



Networking 2012

21-25 May 2012
Prague, Czech Republic



Czech Technical University in Prague
Faculty of Electrical Engineering



<http://networking2012.cvut.cz>

Program at a glance						
	21.5.2012 Monday	22.5.2012 Tuesday	23.5.2012 Wednesday	24.5.2012 Thursday	25.5.2012 Friday	
	Tutorials	Main conference				Workshops
8:30 - 9:00		Opening session		One Minute Madness		
9:00 - 10:30		Keynote 1 Xiaoming Fu	Keynote 2 Matthew Finnie	Session 7A: Video Streaming	Session 7B DTN and Wireless Sensor Networks	
(10:00- 10:30)		One Minute Madness	One Minute Madness			
10:30 - 11:00		Coffee break				
11:00 - 12:30		Session 1A: IP Routing	Session 1B: Wireless Networks 1	Session 4A: LISP and Multi-domain Routing	Session 4B: Wireless Networks II	Session 8B: Interdomain ain
12:30 - 14: 00	Lunch	Lunch			Closing session	Lunch
14:00 - 15:30		Session 2A: Network Measurement	Session 2B: Cooperation and Colloboration	Session 5A: Reliability and Resilience	Session 5B: Content - contric Networking	40 th Anniversary of IFIP TC6
15:30 - 16:00		Coffee break				
16:00 - 17:30		Session 3A: Security	Session 3B: Peer to Peer	Session 6A: Reliability and Resilience	Session 6B: Social Networks	
19:00		Welcome drink		Banquet		
21:00						
23:00						

Message from the General Chairs

On behalf of the Organizing Committee, it is our pleasure to welcome you at the Czech Technical University in Prague.

Networking 2012 is the 11th event of the series of IFIP International Conferences on Networking, considered to be one of the best international conferences on computer communications and networks. The main objectives of the conference are to bring together members of the networking community from both academia and industry, to discuss recent advances in the broad and fast-evolving field of communication networks, and to highlight key issues, identify trends and develop visions.

The conference takes place at the Czech Technical University in Prague, at the main university campus, in the brand new building of the Faculty of Architecture. The technical program of Networking 2012 is organized into three days, from Tuesday, May 22, to Thursday, May 24. A total of 64 high-quality papers (28% of all submitted) are presented in two parallel tracks. Three associated tutorials and workshops respectively, focusing on hot topics in telecommunications, are held on Monday, May 21, and Friday, May 25, respectively. The conference features two technical keynotes from well-known networking innovation leaders: Xiaoming Fu (University of Goettingen, Germany) and Matthew Finnie (Interoute, United Kingdom). The technical program is complemented by social events, to foster discussion, enjoy Prague culture and help strengthen relationships between participants

This edition of the conference is greatly honored by hosting the 40th IFIP TC6 Anniversary event. Some of the most prestigious networking scientists on the planet will address it: Vint Cerf (over video), Jon Crowcroft and Louis Pouzin, joined by the rising stars of the networking research community: Adam Dunkels, Dina Katabi and Pablo Rodriguez Rodriguez. Otto Spaniol, long-term Chair of TC6, will conclude by some highly original poetry! We would like to express our gratitude to all the speakers for accepting the invitation to participate.

Czech Technical University in Prague (CTU) is a large, over 300-year-old research-oriented university. It is among the leading technical universities in Europe. Education and research at CTU covers a wide range of fields of engineering. At present, there are over 25'000 students at 8 faculties. In 2010, CTU ranked 121st among the technical universities worldwide by the Times Higher Education Supplement.

Prague (Praha), the capital of the Czech Republic, is the most important political, economic and cultural center in the country, and the seat of the President, the Government and the Parliament of the Czech Republic. Throughout history, Prague has been at the crossroads of European knowledge and culture. Charles University, founded in 1348, is the oldest institution of its kind in Central Europe. Science heavyweights Einstein, Tesla, Mach and Bolzano all spent parts of their careers in Prague and the tradition of technical innovation is very much alive, with prime example being the invention of contact lenses by Wichterle. Prague's vibrant musical life dates back to the Middle Ages - from the Hussite chorals and Baroque organ music across Mozart's Don Giovanni world premiere to the great Czech composers, Antonin Dvorak and Bedrich Smetana. The city's role as a literary melting pot manifests itself in the works of Kafka, Capek, Hasek, Seifert, and many others. It is also famous for its spirit of free thinking, with long history of political reformers from Hus to Havel. Prague has rich collections of creative arts on display in many galleries. With its exquisitely preserved historical center, it is known as the "Golden City" or the "City of hundred spires".

In this inspiring combination of technical and cultural environments, we wish you a productive and enjoyable week.

