of Toronto, Canada), Hassan Naser (Lakehead University, Canada) ..... \* %

### *The Twofold Nature of Autonomous Systems: Evidence Combining Stock Market Data with Topological Properties*

Simone Mainardi (University of Pisa, Italy), Enrico Gregori (CNR-IIT, Italy), Luciano Lenzini (University of Pisa, Italy) ..... \* +

# INFOCOM'2013 CCSES: 2013 IEEE INFOCOM Workshop on Communications and Control for Smart Energy Systems

## Consumer Behavior

### *Sustainable Energy Consumption Monitoring in Residential Settings*

Akshay Uttama Nambi (TU Delft, The Netherlands), Thanasis Papaioannou (EPFL, Switzerland), Dipanjan Chakraborty (IBM Research, India), Karl Aberer (EPFL, Switzerland) ..... +'

### *Real Time Market Models and Prosumer Profiling*

Ugo Montanari (University of Pisa, Italy), Alain Tcheukam Siwe (IMT Institute for Advanced Studies Lucca, Italy) ..... +-

## SDP'13: SDP 2013 - IEEE INFOCOM Workshop

### Session I: SDP of Content Distribution & Access

### *Pricing for Demand Shaping and Proactive Download in Smart Data Networks*

John Tadrous (Ohio State University, USA), Atilla Eryilmaz (Ohio State University, USA), Hesham El Gamal (Ohio State University, USA) ..... , )

### *SpeedGate: A Smart Data Pricing Testbed Based on Speed Tiers*

Yih-Farn Robin Chen (AT&T Labs - Research, USA), Rittwik Jana (AT&T Labs Research, USA) ..... - %

### *On the Interaction between Content-oriented Traffic Scheduling and Revenue Sharing among Providers*

Hyojung Lee (KAIST, Korea), Hyeryung Jang (KAIST, Korea), Yung Yi (KAIST, Korea), Jeong-woo Cho (Royal Institute of Technology (KTH), Sweden) ..... - +

### *On the CDN Pricing Game*

Yang Song (University of Massachusetts, Amherst, USA), Arun Venkataramani (UMass Amherst, USA), Lixin Gao (University of Massachusetts at Amherst, USA) ..... %\$'

### *Economic Models of Sponsored Content in Wireless Networks with Uncertain Demand*

Matthew Andrews (Bell Labs, Alcatel-Lucent, USA), Marty Reiman (Bell Labs, Lucent Technologies, USA), Qiong Wang (University of Illinois, USA), Ulas Ozen (Ozyegin University, Turkey) ..... %\$-

# INFOCOM'2013 CCSES: 2013 IEEE INFOCOM Workshop on Communications and Control for Smart Energy Systems

## Energy Efficiency in the Smart Grid

### *Real-Time Welfare-Maximizing Regulation Allocation in Aggregator-EVs Systems*

Sun Sun (University of Toronto, Canada), Min Dong (University of Ontario Institute of Technology, Canada), Ben Liang (University of Toronto, Canada) ..... %%)

### *A Cross-Layer Perspective on Energy Harvesting Aided Green Communications over Fading Channels*

Tian Zhang (Tsinghua University, P.R. China), Wei Chen (Tsinghua University, P.R. China), Zhu Han (University of Houston, USA), Zhigang Cao (Tsinghua University, P.R. China) ..... %&%

### *Cost-aware optimization models for communication networks with renewable energy sources*

Giulio Betti (Politecnico di Milano, Italy), Edoardo Amaldi (Politecnico di Milano, Italy), Antonio Capone (Politecnico di Milano, Italy), Giulia Ercolani (Politecnico di Milano, Italy) ..... %&+

# GI'2013: 16th IEEE Global Internet Symposium

## Inferring the Shape of the Internet

<i>DRAGO: Detecting, Quantifying and Locating Hidden Routers in Traceroute IP Paths</i> Pietro Marchetta (University of Napoli, Italy), Antonio Pescapé (University of Napoli Federico II, Italy) .....	% ' -
<i>The BGP Visibility Scanner</i> Andra Lutu (Institute IMDEA Networks, Spain), Marcelo Bagnulo (University Carlos III of Madrid, Spain), Olaf M Maennel (Loughborough University, United Kingdom) .....	% -
<i>Improving the Discovery of IXP Peering Links through Passive BGP Measurements</i> Vasileios Giotsas (University College London, United Kingdom), Shi Zhou (University College London, United Kingdom) .....	% ( )

