2012 24th International Teletraffic Congress

(ITC 24)

Krakow, Poland
4 – 7 September 2012
## Technical Sessions

**Tuesday, 4\textsuperscript{th} September**

### Traffic Monitoring

**Chairman:** Ravi Mazumdar

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<td>Light-weight Traffic Parameter Estimation for On-line Bandwidth Provisioning</td>
<td>Wolfram Lautenschlaeger (Alcatel-Lucent, Germany); Frank Feller (University of Stuttgart, Germany)</td>
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<td>Anomaly Detection in VoIP Traffic with Trends</td>
<td>Felipe Mata (Universidad Autonoma de Madrid, Spain); Piotr Zuraniewski (University of Amsterdam/TNO, The Netherlands); Michel Mandjes (University of Amsterdam, The Netherlands); Marco Mellia (Politecnico di Torino, Italy)</td>
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<td>Modeling Conservative Updates in Multi-Hash Approximate Count Sketches</td>
<td>Giuseppe Bianchi (University of Rome „Tor Vergata”, Italy); Ken R Duffy (National University of Ireland Maynooth, Ireland); Douglas Leith (Hamilton, Ireland); Vsevolod Shneer (Heriot-Watt University, United Kingdom)</td>
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<td>Modeling and Analysis of Web Usage and Experience Based on Link-Level Measurements</td>
<td>Junaid Junaid (Blekinge Institute of Technology, Sweden); Markus Fiedler (Blekinge Institute of Technology, Sweden); Denis Collange (Orange Labs, France); Patrik Arlos (Blekinge Institute of Technology, Sweden)</td>
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### Bandwidth Sharing & Caching

**Chairman:** Debasis Mitra

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<td>Processor Sharing and Pricing Implications</td>
<td>Sharad Birmiwal (University of Waterloo, Canada); Ravi Mazumdar (University of Waterloo, Canada); Shreyas Sundaram (University of Waterloo, Canada)</td>
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<td>Inverse Problems in Bandwidth Sharing Networks</td>
<td>Bruno Kauffmann (Orange Labs, France)</td>
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<td>Inverting Flow Durations from Sampled Traffic</td>
<td>Nelson Antunes (University of Algarve, Portugal); Vladas Pipiras (University of North Carolina, USA)</td>
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<td>A Versatile and Accurate Approximation for LRU Cache Performance</td>
<td>Christine Fricker (INRIA, France); Philippe Robert (INRIA, France); James Roberts (INRIA, France)</td>
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**Best Student Paper Award**
TECHNICAL SESSIONS

Wednesday, 5th September

Cloud Computing
Chairman: Wojciech Burakowski

Heavy Traffic Optimal Resource Allocation Algorithms for Cloud Computing Clusters
Siva Theja Maguluri (University of Illinois Urbana Champaign, USA); R. Srikant (University of Illinois at Urbana-Champaign, USA); Lei Ying (Iowa State University, USA)

A Virtual Machine Consolidation Framework for MapReduce Enabled Computing Clouds
Zhe Huang (Hong Kong University of Science and Technology, Hong Kong); Danny H.K. Tsang (HKUST, Hong Kong); James She (Hong Kong University of Science and Technology, Hong Kong)

Heavy-traffic Analysis of Cloud Provisioning
Jian Tan (IBM Research, USA); Hanhua Feng (IBM T J Watson Research, USA); Xiaqiao Meng (IBM T. J. Watson Research Center, USA); Li Zhang (IBM T. J. Watson Research Center, USA)

Analyzing the Impact of YouTube Delivery Policies on the User Experience
Louis Plissonneau (Orange Labs, France); Ernst W Biersack (EURECOM, France); Parikshit Juluri (University of Missouri-Kansas City, USA)

Wireless & Coding
Chairman: Ulf Körner

Multidirectional Forwarding Capacity in a Massively Dense Wireless Network
Jarno Nousiainen (Aalto University, Finland); Jorma Virtamo (Aalto University, Finland); Pasi Lassila (Helsinki University of Technology, Finland)

Opportunistic Schedulers for Optimal Scheduling of Flows in Wireless Systems with ARQ Feedback
Peter Jacko (BCAM, Spain); Sofía S. Villar (Carlos III Madrid University, Spain)

Utilizing Buffered YouTube Playtime for QoE-oriented Scheduling in OFDMA Networks
Florian Wamser (University of Wuerzburg, Germany); Dirk Staehle (University of Wuerzburg, Germany); Jan Prokopec (Brno University of Technology, Czech Republic); Andreas Maeder (NEC Laboratories Europe, Germany); Phuoc Tran-Gia (University of Wuerzburg, Germany)

Some Further Investigation on Maximum Throughput: Does Network Coding Really Help?
Eric Gourdin (Orange Labs, France); Yuhui Wang (Orange Labs, France)
TECHNICAL SESSIONS

Thursday, 6th September

Content Delivery & P2P

Chairman: Kurt Tutschku

Pull versus Push Mechanism in Large Distributed Networks: Closed Form Results

Wouter Minnebo (University of Antwerp, Belgium); Benny Van Houdt (University of Antwerp, Belgium)

Who Profits from Peer-to-Peer File-Sharing? Traffic Optimization Potential in BitTorrent Swarms

Valentin Burger (University of Wuerzburg, Germany); Frank Lehrieder (University of Wuerzburg, Germany); Tobias Hoßfeld (University of Wuerzburg, Germany); Jan Seedorf (NEC Europe Ltd., Germany)

Content Dynamics in P2P Networks from Queueing and Fluid Perspectives

Andres Ferragut (Universidad ORT Uruguay, Uruguay); Fernando Paganini (Universidad ORT, Uruguay)

On Popularity-Based Load Balancing in Content Networks

Tomasz Janaszka (Telekomunikacja Polska, Poland); Dariusz Bursztynowski (Telekomunikacja Polska, Poland); Mateusz Dzida (Telekomunikacja Polska, Poland)

Queuing Models

Chairman: Jim Roberts

Multi-Server Generalized Processor Sharing

Kok-Kiong Yap (Stanford University, USA); Nick McKeown (Stanford University, USA); Sachin Katti (Stanford University, USA)

On the Impact of Finite Buffers on Per-Flow Delays in FIFO Queues

Yashar Ghiassi-Farrokhfal (University of Toronto, Canada); Florin Ciucu (T-Labs / TU Berlin, Germany)

A Fluid Model Analysis of Streaming Media in the Presence of Time-Varying Bandwidth

Joost W Bosman (CWI, The Netherlands); Rob van der Mei (Centrum voor Wiskunde en Informatica, The Netherlands); Rudesindo Nunez-Queija (University of Amsterdam, The Netherlands)

Separation of Timescales in a Two-Layered Network

Maria Vlasiou (Eindhoven University of Technology, The Netherlands); Jiheng Zhang (Georgia Institute of Technology, USA); Bert Zwart (CWI, The Netherlands); Rob van der Mei (Centrum voor Wiskunde en Informatica, The Netherlands)