Robert Bestak and Lukas Kencil
Networking 2012 General Chairs

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Otto Spaniol, RWTH Aachen University, Germany
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James Sterbenz, University of Kansas & Lancaster University (UK), USA
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Xinbing Wang, Shanghai Jiaotong University, China
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Guoliang Xue, Arizona State University, USA
Fan Ye, IBM T. J. Watson Research Center, USA
Sheng Zhong, University at Buffalo, USA
Martina Zitterbart, Karlsruhe Institute of Technology, Germany



Keynote speakers

Keynote 1

Tuesday, May 22; 9:00 -10:00

Room: 155

Xiaoming Fu (University of Goettingen, Germany)

Content Distribution: from Client/Server to Content-Oriented Publish/Subscribe System

Abstract

From the conventional client/server model to peer-to-peer (P2P) and content distribution networks (CDNs), a variety of solutions have been developed towards efficient content distribution over the Internet. Information-centric networking (ICN) is a next paradigm for content distribution, which provides substantial flexibility for users to obtain information without knowing the source of the information or its current location. I will describe some of the work we are currently doing in the COPSS project which aims to build a content-oriented publish/subscribe infrastructure which supports large-scale and time-sensible ICN applications such as Massively Multiplayer Online Role Playing Game (MMORPG). Using trace-driven simulation, we demonstrate that COPSS can achieve scalable and efficient content-centric pub/sub-based content delivery, providing considerable performance improvements over traditional server-based system.

About the speaker

Xiaoming Fu is full professor of computer science at the Institute of Computer Science, University of Goettingen and leading the Computer Networks (NET) Research Group. He received his bachelor (1994) and master (with distinction, 1997) degrees from Northeastern University, Shenyang, China, and his PhD. (2000) degree in computer science from Tsinghua University, Beijing, China (supervisor: Professor Yaoxue Zhang). Prior to joining Goettingen, he worked with Prof. Dr.-Ing. Adam Wolisz as a research fellow at the Telecommunications Networks (TKN) group, Technical University Berlin until September 2002. Between 2003 and 2005, he also served in the European Telecommunications Standards Institute as an expert in Specialist Task Forces in Internet Protocol (Version 6) Testing. He was/is a visiting scholar at the University of Cambridge (host: Prof. Jon Crowcroft) in 2005 and 2007, a DAAD visiting professor at Columbia University (host: Prof. Henning Schulzrinne) in 2008 and 2009, a Fulbright Scholar Visiting Professor at UCLA (hosts: Prof. Lixia Zhang and Prof. Mario Gerla) in academic year 2009/2010, and a ChangJiang Scholar Visiting Professor at Tsinghua University. Since October 2010 he serves as Vice Chair of the Technical Committee on Computer Communications (TCCC), IEEE Communications Society (ComSoc), and since November 2011 as Chair of the Internet Technical Committee of the IEEE ComSoc and Internet Society (ISOC). He is a senior member of IEEE, a member of ACM and a member of GI.

Keynote 2

Wednesday, May 23; 9:00 -10:00

Room: 155

Matthew Finnie (Interoute, United Kingdom)

In the first 40 years technology and networks have fundamentally changed the world, so what's left?

Abstract

40 years ago is pre-history for many technologies, we had to wait 20 years for the first commercial signs of the internet, 20 years on it's a different world. We have revolutionized the way in which we communicate, shop and live. Despite this we are only at the tipping point, the way in which we build these platforms to deliver services has remained stubbornly silo'd along traditional technology lines. This talk looks forward and using history as a guide gives an insight into the next fundamental technology convergence between computer and network that will change the communication and content provider landscape forever.

About the speaker

Matthew Finnie is the Chief Technology Officer (CTO) of Interoute, the operator that owns the largest Next Generation Network covering the European Union, from London to Warsaw, from Stockholm to Sicily and beyond into the Continent's emerging economies. Interoute is also the owner of Europe's largest cloud services platform. Matthew drives the company's advanced services strategy, including developing the platform that has allowed the company to launch its industry-leading VOIP, Ethernet and Media products. Trained as an electrical engineer, he helped develop early IP-product innovations, including one of the first commercial applications of VOIP a decade ago. As head of the Enterprise Service Development Group at Vocaltec, he worked with European/US carriers and multi-national corporations to launch converged communication services. Matthew was also the co-founder of US-based Internet start-up Insitu, which developed real-time IP collaboration tools. Matthew has degrees in electrical and electronic engineering and marketing.

Opening Session

Tuesday, May 22; 8:30 -9:00

Room: 155

Session 1A: IP Routing

Tuesday, May 22; 11:00 -12:30

Room: 107

Sign What You Really Care About - Secure BGP AS Paths Efficiently

Yang Xiang (Tsinghua University, P.R. China); Zhiliang Wang (Tsinghua University, P.R. China); Jianping Wu (Tsinghua University, P.R. China); Xingang Shi (Tsinghua University, P.R. China); Xia Yin(Tsinghua University, P.R. China)

Permutation Routing for Increased Robustness in IP Networks

Hung Quoc Vo (Simula Research Laboratory, Norway); Olav Lysne (Simula Research Laboratory, Norway); Amund Kvalbein (Simula Research Laboratory, Norway)

Routing On Demand: Toward the Energy-Aware Traffic Engineering with OSPF

Meng Shen (Tsinghua University, P.R. China); Hongying Liu (BeiHang University, P.R. China); Ke Xu (Tsinghua University, P.R. China); Ning Wang (University of Surrey, United Kingdom); Yifeng Zhong(Tsinghua University, P.R. China)

Minimization of Network Power Consumption with Redundancy Elimination

Frederic Giroire (CNRS, France); Joanna Moulhierac (MASCOTTE, I3S (CNRS UNS) INRIA, France); Truong Khoa Phan (MASCOTTE, CNRS-UNS, INRIA, France); Frédéric Roudaut (Orange Lab, France)

Notes:

Session 1B: Wireless Networks

Tuesday, May 22; 11:00 -12:30

Room: 111

QoE Analysis of Media Streaming in Wireless Data Networks

Yuedong Xu (INRIA, France); Eitan Altman (INRIA, France); Rachid El-Azouzi (LIA/CERI University of Avignon, France); Salah Eddine Elayoubi (Orange Labs, France); Majed Haddad (Orange-Labs, France)

Maximizing Lifetime of Connected-Dominating-Set in Cognitive Radio Networks

Zhiyong Lin (Hong Kong Baptist University, Hong Kong); Hai Liu (Hong Kong Baptist University, Hong Kong); Xiaowen Chu (Hong Kong Baptist University, Hong Kong); Yiu-Wing Leung (Hong Kong Baptist University, Hong Kong); Ivan Stojmenovic (University of Ottawa, Canada)

Competition between Wireless Service Providers Sharing a Radio Resource

Patrick Maillé (Telecom Bretagne, France); Bruno Tuffin (Inria Rennes - Bretagne Atlantique, France); Jean-Marc Vigne (Inria Rennes - Bretagne Atlantique, France)

Traffic-Aware Channel Assignment for Multi-radio Wireless Networks

Ryan Irwin (Virginia Tech, USA); Allen B. MacKenzie (Virginia Tech, USA); Luiz A. DaSilva (Virginia Polytechnic Institute and State University, Ireland)

Notes:

Session 2A: Network Measurement

Tuesday, May 22; 14:00 -15:30

Room: 107

Estimating Network Layer Subnet Characteristics via Statistical Sampling

M. Engin Tozal (University of Texas at Dallas, USA); Kamil Sarac (University of Texas at Dallas, USA)

Sparsity without the Complexity: Loss Localisation using Tree Measurements

Vijay Arya (IBM Research - India, India); Darryl Veitch (University of Melbourne, Australia)

A Panoramic View of 3G Data/Control-Plane Traffic: Mobile Device Perspective

Xiuqiang He (Huawei Research, P.R. China); Patrick Pak-Ching Lee (The Chinese University of Hong Kong, Hong Kong); Lujia Pan (Huawei Research, P.R. China); Cheng He (Huawei Research, P.R. China); John Chi Shing Lui (Chinese University of Hong Kong, Hong Kong)

Efficient and Secure Decentralized Network Size Estimation

Nathan Evans (Technische Universität München, Germany); Bartłomiej Polot (Technische Universität München, Germany); Christian Grothoff (Technische Universität München, Germany)

Notes:

Session 2B: Cooperation and Collaboration

Tuesday, May 22; 14:00 -15:30

Room: 111

Modelling the Tradeoffs in Overlay-ISP Cooperation

Raul Landa (University College London, United Kingdom); Eleni Mykoniati (University College London, United Kingdom); Richard G Clegg (University College London, United Kingdom); David Griffin (University College London, United Kingdom); Miguel Rio (UCL, United Kingdom)

Reducing the History in Decentralized Interaction-Based Reputation Systems

Dimitra Gkorou (Delft University of Technology, The Netherlands); Tamás Vinkó (Delft University of Technology, The Netherlands); Nitin Chiluka (Delft University of Technology, The Netherlands); Johan A. Pouwelse (Delft University of Technology, The Netherlands); Dick Epema (Delft University of Technology, The Netherlands)

Competition in Access to Content

Tania Jimenez (University of Avignon, France); Yezekael Hayel (LIA, University of Avignon, France); Eitan Altman (INRIA, France)

On The Problem of Revenue Sharing in Multi-domain Federations

Isabel Amigo (Telecom Bretagne, France); Pablo Belzarena (Universidad de la Republica, Uruguay); Sandrine Vaton (Telecom Bretagne, France)

Notes:

Session 3A: Security

Tuesday, May 22; 16:00 -17:30

Room: 107

Security Adoption in Heterogeneous Networks: the Influence of Cyber-insurance Market

Zichao Yang (The Chinese University of Hong Kong, Hong Kong); John Chi Shing Lui (Chinese University of Hong Kong, Hong Kong)

Detecting Stealthy Backdoors with Association Rule Mining

Stefan Hommes (University of Luxembourg, Luxembourg); Radu State (University of Luxembourg, Luxembourg); Thomas Engel (University of Luxembourg, Luxembourg)

Secure Client Puzzles based on Random Beacons

Yves Igor Jerschow (Heinrich Heine University Düsseldorf, Germany); Martin Mauve (Heinrich Heine University Düsseldorf, Germany)

Heterogeneous Secure Multi-Party Computation

Mentari Djatmiko (NICTA, Australia); Mathieu Cunche (NICTA, Australia); Roksana Boreli (National ICT Australia, Australia); Aruna Seneviratne (University of New South Wales, Australia)

Notes:

Session 3B: Peer to Peer

Tuesday, May 22; 16:00 -17:30

Room: 111

Content Publishing and Downloading Practice in BitTorrent

Seungbae Kim (KAIST Institute for Information Technology Convergence, Korea); Jinyoung Han (Seoul National University, Korea); Taejoong Chung (Seoul National University, Korea); Hyun-chul Kim (Sangmyung University, Korea); Taekyoung Kwon (Seoul National University, Korea); Yanghee Choi (Seoul National University, Korea)

Enhancing Efficiency for Peer-to-Peer Traffic Locality: Measurement, Design and Future Trends

