### IEEE ICC 2010 - Next-Generation Networking and Internet Symposium Program

**Symposium Co-Chairs:**  
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**Monday, May 24**

14:00 - 15:45

**NG01: Social Networks and Data Center Networking**

**Room: 1.63 Session Chair: Renato Lo Cigno (University of Trento, Italy)**

- **Locating Experts via On-line Social Networks**  
  Kuang Xu (The University of Hong Kong, Hong Kong); Jing XIE (The University of Hong Kong, Hong Kong); Victor O. K. Li (University of Hong Kong, P.R. China)

- **Reputation-based Internet Sharing in Wireless Neighborhood Community Networks**  
  Anna Satsiou (CERTH, & University of Thessaly, Greece); Leandros Tassiulas (CERTH, & University of Thessaly, Greece)

- **Killer Fabrics for Scalable Datacenters**  
  Mike Schlansker (HP Labs, USA); Jean Tourrilhes (HP Labs, USA); Yoshio Turner (HP Labs, USA); Jose Renato Santos (HP Labs, USA)

- **OmTCP: increasing performance in server farms**  
  Iljitsch van Beijnum (University Carlos III of Madrid, Spain); Arturo Azcorra (University Carlos III of Madrid, Spain); Marcelo Bagnulo (University Carlos III of Madrid, Spain)

- **A weighting scheme for enhancing community detection in networks**  
  Alireza Khadivi (Ecole Polytechnique Fédéral de Lausanne, Switzerland); Martin Hasler (EPFL, Switzerland)

- **Tree-Farms for Tree-Based Multicast Schemes in Peer-to-Peer Overlay Networks**
16:15 - 18:00

**NG02: Routing and Forwarding**

Room: 1.63  Session Chair: Tilman Wolf (University of Massachusetts, USA)

**AnyTraffic Labeled Routing**
Dimitri Papadimitriou (Alcatel-Lucent Bell, Belgium); Pedro Pedroso (Universitat Politècnica de Catalunya, Spain); Davide Careglio (Universitat Politècnica de Catalunya, Spain)

**Data Path Management in Mesh-Based Programmable Routers**
Qiang Wu (University of Massachusetts, USA); Tilman Wolf (University of Massachusetts, USA)

**Inter-layer PCE based Scalable Packet Forwarding with ID/Loc Separation**
Kye-hwan Lee (Yeungnam University, Korea); Young-Tak Kim (Yeungnam University, Korea)

**Effective Usage of Dynamic Circuits for IP Routing**
Mohit Chamania (Technische Universität Carolo-Wilhelmina zu Braunschweig, Germany); Marcel Caria (Technische Universität Carolo-Wilhelmina zu Braunschweig, Germany); Admela Jukan (Technische Universität Carolo-Wilhelmina zu Braunschweig, Germany)

**Achieving Perfect Hashing through an Improved Construction of Bloom Filters**
Gianni Antichi (University of Pisa, Italy); Andrea Di Pietro (University of Pisa, Italy); Domenico Ficara (University of Pisa, Italy); Stefano Giordano (University of Pisa, Italy); Franco Russo (University of Pisa, Italy); Fabio Vitucci (University of Pisa, Italy)

**Bloom filters in a Landmark-based Flat Routing**
Rafael Pasquini (University of Campinas, Brazil); Maurício Ferreira Magalhães (State University of Campinas, Brazil); Fábio Verdi (Federal University of São Carlos, Brazil); Annikki Welin (Ericsson, Sweden)

Tuesday, May 25

10:30 - 12:15

**NG03: Routers and Switches**

Room: 1.63  Session Chair: Noriaki Kamiyama (NTT Service Integration Laboratories, Japan)

**Using Banyan Networks for Load-Balanced Switches with Incremental Update**
Ching-Min Lien (National Tsing Hua University, Taiwan); Cheng-Shang Chang (National Tsing Hua University, Taiwan); Jay Cheng (National Tsing Hua University, Taiwan); Duan-Shin Lee (National Tsing Hua University, Taiwan); Jou-Ting Liao (National Tsing Hua University, Taiwan)