# NetSciCom 2013: Fifth International Workshop on Network Science for Communication Networks 2013

## Session 2

<i>Emergence of Equilibria from Individual Strategies in Online Content Diffusion</i> Eitan Altman (INRIA, France), Francesco De Pellegrini (Create-Net, Italy), Rachid El-Azouzi (LIA/CERI University of Avignon, France), Daniele Miorandi (Create-Net, Italy), Tania Jimenez (University of Avignon, France) .....	% ) %
<i>Information Diffusion in Heterogeneous Networks: The Configuration Model Approach</i> Pavlos Sermpezis (EURECOM, France), Thrasyvoulos Spyropoulos (EURECOM, France) .....	% ) +
<i>On the Impact of Global Information on Diffusion of Innovations over Social Networks</i> Youngmi Jin (KAIST, Korea), Jinwoo Shin (IBM T. J. Watson Research, Korea), Jungseul Ok (Korea Advanced Institute of Science and Technology, Korea), Yung Yi (KAIST, Korea) .....	%* ' -
<i>Surviving in a Competitive Market of Information Providers</i> Konstantinos Poularakis (University of Thessaly, Greece), Leandros Tassiulas (University of Thessaly, Greece) .....	%* -

# TMA 2013: The 5th IEEE International Traffic Monitoring and Analysis Workshop (TMA 2013)

## Network Performances

<i>New generation satellite broadband Internet services: should ADSL and 3G worry?</i> Alessio Botta (University of Napoli Federico II, Italy), Antonio Pescapé (University of Napoli Federico II, Italy) .....	%+)
<i>Troubleshooting Slow Webpage Downloads</i> Heng Cui (EURECOM, France), Ernst W Biersack (EURECOM, France) .....	% ) %
<i>Fighting the bufferbloat: on the coexistence of AQM and low priority congestion control</i> Yixi Gong (Telecom ParisTech, France), Dario Rossi (Telecom ParisTech, France), Claudio Testa (Telecom ParisTech, France), Silvio Valenti (TELECOM ParisTech, France), Dave Taht (Bufferbloat.net, France) .....	% ) +
<i>To the Moon and back: are Internet bufferbloat delays really that large?</i> Chiara Chirichella (Telecom ParisTech, France), Dario Rossi (Telecom ParisTech, France) .....	%- ' -

## SDP'13: SDP 2013 - IEEE INFOCOM Workshop

### Session II: SDP of Offloading & Scheduling

#### *Economics of Mobile Data Offloading*

Lin Gao (The Chinese University of Hong Kong, Hong Kong), George Iosifidis (University of Thessaly, CERTH, Greece), Jianwei Huang (The Chinese University of Hong Kong, Hong Kong), Leandros Tassioulas (University of Thessaly, Greece) ..... %-

#### *Economics of WiFi Offloading: Trading Delay for Cellular Capacity*

Joohyun Lee (Korea Advanced Institute of Science and Technology (KAIST), Korea), Yung Yi (KAIST, Korea), Song Chong (KAIST, Korea), Youngmi Jin (KAIST, Korea) ..... &\$)

#### *Tiered Billing Scheme for Residential Load Scheduling with Bidirectional Energy Trading*

Byung-Gook Kim (Yonsei University, Korea), Shaolei Ren (Florida International University, USA), Mihaela van der Schaar (University of California, Los Angeles (UCLA), USA), Jang-Won Lee (Yonsei University, Korea) ..... &%%

#### *Pricing Algorithms for the Day-Ahead Electricity Market with Flexible Consumer Participation*

Ozgur Dalkilic (The Ohio State University, USA), Utku Ozan Candogan (Massachusetts Institute of Technology, USA), Atilla Eryilmaz (Ohio State University, USA) ..... &%+

#### *Smart Data Pricing: Lessons from Trial Planning*

Ming-Jye Sheng (Princeton University, USA), Carlee Joe-Wong (Princeton University, USA), Sangtae Ha (Princeton University, USA), Felix Ming Fai Wong (Princeton University, USA), Soumya Sen (Princeton University, USA) ..... &&'