Haiyang Wang (Simon Fraser University, Canada); Feng Wang (Simon Fraser University, Canada); Jiangchuan Liu (Simon Fraser University, Canada); Ke Xu (Tsinghua University, P.R. China)

A Task-Based Model for the Lifespan of Peer-to-Peer Swarms

Yong Zhao (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Zhibin Zhang (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Ting He (IBM Research, USA); Alex X. Liu (Michigan State University, USA); Li Guo (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Binxing Fang (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China)

Using Centrality Metrics to Predict Peer Cooperation in Live Streaming Applications

Glauber Gonçalves (Universidade Federal de Minas Gerais, Brazil); Anna Guimarães (Universidade Federal de Minas Gerais, Brazil); Alex Borges Vieira (Universidade Federal de Juiz de Fora, Brazil); Italo Cunha (Universidade Federal de Minas Gerais, Brazil); Jussara M. Almeida (Federal University of Minas Gerais, Brazil)

Notes:

Session 4A: LISP and Multi-domain Routing

Wednesday, May 23; 11:00 -12:30

Room: 107

On the Dynamics of Locators in LISP

Damien Saucez (INRIA, France); Benoit Donnet (Université de Liège (ULg), Belgium)

A Local Approach to Fast Failure Recovery of LISP Ingress Tunnel Routers

Damien Saucez (INRIA, France); Juhoon Kim (TU Berlin, Germany); Luigi Iannone (Telecom ParisTech, France); Olivier Bonaventure (Université catholique de Louvain, Belgium); Clarence Filsfils (Cisco Systems, Belgium)

An Analytical Model for the LISP Cache Size

Florin Coras (Universitat Politècnica de Catalunya (UPC), Spain); Albert Cabellos-Aparicio (Universitat Politècnica de Catalunya, Spain); Jordi Domingo-Pascual (Universitat Politècnica de Catalunya (UPC BarcelonaTECH), Spain)

Path Computation in Multi-Layer Multi-domain Networks

Mohamed Lamine Lamali (Alcatel-Lucent Bell Labs France, France); Hélia Pouyllau (Alcatel-Lucent Bell Labs, France); Dominique Barth (University of Versailles-St Quentin, France)

Notes:

Session 4B: Wireless Networks II

Wednesday, May 23; 11:00 -12:30

Room: 111

A Semi-Dynamic Evolutionary Power Control Game

Majed Haddad (Orange-Labs, France); Eitan Altman (INRIA, France); Julien Gaillard (University of Avignon, France); Dieter Fiems (Ghent University, Belgium)

Relay Placement for Two-connectivity

Gruia Calinescu (Illinois Institute of Technology, USA)

Gossip-based Counting in Dynamic Networks

Ruud van de Bovenkamp (Delft University of Technology, The Netherlands); Fernando A. Kuipers (Delft University of Technology, The Netherlands); Piet Van Mieghem (Delft University of Technology, The Netherlands)

A 2-Approximation Algorithm for Optimal Deployment of k Base Stations in WSNs

Hui Wu (University of New South Wales, Australia); Sabbir Mahmud (University of New South Wales, Australia)

Notes:

Session 5A: Network Mapping

Wednesday, May 23; 14:00 -15:30

Room: 107

Semantic Exploration of DNS

Samuel Marchal (University of Luxembourg, Luxembourg); Jérôme François (University of Luxembourg, Luxembourg); Cynthia Wagner (University of Luxembourg, Luxembourg); Thomas Engel (University of Luxembourg, Luxembourg)

Towards a Robust Framework of Network Coordinate Systems

Linpeng Tang (Shanghai Jiao Tong University, P.R. China); Zhiyong Shen (HP Labs, P.R. China); Qunyang Lin (HP Labs, P.R. China); Junqing Xie (HP Labs, P.R. China)

Validity of Router Responses for IP Aliases Resolution

Santiago Garcia-Jimenez (Universidad Publica de Navarra, Spain); Eduardo Magaña (Universidad Publica de Navarra, Spain); Mikel Izal (Public University of Navarra (UPNA), Spain); Daniel Morato (Universidad Publica de Navarra, Spain)

BSense: A Flexible and Open-Source Broadband Mapping Framework

Giacomo Bernardi (The University of Edinburgh, United Kingdom); Damon Fenacci (The University of Edinburgh, United Kingdom); Mahesh K Marina (The University of Edinburgh, United Kingdom); Dimitrios Pezaros (University of Glasgow, United Kingdom)

Notes:

Session 5B: Content-centric Networking

Wednesday, May 23; 14:00 -15:30

Room: 111

Efficient User-assisted Content Distribution over Information-centric Network

HyunYong Lee (The University of Tokyo, Japan); Akihiro Nakao (University of Tokyo, Japan)

On Inter-domain Name Resolution for Information-centric Networks

Konstantinos Katsaros (Athens University of Economics and Business, Greece); Nikolaos Fotiou (Mobile Multimedia Lab, Athens University of Economics and Business, Greece); Xenofon Vasilakos (Athens University of Economics and Business, Greece); Christopher Ververidis (Athens University of Economics and Business, Greece); Christos Tsilopoulos (Athens University of Economics and Business, Greece); George Xylomenos (Athens University of Economics and Business, Greece); George Polyzos (Athens University of Economics and Business, Greece)