**Contention-Tolerant Crossbar Packet Switches without and with Speedup**
Guannan Qu (Jilin University, P.R. China, USA); Hyung Jae Chang (University of Texas at Dallas, USA); Jianping Wang (City University of Hong Kong, Hong Kong); Zhiyi Fang (Jilin University, P.R. China); Si-Qing Zheng (University of Texas at Dallas, USA)

**Two-stage Fair Queuing Using Budget Round-Robin**
Dong Lin (Hong Kong University of Science & Technology, Hong Kong); Mounir Hamdi (Hong Kong University of Science and Technology, P.R. China)

**OpenFlow Switching: Data Plane Performance**
Andrea Bianco (Politecnico di Torino, Italy); Robert Birke (Politecnico di Torino, Italy); Manuel Palacin (Politecnico di Torino, Spain); Luca Giraudo (Politecnico di Torino, Italy)

**Load-Balanced Optical Switch for High-Speed Router Design**
A Randomized Scheme for IP Lookup at Wire Speed on NetFPGA
Gianni Antichi (University of Pisa, Italy); Andrea Di Pietro (University of Pisa, Italy); Domenico Ficara (University of Pisa, Italy); Stefano Giordano (University of Pisa, Italy); Gregorio Procissi (Università di Pisa, Italy); Fabio Vitucci (University of Pisa, Italy)

14:00 - 15:45

NG04: Performance

Room: 1.63 Session Chair: Attahiru S. Alfa (University of Manitoba, Canada)

A Framework to Analyze Network Performance Based on Information Quality
Yanhui Geng (The University of Hong Kong, Hong Kong); Victor O. K. Li (University of Hong Kong, P.R. China)

Mathematical Impact of Information Accuracy on Network Performance
Yanhui Geng (The University of Hong Kong, Hong Kong); Victor O. K. Li (University of Hong Kong, P.R. China)

Hybrid Techniques for Large-Scale IP Traffic Matrix Estimation
Titus Adelani (University of Manitoba, Canada); Attahiru S. Alfa (University of Manitoba, Canada)

A Linear Algebraic Approach for Loss Tomography in Mesh Topologies Using Network Coding
Jiaqi Gui (University of British Columbia, Canada); Vahid Shah-Mansouri (University of British Columbia, Canada); Vincent Wong (University of British Columbia, Canada)

Optimally Designing Capacity and Location of Caches to Reduce P2P Traffic
Noriaki Kamiyama (NTT Service Integration Laboratories, Japan); Ryoichi Kawahara (NTT Service Integration Laboratories, Japan); Tatsuya Mori (NTT, Japan); Shigeaki Harada (Nippon Telegraph and Telephone West Corporation, Japan); Haruhisa Hasegawa (NTT, Japan)

An Optimal Design Scheme for Global Overlay Networks with Enhanced Date Transfer Throughput
Yasuhiro Miyao (NEC Corporation, Japan)

NG1p: Recent Advances in Next Generation Networking

Room: Exhibit Hall

Layered Communication Protocol for Macro to Nano-scale Communication Systems
Aaron Sharp (University of Nebraska, USA); Sri Raja (University of Nebraska Medical Center, USA); Tadeusz A. Wysocki (University of Nebraska-Lincoln, USA); Beata Wysocki (University of Nebraska-Lincoln, USA)

Discovery and Composition of Per-Domain Behaviours -- a Service Abstraction Approach
Vitor Jesus (Universidade de Aveiro, Portugal); Rui L Aguiair (University of Aveiro, Portugal); Peter Steenkiste (Carnegie Mellon University, USA)

Crosstalk: A Scalable Cross-Protocol Monitoring System for Anomaly Detection
Felipe Huici (NEC Europe Ltd., Germany); Andrea Di Pietro (University of Pisa, Italy); Diego Costantini (Technische Universität Darmstadt, Germany); Takahide Sugita (NEC, Japan); Saverio Niccolini (NEC Europe Ltd., Germany)

An Operator Approach to Popularity-based Caching in DHTs
Zoran Despotovic (DOCOMO Communications Laboratories Europe, Germany); Quirin T. Hofstaetter (Technische Universität Muenchen, Germany); Maximilian Michel (DOCOMO Communications Laboratories Europe, Germany); Wolfgang Kellerer (DOCOMO Communications Laboratories Europe, Germany)