## GI'2013: 16th IEEE Global Internet Symposium

### New Mechanisms

#### *AliasCluster: A Lightweight Approach to Interface Disambiguation*

Larissa Spinelli (Boston University, USA), Mark Crovella (Boston University, USA), Brian Eriksson (Technicolor, USA) ..... &&-

#### *Applying Software-Defined Networking to the Telecom Domain*

Georg Hampel (Qualcomm, USA), Tian Bu (Bell Labs, USA), Moritz Steiner (Bell Labs / Alcatel-Lucent, USA) ..... &' )

#### *Into the Moana — Hypergraph-based Network Layer Indirection*

Yan Shvartzshnaider (The University of Sydney, Australia), Max Ott (NICTA, Australia), Olivier Mehani (NICTA, Australia), Guillaume Jourjon (NICTA, Australia), Thierry Rakotoarivelo (NICTA-Sydney, Australia), David Levy (University of Sydney, Australia) ..... &( %

#### *COBRA: A Framework for the Analysis of Realistic Mobility Models*

Gautam Thakur (Oak Ridge National Laboratory, USA), Ahmed Helmy (University of Florida, USA) ..... &( +

## NetSciCom 2013: Fifth International Workshop on Network Science for Communication Networks 2013

### Session 3

#### *Exploring Venue Popularity in Foursquare*

Yanhua Li (University of Minnesota, USA), Moritz Steiner (Bell Labs / Alcatel-Lucent, USA), Limin Wang (Bell Labs, USA), Zhi-Li Zhang (University of Minnesota, USA), Jie Bao (University of Minnesota, Twin Cities, USA) ..... &)'

<i>Inferring Cellular User Demographic Information Using Homophily on Call Graphs</i>	
Yi Wang (University of California, Riverside, USA), Hui Zang (Sprint, USA), Michalis Faloutsos (University of California, Riverside, USA) .....	& -
<i>The Strength of Vicinity Annexation in Opportunistic Networking</i>	
Tiphaine Phe-Neau (UPMC Sorbonne Universités, France), Marcelo Dias de Amorim (UPMC Sorbonne Universités, France), Vania Conan (Thales Communications & Security, France) .....	&*
<i>Finding critical regions in a network</i>	
Stojan Trajanovski (Delft University of Technology, The Netherlands), Fernando A. Kuipers (Delft University of Technology, The Netherlands), Piet Van Mieghem (Delft University of Technology, The Netherlands) .....	&+%

## TMA 2013: The 5th IEEE International Traffic Monitoring and Analysis Workshop (TMA 2013)

### Passive Monitoring and Classification

<i>Self-Learning Classifier for Internet Traffic</i>	
Luigi Grimaudo (Politecnico di Torino, Italy), Marco Mellia (Politecnico di Torino, Italy), Elena Baralis (Politecnico di Torino, Italy), Ram Keralapura (Narus, USA) .....	&++
<i>Rogue Femtocell Owners: How Mallory Can Monitor My Devices</i>	
David Malone (NUI Maynooth, Ireland), Darren F Kavanagh (Trinity College Dublin, Ireland), Niall Murphy (Google, Ireland) .....	&, '
<i>Botnet detection revisited: theory and practice of finding malicious P2P networks via Internet connection graphs</i>	
Stefan Ruehrup (FTW, Austria), Pierfrancesco Urbano (FTW, Austria), Andreas Berger (FTW Telecommunications Research Center Vienna, Austria), Alessandro D'Alconzo (Telecommunications Research Center Vienna (ftw.), Austria) .....	&, -
<i>10 Gbit Line Rate Packet-to-Disk Using n2disk</i>	
Luca Deri (NTOP, Italy), Alfredo Cardigliano (NTOP, Italy), Francesco Fusco (ETH, Switzerland) .....	&- )

## INFOCOM'2013 CCSES: 2013 IEEE INFOCOM Workshop on Communications and Control for Smart Energy Systems

### Smart Grid Communications

<i>Advanced Metering and Demand Response Communication Performance in Zigbee based HANs</i>	
Velin Kounev (University of Pittsburgh, USA), David Tipper (University of Pittsburgh, USA) .....	' \$%
<i>Elderberry: A peer-to-peer, privacy-aware smart metering protocol</i>	
Sören Finster (Karlsruhe Institute of Technology (KIT), Germany), Ingmar Baumgart (Karlsruhe Institute of Technology (KIT), Germany) .....	' \$+
<i>Performance Evaluation of Time-critical Communication Networks for Smart Grids based on IEC 61850</i>	
Hanno Georg (TU Dortmund University, Germany), Nils Dorsch (TU Dortmund University, Germany), Markus Putzke (TU Dortmund University, Germany), Christian Wietfeld (TU Dortmund University, Germany) .....	' %