Cache “Less for More” in Information-centric Networks

Wei Koong Chai (University College London, United Kingdom); Diliang He (University College London, United Kingdom); Ioannis Psaras (University College London, United Kingdom); George Pavlou (University College London, United Kingdom)

Collaborative Forwarding and Caching in Content Centric Networks

Shuo Guo (University of Minnesota, USA); Haiyong Xie (US Corporate Research, Huawei Technologies, USA); Guangyu Shi (Huawei Technologies Co., Ltd, P.R. China)

Notes:

Session 6A: Reliability and Resilience

Wednesday, May 23; 16:00 -17:30

Room: 107

Resilience in Computer Network Management

Marcelo Vasconcelos (Military Institute of Engineering, Brazil); Ronaldo M Salles (Military Institute of Engineering, Brazil)

Degree and Principal Eigenvectors in Complex Networks

Cong Li (Delft University of Technology, The Netherlands); Huijuan Wang (Delft University of Technology, The Netherlands); Piet Van Mieghem (Delft University of Technology, The Netherlands)

An Experimental Study on the Impact of Network Segmentation to the Resilience of Physical Processes

Bela Genge (Joint Research Centre, European Commission, Italy); Christos Siaterlis (Joint Research Centre, Italy)

On the Vulnerability of Hardware Hash Tables to Sophisticated Attacks

Udi Ben-Porat (ETH Zurich, Switzerland); Anat Bremler-Barr (Interdisciplinary Center Herzliya, Israel); Hanoch Levy (Tel Aviv University, Israel); Bernhard Plattner (ETH Zurich, Switzerland)

Notes:

Session 6B: Social Networks

Wednesday, May 23; 16:00 -17:30

Room: 111

Crawling and Detecting Community Structure in Online Social Networks using Local Information

Norbert Blenn (Delft University of Technology, The Netherlands); Christian Doerr (Delft University of Technology, The Netherlands); Bas van Kester (TU Delft, The Netherlands); Piet Van Mieghem (Delft University of Technology, The Netherlands)

Context-Sensitive Sentiment Classification of Short Colloquial Text

Norbert Blenn (Delft University of Technology, The Netherlands); Kassandra Charalampidou (Delft University of Technology, The Netherlands); Christian Doerr (Delft University of Technology, The Netherlands)

Distributed Content Backup and Sharing using Social Information

Jin Jiang (Politecnico di Torino, Italy); Claudio E. Casetti (Politecnico di Torino, Italy)

Trans-Social Networks for Distributed Processing

Nuno Apolónia (Inesc-ID/IST, Portugal); Paulo Ferreira (INESC-ID Lisboa/IST Portugal, Portugal); Luís Veiga (Instituto Superior Técnico - UTL / INESC-ID Lisboa, Portugal)

Notes:

Session 7A: Video Streaming

Thursday, May 24; 9:00 -10:30

Room: 107

Leveraging Video Viewing Patterns for Optimal Content Placement

Kyung-Wook Hwang (Columbia University, USA); David Applegate (AT&T Labs - Research, USA); Aaron Archer (AT&T, USA); Vijay Gopalakrishnan (AT&T Labs - Research, USA); Seungjoon Lee (AT&T Labs Research, USA); Vishal Misra (Columbia University, USA); K. K. Ramakrishnan (AT&T Labs - Research, USA); Deborah Swayne (AT&T Labs—Research, USA)

SmoothCache: HTTP-Live Streaming Goes Peer-To-Peer

Roberto Roverso (Royal Institute of Technology (KTH), Sweden); Sameh El-Ansary (Swedish Institute of Computer Science, Sweden); Seif Haridi (KTH - The Royal Institute of Technology, Sweden)

Quality Adaptation in P2P Video Streaming Based on Objective QoE Metrics

Julius Rückert (Technische Universität Darmstadt, Germany); Osama Abboud (TU Darmstadt, Germany); Thomas Zinner (University of Wuerzburg, Germany); Ralf Steinmetz (Technische Universität Darmstadt, Germany); David Hausheer (TU Darmstadt, Germany)

Playback Policies for Live and On-Demand P2P Video Streaming

Fabio V Hecht (University of Zurich, Switzerland); Thomas Bocek (University of Zurich, Switzerland); Flavio R Santos (Federal University of Rio Grande do Sul, Brazil); Burkhard Stiller (University of Zürich, Switzerland)

Notes:

Session 7B: DTN and Wireless Sensor Networks

Thursday, May 24; 9:00 -10:30

Room: 111

A Two-Layer Approach for Energy Efficiency in Mobile Location Sensing Applications

Yi-Yin Chang (Academia Sinica, Taiwan); Cheng-Yu Lin (Academia Sinica, Taiwan); Ling-Jyh Chen (Academia Sinica, Taiwan)

On the Impact of a Road-Side Infrastructure for a DTN Deployed on a Public Transportation System

Sabrina Gaito (University of Milan, Italy); Dario Maggiorini (University of Milano, Italy); Christian Quadri (University of Milano, Italy); Gian Paolo Rossi (Università degli Studi di Milano, Italy)

Estimating File-Spread in Delay Tolerant Networks under Two-Hop Routing

Arshad Ali (Telecom SudParis, France); Eitan Altman (INRIA, France); Tijani Chahed (Telecom SudParis, France); Dieter Fiems (Ghent University, Belgium); Manoj Panda (Telecom SudParis, France); Lucile Sassatelli (I3S - CNRS Universite de Nice UMR, France)