A Lightweight Emulator for BitTorrent-like File Sharing Systems
Xiaowei Chen (Hong Kong Baptist University, Hong Kong); Xiaowen Chu (Hong Kong Baptist University, Hong Kong); Jiangchuan Liu (Simon Fraser University, Canada)
**BitTorrent Traffic Localization via Operator-related Information**
Bartosz Polaczyk (AGH University of Science and Technology, Poland); Piotr A Cholda (AGH University of Science and Technology, Poland)

**16:15 - 18:00**

**NG2p: Traffic Engineering**

Room: Exhibit Hall

**Voice Synchronization across Heterogeneous Telephony Systems: Problem and Solutions**
Hung-Yun Hsieh (National Taiwan University, Taiwan); Hsiao-Pu Lin (National Taiwan University, Taiwan)

**Differentiated Ethernet Congestion Management for Prioritized Traffic**
Shuo Fang (Nanyang Technological University, Singapore); Chuan Heng Foh (Nanyang Technological University, Singapore); Khin Mi Mi Aung (A*STAR, Data Storage Institute, Singapore)

**An API-RCP Design Using Pole Placement Technique**
Yang Hong (University of Ottawa, Canada); Oliver Yang (University of Ottawa, Canada)

**A Flow Analysis For Mining Traffic Anomalies**
Yoshiki Kanda (Waseda University, Japan); Toshiharu Sugawara (Waseda University, Japan); Kensuke Fukuda (National Institute of Informatics, Japan)

**A Novel SLA for Time-Differentiated Resilience with Efficient Resource Sharing in WDM Networks**
Ming Xia (University of California, Davis, USA); Charles Martel (University of California, Davis, USA); Lei Shi (University of California, Davis, USA); Massimo Tornatore (University of California, Davis, USA); Biswanath Mukherjee (Dept. of Computer Science - University of California Davis, USA)

**Eliminating Rank Reversal Phenomenon in GRA–based Network Selection Method**
Arpad Huszak (Budapest University of Technology and Economics, Hungary); Sándor Imre (Technical University of Budapest, Hungary)

**Wednesday, May 26**

**08:30 - 10:15**

**NG05: P2P and Overlay Networks**

Room: 1.63

**A Novel Grouping Strategy for Reducing Average Distribution Time in P2P File Sharing**
Pui-Sze Tsang (The University of Hong Kong, Hong Kong); Xiang Meng (The University of Hong Kong, Hong Kong); King-Shan Lui (The University of Hong Kong, Hong Kong)

**On the System Parameters of Peer-to-Peer Video Streaming with Network Coding**
Le Chang (University of Victoria, Canada); Jianping Pan (University of Victoria, Canada)

**An Adaptive and Robust Reputation Mechanism for P2P Network**
Miao Wang (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Fei Tao (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Zhang Yujun (Institute of Computing Tech. Chinese Academy of Sciences, P.R. China); Guojie Li (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China)

**Robust Scheduling of Video Streams in Network-Aware P2P Applications**
Luca Abeni (University of Trento, Italy); Csaba Kiraly (University of Trento, Italy); Renato Lo Cigno (University of Trento, Italy)

**Delay-Aware Push/Pull Protocols for Live Video Streaming in P2P Systems**
Alessandro Russo (University of Trento, Italy); Renato Lo Cigno (University of Trento, Italy)
### Improving Efficiency and Fairness in P2P Systems with Effort-Based Incentives
Rameez Rahman (Delft University of Technology, The Netherlands); Michel Meulpolder (Delft University of Technology, The Netherlands); David Hales (Delft University of Technology, The Netherlands); Johan A. Pouwelse (Delft University of Technology, The Netherlands); Dick Epema (Delft University of Technology, The Netherlands); Henk J. Sips (Delft University of Technology, The Netherlands)

### NG3p: Network Topology and Routing

**Room: Exhibit Hall**

**Compact Routing in Internet-Like Graphs with Improved Space-Stretch Tradeoff**
Mingdong Tang (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Jing Yang (Institute of Computing Technology, Chinese Academy of Science, P.R. China); Guoqiang Zhang (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Guoqing Zhang (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China)

**Maximum Likelihood Network Topology Inference Using Unicast End-to-end Measurements**
Gaolei Fei (University of Electronic Science and Technology of China, P.R. China); Guangmin Hu (University of Electronic Science and Technology of China, P.R. China)