## Smart Grid Security

### *A Novel Method to Detect Bad Data Injection Attack in Smart Grid*

Ting Liu (Xi'an Jiaotong University, PRC, P.R. China), Yun Gu (Xi'an Jiaotong University, P.R. China), Dai Wang (Xi'an Jiaotong University, P.R. China), Yuhong Gui (Xi'an Jiaotong University, P.R. China) ..... ' %

### *Robust Privacy-Preserving Authentication Scheme for Communication Between Electric Vehicle as Power Energy Storage and Power Stations*

Hasen Nicanfar (The University of British Columbia, Canada), Seyedali Hosseininezhad (University of British Columbia, Canada), Peyman TalebiFard (The University of British Columbia, Canada), Victor CM Leung (The University of British Columbia, Canada) ..... ' &

### *A Reverse Transmission Mechanism for Surveillance Network in Smart Grid*

Liang Tang (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Science, P.R. China), Yun Rui (Shanghai Advanced Research Institute · Chinese Academy of Sciences, P.R. China), Qian Wang (Wuhan University, P.R. China), Husheng Li (University of Tennessee, USA), Zhiyong Bu (Shanghai Institute of Microsystem and Information Technology, CAS, P.R. China) ..... ' ' %

## GI'2013: 16th IEEE Global Internet Symposium

### New Tools

#### *Network Emulation Testbed for DTN Applications and Protocols*

Razvan Beuran (National Institute of Information and Communications Technology, Japan), Shinsuke Miwa (National Institute of Information and Communications Technology, Japan), Yoichi Shinoda (Japan Advanced Institute of Science and Technology, Japan) ..... ' ' +

#### *Trade-off Analysis of Multi Topology Routing Based IP Fast Reroute Mechanisms*

Selcuk Cevher (Karadeniz Technical University, Turkey), Mustafa Ulutas (Karadeniz Technical University, Turkey), Ibrahim Hokelek (TUBITAK BILGEM, Turkey) ..... ' ( '

#### *Detecting Encrypted Botnet Traffic*

Han Zhang (Colorado State University, USA), Christos Papadopoulos (Colorado State University, USA), Daniel Massey (Colorado State University, USA) ..... ' ( -

## NetSciCom 2013: Fifth International Workshop on Network Science for Communication Networks 2013

### Session 4A

#### *Ego Networks in Twitter: an Experimental Analysis*

Valerio Arnaboldi (IIT-CNR, Italy), Marco Conti (IIT-CNR, Italy), Andrea Passarella (IIT-CNR, Italy), Fabio Pezzoni (IIT-CNR, Italy) ..... ' ' )

#### *Analysis and Applications of Smartphone User Mobility*

Swati Rallapalli (University of Texas at Austin, USA), Wei Dong (University of Texas at Austin, USA), Gene Moo Lee (University of Texas at Austin, USA), Yi-Chao Chen (University of Texas at Austin, USA), Lili Qiu (The University of Texas at Austin, USA) ..... ' \* %



# TMA 2013: The 5th IEEE International Traffic Monitoring and Analysis Workshop (TMA 2013)

## Global Internet

### *Gaining Insight into AS-level Outages through Analysis of Internet Background Radiation*

Karyn Benson (CAIDA/UCSD, USA), Alberto Dainotti (CAIDA, UC San Diego, USA), Kimberly Claffy (CAIDA, USA), Emile Aben (RIPE NCC, The Netherlands) ..... ' \* +

### *SpamTracer: How Stealthy Are Spammers?*

Pierre-Antoine Vervier (Eurecom, France), Olivier Thonnard (Symantec, France) ..... ' +'

### *Improving AS Relationship Inference Using PoPs*

Lior Neudorfer (Tel Aviv University, Israel), Yuval Shavitt (Tel-Aviv University, Israel), Noa Zilberman (Tel-Aviv University, Israel) ..... ' +-'