A Distributed Smart Application for Solar Powered WSNs

T V Prabhakar (IISc, India); Akshay Uttama Nambi (Indian Institute of Science, India); Venkatesha Prasad (Delft University of Technology, The Netherlands); Shilpa Suresh (IISc, India); Prakruthi Keshavamurthy (Indian Institute of Science, India); Ignas G.M.M. Niemegeers (Delft University of Technology, The Netherlands)

Notes:

Session 8A: Virtualization and Cloud Services

Thursday, May 24; 11:00 -12:30

Room: 107

Dynamic Scaling of Call Stateful SIP Clusters in the Cloud

Nico Janssens (Alcatel-Lucent, Belgium); Xueli An (Bell Labs, Alcatel-Lucent, Belgium); Koen Daenen (Alcatel-Lucent, Belgium); Claudio Forlivesi (Alcatel-Lucent, Belgium)

Building a Flexible and Scalable Virtual Hardware Data Plane

Junjie Liu (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Yingke Xie (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Gaogang Xie (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Layong Luo (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Fuxing Zhang (Institute of Computing Technology, Chinese Academy of Science, P.R. China); Xiaolong Wu (Institute of Computing Technology, Chinese Academy of Science, P.R. China); Qingsong Ning (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Hongtao Guan (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China)

Resilient Virtual Network Design for End-To-End Cloud Services

Isil B. Barla (Technical University of Munich, Germany); Dominic A. Schupke (Nokia Siemens Networks, Germany); Georg Carle (Technische Universität München, Germany)

Remedy: Network-aware Steady State VM Management for Data Centers

Vijay Mann (IBM Research, New Delhi, India); Akanksha Gupta (IBM Research - India, India); Partha Dutta (IBM, India); Anilkumar Vishnoi (IBM Research - India, India); Parantapa Bhattacharya (IIT Kharagpur, India); Rishabh Poddar (Indian Institute of Technology, Kharagpur, India); Aakash Iyer (IBM Research - India, India)

Notes:

Session 8B: Interdomain

Thursday, May 24; 11:00 -12:30

Room: 111

Towards a Statistical Characterization of the Interdomain Traffic Matrix

Jakub Mikians (UPC Barcelona Tech, Spain); Amogh Dhamdhere (CAIDA, USA); Constantine Dovrolis (Georgia Institute of Technology, USA); Pere Barlet-Ros (Technical University of Catalonia, Spain); Josep Sole-Pareta (UPC, Spain)

Obscure Giants: Detecting the Provider-Free ASes

Syed Hasan (Institute IMDEA Networks, Spain); Sergey Gorinsky (Institute IMDEA Networks, Spain)

Characterizing Inter-domain Rerouting after Japan Earthquake

Yujing Liu (National University of Defense Technology, P.R. China); Xiapu Luo (The Hong Kong Polytechnic University, Hong Kong); Rocky Chang (The Hong Kong Polytechnic University, Hong Kong); Jinshu Su (National University of Defence Technology, P.R. China)

Measuring the Evolution of Internet Peering Agreements

Amogh Dhamdhere (CAIDA, USA); Himalatha Cherukuru (Georgia Tech, USA); Constantine Dovrolis (Georgia Institute of Technology, USA); Kimberly Claffy (CAIDA, USA)

Closing Session

Thursday, May 24; 12:30 -13:00

Room: 107

Notes:

40 years of IFIP TC6 - Commemoration ceremony

May 24, 2012: 14:00 - 17:30

Room: 105

The International Federation for Information Processing (IFIP) has more than 10 Technical Committees (TCs). The committee TC6 on Communication Systems is one of the biggest, most active, and oldest of them. It was founded in 1972 and has actually 12 Working Groups (WGs).

The 40 years jubilee event of TC6 will be held in Prague in conjunction with the annual Networking conference (the “flagship event” of TC6). The commemoration will basically consist of two parts, namely:

- on the history, i.e. what has happened in the first 40 years
- on the future, i.e. on the perspectives of the communication area as seen by TC6.

The presentations of the event will be given by some older “gurus” of TC6 as well as by some promising “young revolutionaries”.

Programme		
Part 1	Chair: Guy Leduc	
Prologue	Welcome	14:00 - 14:10
Prehistory	Vint Cerf (Google, United States) The early years of INWG and IFIP WG 6.1 (Video greetings)	14:10 - 14:20
Past	Louis Pouzin (Internet Pioneer, France) What difference between 因特网 and internet?	14:20 - 14:50
Present	Jon Crowcroft (University of Cambridge, United Kingdom) The way to move forward in networking	14:50 - 15:20
Pause: 15:20 - 15:45		
Part 2	Chair: Gunnar Karlsson	
Progress	Dina Katabi (Massachusetts Institute of Technology, United States) Cutting through the Layers: High-Performance Wireless Networks	15:45 - 16:15
Perspectives	Adam Dunkels (Swedish Institute of Computer Science, Sweden) Networking in the small, in the large	16:15 - 16:45
	Pablo Rodriguez Rodriguez (Telefonica R&D, Spain) The Next Wave of Telco's Innovation	16:45 - 17:15
Poetry	Otto Spaniol (RWTH Aachen, Germany) Self-gratulation of IFIP TC6 for its 40th birthday	17:15 - 17:30

40 years of IFIP TC6 - About the speakers

Vint Cerf (Google, United States)

Vinton G. Cerf is vice president and Chief Internet Evangelist for Google. He is responsible for identifying new enabling technologies and applications on the Internet and other platforms for Google. Widely known as one of the “Fathers of the Internet,” Cerf is the co-designer of the TCP/IP protocols and the architecture of the Internet.