**Resilient multipath routing with independent directed acyclic graphs**
Sangman Cho (University of Arizona, USA); Theodore Elhourani (University of Arizona, USA); Srinivasan Ramasubramanian (University of Arizona, USA)

### 10:45 - 12:30

### NG06: Next Generation Networks and IP Networks

**Room: 1.63 Session Chair: Mike Schlansker (HP Labs, USA)**

**An Identifier/Locator Split Architecture for Exploring Path Diversity through Site Multi-homing - A Hybrid Host-Network Cooperative Approach**
Subharthi Paul (Washington University in St. Louis, USA); Raj Jain (Washington University in St. Louis, USA); Jianli Pan (Washington University in Saint Louis, USA)

**End-to-End Quality-of-Service Support in Next Generation Networks with NSIS**
Roland Bless (University of Karlsruhe, Germany); Martin Rührlich (Karlsruhe Institute of Technology (KIT), Germany)

**Intrinsic Monitoring within an IPv6 Network: Relating Traffic Flows to Network Paths**
Alan Davy (Waterford Institute of Technology, Ireland); Lei Shi (Waterford Institute of Technology, Ireland)

**Convergence of Communication and Processing in Next-Generation Networks**
Tilman Wolf (University of Massachusetts, USA); Soumya Mahadevan (University of Massachusetts, USA)

**Forecasting Full-Path Network Congestion Using One Bit Signalling**
Mussie Woldeselassie (University College London, United Kingdom); Richard G Clegg (University College London, United Kingdom); Miguel Rio (UCL, United Kingdom)

**Link Bandwidth Design Method Considering Failures in IP Network**
Ryuta Sugiyama (NTT, Japan); Tomonori Takeda (NTT, Japan); Hisashi Kojima (NTT, Japan); Ichiro Inoue (NTT, Japan); Kohei Shiomoto (NTT, Japan)

### 14:00 - 15:45

### NG07: IP Routing

**Room: 1.63 Session Chair: Nasir Ghani (University of New Mexico, USA)**

**A Light-weight IP Fast Reroute Algorithm with Tunneling**
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<td>Fine Two-Phase Routing Over Shortest Paths Without Traffic Splitting</td>
<td>Eiji Oki (The University of Electro-Communications, Japan); Ayako Iwaki (University of Electro-Communications, Japan); Shigeo Urushidani (National Institute of Informatics, Japan); Michihiro Aoki (National Institute of Informatics, Japan)</td>
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<td>Partial Complete iBGP</td>
<td>Bakr Sarakbi (Institut Telecom / Telecom SudParis, France); Stephane Maag (INSTITUT TELECOM / TELECOM &amp; Management SudParis, France)</td>
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<td>Enhanced Crankback Signaling for Multi-Domain Traffic Engineering</td>
<td>Feng Xu (University of New Mexico, USA); Mostafa Esmaeili (University of New Mexico, USA); Chongyang Xie (University of New Mexico, USA); Nasir Ghani (University of New Mexico, USA); Min Peng (Wuhan University, P.R. China); Qing Liu (Oak Ridge National Laboratory, USA)</td>
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<td>Hierarchical Border Gateway Protocol (HBGP) for PCE-based Multi-domain Traffic Engineering</td>
<td>Luca Buzzi (Politecnico di Milano, Italy); Matteo Conforto Bardellini (Politecnico di Milano, Italy); Domenico Siracusa (Politecnico di Milano, Italy); Guido Maier (Politecnico di Milano, Italy); Francesco Paolucci (Scuola Superiore S.Anna, Italy); Filippo Cugini (CNIT, Italy); Luca Valcareggi (Scuola Superiore Sant'Anna, Italy); Piero Castoldi (Scuola Superiore Sant'Anna, Italy)</td>
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<td>Analysis of Varying AS Path Lengths from the Edge of the Network</td>
<td>Arif Selcuk Uluagac (Georgia Institute of Technology, USA); Raheem A. Beyah (Georgia State University, USA); Roma Kane (Georgia Institute of Technology, USA); Siddharth Joshi (Georgia Institute of Technology, USA); John A. Copeland (Georgia Institute of Technology, USA)</td>
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