Vint Cerf served as chairman of the board of the Internet Corporation for Assigned Names and Numbers (ICANN) from 2000-2007 and has been a Visiting Scientist at the Jet Propulsion Laboratory since 1998. Cerf served as founding president of the Internet Society (ISOC) from 1992-1995. Cerf is a Fellow of the IEEE, ACM, and American Association for the Advancement of Science, the American Academy of Arts and Sciences, the International Engineering Consortium, the Computer History Museum, the British Computer Society, the Worshipful Company of Information Technologists and a member of the National Academy of Engineering. Cerf is a recipient of numerous awards and commendations in connection with his work on the Internet, including the US Presidential Medal of Freedom, US National Medal of Technology, the Prince of Asturias Award, the Tunisian National Medal of Science, the Japan Prize, the Charles Stark Draper award, the ACM Turing Award and eighteen honorary degrees. In December, 1994, People magazine identified Cerf as one of that year’s “25 Most Intriguing People.”

Louis Pouzin (Internet Pioneer, France)

Louis Pouzin has acquired an international reputation as an expert in computer communications and networks. Most of his career has been devoted to the design and implementation of computer systems, such as CTSS, the first large time sharing system at the Massachusetts Institute of Technology, or the CYCLADES computer network and its datagram packet switching network, from which TCP/IP was derived.

Besides his experience in leading teams of top professionals, he is known internationally for his participation in early network standardization within IFIP, ISO and CCITT, and his numerous publications, many of which have become educational material in network courses. As a lecturer, he is especially appreciated for presenting complex subjects in clear and understandable terms.

He graduated from École Polytechnique in Paris. He is past chairman of IFIP-TC-6 (data communications). He has published more than 80 articles and a book on computer networks. Among awards he has received: IFIP Silver Core, Bulgarian Academy of Sciences Marin Drinov, ACM SIGCOMM, IEEE Internet, French Légion d’Honneur, and ISOC Hall of Fame Pioneers. Presently he is Project Director with EUROLINC, a non-profit organization promoting the use of native languages in the Internet.

Jon Crowcroft (University of Cambridge, United Kingdom)

Jon Crowcroft has been the Marconi Professor of Communications Systems in the Computer Laboratory since October 2001. He has worked in the area of Internet support for multimedia communications for over 30 years. Three main topics of interest have been scalable multicast routing, practical approaches to traffic management, and the design of deployable end-to-end protocols. Current active research areas are Opportunistic Communications, Social Networks, and techniques and algorithms to scale infrastructure-free mobile systems. He leans towards a “build and learn” paradigm for research.

He graduated in Physics from Trinity College, University of Cambridge in 1979, gained an MSc in Computing in 1981 and PhD in 1993, both from UCL. He is a Fellow of the ACM, a Fellow of the British Computer Society, a Fellow of the IET and the Royal Academy of Engineering and a Fellow of the IEEE.

Dina Katabi (Massachusetts Institute of Technology, United States)

Dina Katabi is a professor in the EECS Department, and a member of the Computer Science and Artificial Intelligence Laboratory. She has joined the MIT faculty in March 2003, after completing her PhD at MIT. Katabi's work focuses on wireless networks, mobile applications, network security, and distributed resource management. She has award winning papers in ACM SIGCOMM and Usenix NSDI. She has been awarded a Faculty Research Innovation Fellowship in 2011, the IEEE William R. Bennett prize in 2009, a Sloan Fellowship in 2006, the NBX Career Development chair in 2006, and an NSF CAREER award in 2005. Her doctoral dissertation won an ACM Honorable Mention award and a Sprowls award for academic excellence.

Adam Dunkels (Swedish Institute of Computer Science, Sweden)

Adam Dunkels is an experimental computer scientist in the Computer Systems Laboratory of the Swedish Institute of Computer Science, Kista, Sweden, and the founder and senior scientist of the Networked Embedded Systems group. His research interests are system software and low-power IP networking for small embedded systems and wireless sensor networks. Adam has written some well-known software for networked embedded systems that is used in satellites, air planes, racing car engines, oil bore holes, cargo ships, TV-transmission equipment, and in products from hundreds of companies, including ABB, Altera, BMW, Cisco, Ericsson, GE, HP or Xilinx.

Pablo Rodriguez Rodriguez (Telefonica R&D, Spain)

Pablo Rodriguez Rodriguez is Director of Research and Director of Telefonica Digital Barcelona R&D Lab. He is also an adjunct faculty professor at the department of computer science at Columbia University, New York. He has developed his career in the United States as a software architect and entrepreneur in three Silicon Valley start-ups (Inktomi, which provided the search engine of MSN, Yahoo and AOL; Netli and Tahoe Networks). He also worked at Microsoft Research in Cambridge and Bell-Labs in the USA. As a result of his work, Pablo has more than fifty scientific publications and patents. He has winning paper awards, including ACM/IMC and WWW, and was awarded the "Prix de la Recherche" for academic excellence.

Otto Spaniol (RWTH Aachen, Germany)

Otto Spaniol is professor emeritus at RWTH Aachen University (Germany) for "Communication and Distributed Systems". He has been chairman of IFIP TC6 from 1992 till 1997 and then again from 2004 till 2006. Since 1983 he serves as German national delegate for this Technical Committee.

Workshops

Friday, May 25;
Rooms: 113, 152, 153

This year, three workshops are co-located with the main conference:

- Workshop ETICS 2012,
- Workshop HetsNets: Future Heterogeneous Networks 2012,
- Workshop Comp-Nets: Computing in Networks 2012.

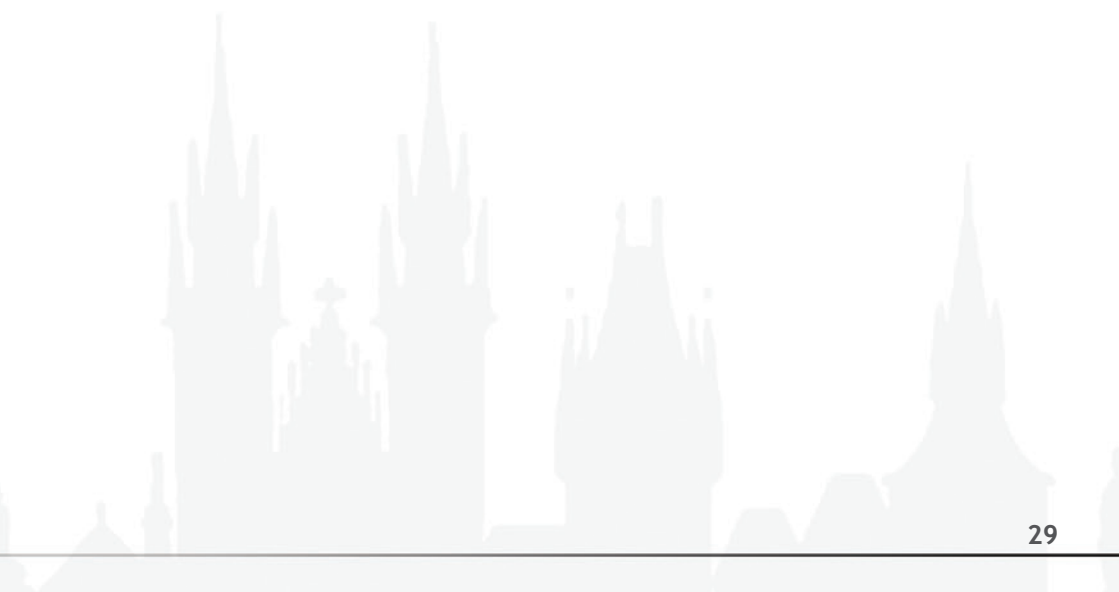
Workshop program at a glance

ETICS 2012	
09:00-10:00	Keynote I John Mussachio
10:00-10:45	Economic Session 1: Value Network Modeling for the Future Internet
10:45-11:00	Coffee break
11:00-12:30	Economic Session 2: End Users and Applications
12:30- 13:30	Lunch
13:30-14:30	Keynote II Roch Guérin
14:30-14:45	Coffee break
14:45-16:00	Technical Session: Inter-domain QoS-aware Routing

HetsNets 2012	
09:00-09:30	Opening
09:30-10:45	Session 1: Future Heterogeneous Network I
10:45-11:00	Coffee break
11:00-12:30	Session 2: Future Heterogeneous Network II
12:30- 13:30	Lunch
13:30-14:30	Session 3: Future Heterogeneous Network III

Computing in Networks 2012	
09:00-09:30	Opening
09:30-10:45	Session 1: QoS in Networks
10:45-11:00	Coffee break
11:00-12:30	Session 2: Strategies and Modeling
12:30- 13:30	Lunch
13:30-14:30	Keynote Gokhan Ilk
14:30-15:30	Session 3: Identification and Localization

Notes:







Welcome drink

Tuesday, May 22; 19:00 -21:00

The Welcome drink will be served at the **Bethlehem Chapel** (<http://www.digital-guide.cz/en/poi/old-town-1/bethlehem-chapel/>), located at Bethlehem Square in the Old Town part of Prague.

Czech Technical University Academic Orchestra will perform short classical music pieces as part of the event.

Address: Betlemske namesti, Praha 1.

Buses depart from Conference venue at 18:15.

Banquet

Wednesday, May 23; 19:00 -23:00

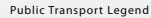
The Banquet is held at the Strelecky Ostrov Restaurant (<http://www.streleckyostrov.cz/en/>) on an island on the Vltava river, in the heart of the Prague historic center.

Address: Strelecky ostrov 336, Praha 1.

Buses depart from Conference venue at 18:15.

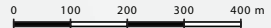


The entire conference takes place at the new building of the Faculty of Architecture, Czech Technical University in Prague.



- BUS FROM/TO AIRPORT
 UNDERGROUND

- 1 NETWORKING 2012 and Workshops
Czech Technical University in Prague,
Faculty of Information Technology,
Faculty of Architecture
- 2 Hotel Diplomat ★★★★★
- 3 Hotel Crowne Plaza Prague ★★★★★



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