IFIP Networking 2015 Conference Program

Wednesday, May 20

08:00-08:30	*Registration*		
08:30-09:00	*Opening session*		
09:00-10:00	Keynote#1: *Energy efficiency in 5G mobile networks*		
10:00-10:30	*Coffee Break*		
10:30-12:00	S-1A: *Wireless Sensor Networks*	S-1B: *Caching*	
12:00-14:00	*Lunch Break*		
14:00-15:30	S-2A: *Queue Management and Scheduling*	S-2B: *Content Centric Networking*	
15:30-16:00	*Coffee Break*		
16:00-17:30	S-3A: *Routing I*	S-3B: *Multimedia*	
18:30-20:30	*Welcome Reception : City Hall and Le Florida Brasserie*		

Thursday, May 21

08:30-09:00	*Registration*		
09:00-10:00	Keynote#2: *Virtualization techniques: Opportunities for fixed/mobile convergence*		
10:00-10:30	*Coffee Break*		
10:30-12:00	S-4A: *Routing II*	S-4B: *Network Architectures*	
12:00-14:00	*Lunch Break*		
14:00-16:00	S-5A: *Data Offloading and the Cloud*	S-5B: *Software Defined Networking*	
16:00-16:30	*Coffee Break*		
16:30-18:00	S-6A: *Measurements*	S-6B: *Network Dependability and Security*	
19:30-22:30	*Conference Dinner – Le Moaï Restaurant*		

Friday, May 22

08:30-10:00	S-7A: *Localization and Sensors*	S-7B: *Peer to Peer Systems*	
10:00-10:30	*Coffee Break*		
10:30-11:30	Keynote#3: *Storms in Mobile Networks: Modelling, Detection and Mitigation*		
11:30-12:30	S-8A: *Cognitive Radio*	S-8B: *Traffic Analysis*	
12:30-13 :45	*Lunch Break*		
13 :45-14:00	*Closing Session*		
14:00-19:00	*Half day trip – Medieval Carcassone city*		

Wednesday, May 20

08:30 - 09:00

Opening session

Room: B00

09:00 - 10:00

Keynote#1: Energy efficiency in 5G mobile networks
Room: B00

Abstract: 5G systems will be used in the 2020's. Moore's exponential law has been slowing down since about 2000 and it will eventually undergo a thermal noise death in about 2020-2030. The switching energy of CMOS electronics will approach the thermal noise spectral density. Future networks are expected to carry 1000 times more mobile data in ten years but the energy efficiency of CMOS technology is expected to improve only by a factor of 10 when before about 2000 the energy efficiency improved by a factor of 100 in ten years. The technology trends and fundamental limits in the physical layer will have a direct effect on all upper layers. Networks do not only consume energy in transmission in power amplifiers but also in computation in algorithms and protocols. Computation energy will be more important in small cells that are expected to be used in places where user density is high. The author's background is in the physical layer.

10:30 - 12:00

S-1A: Wireless Sensor Networks
Room: B00

LT Codes Based Distributed Coding for Efficient Distributed Storage in Wireless Sensor Networks
> Xiucai Ye and Jie Li (University of Tsukuba, Japan); Wen-Tsuen Chen (Academia Sinica, Taiwan); Feilong Tang (Shanghai Jiao Tong University, P.R. China)

Performance of in-network processing for visual analysis in wireless sensor networks
> Hussein Al-Zubaidy (Royal Institute of Technology (KTH), Sweden); György Dán (KTH Royal Institute of Technology, Sweden); Viktoria Fodor (KTH, Sweden)

2D-UBDA: A Novel 2-Dimensional Underwater WSN Barrier Deployment Algorithm
> Zakia Khalfallah (UPMC, France); Ilhem Fajjari (Virtuor & University Pierre et Marie Curie, France); Nadjib Aitsaadi (LiSSi - University of Paris-Est Creteil (UPEC), France); Rami Langar (UPMC - University of Paris 6, France); Guy Pujolle (University Pierre et Marie Curie - Paris 6, France)

S-1B: Caching
Room: C002

Congestion Games in Caching Enabled Heterogeneous Cellular Networks
> Vineeth S Varma (Singapore University of Technology and Design, France); Tony Q. S. Quek (Singapore University of Technology and Design, Singapore)

CCndnS: A strategy for spreading content and decoupling NDN caches
> Mostafa Rezazad and Y. C. Tay (National University of Singapore, Singapore)

Pragmatic Router FIB Caching
> Kaustubh Gadkari (CSU, USA); M. Lawrence Weikum (Colorado State University, USA); Daniel Massey (US Department of Homeland Security & Science and Technology Directorate, Cyber Security Division, USA); Christos Papadopoulos (Colorado State University, USA)

14:00 - 15:30

S-2A: Queue Management and Scheduling
Room: B00

Active Sense Queue Management (ASQM)
Daniel M. Havey and Kevin C Almeroth (University of California, Santa Barbara, USA)
Non-Intrusive Scheduling of TCP Flows
Denis Carvin (LAAS-CNRS, France); Urtzi Ayesta (CNRS-LAAS and Ikerbasque-University of the Basque Country, Spain); Lionel Bertaux (LAAS-CNRS, France)
Queue-aware Uplink Scheduling: Analysis, Implementation, and Evaluation
Amr Rizk (University of Massachusetts Amherst, USA); Markus H Fidler (Leibniz Universität Hannover, Germany)

S-2B: Content Centric Networking
Room: C002

An Encryption-Based Access Control Framework for Content-Centric Networking
Jun Kurihara (KDDI R&D Laboratories Inc., Japan); Christopher Wood (University of California, Irvine, USA); Ersin Uzun (PARC, USA)
Information Resilience through User-Assisted Caching in Disruptive Content-Centric Networks
Vasilis Sourlas (University College London, United Kingdom); Leandros Tassiulas (Yale University, USA); Ioannis Psaras and George Pavlou (University College London, United Kingdom)
A Fault-Tolerant Forwarding Strategy for Interest-based Information Centric Networks
JJ Garcia-Luna-Aceves (University of California at Santa Cruz, USA)

16:00 - 17:30

S-3A: Routing I
Room: B00

AS Path Inference: From Complex Network Perspective
Narisu Tao, Xu Chen and Xiaoming Fu (University of Goettingen, Germany)
Traffic duplication through segmentable disjoint paths
François Aubry and David Lebrun (Université Catholique de Louvain, Belgium); Yves Deville (Universite Catholique de Louvain, Belgium); Olivier Bonaventure (Université catholique de Louvain, Belgium)
Source-specific routing
Matthieu Boutier (Université Paris Diderot, Laboratoire PPS, France); Juliusz Chroboczek (University of Paris-Diderot, France)

S-3B: Multimedia
Room: C002

VoIP-based Calibration of the DQX Model
Christos Tsiaras (University of Zurich & Communication Systems Group, Switzerland); Manuel Rösch (University of Zurich, Switzerland); Burkhard Stiller (University of Zürich & ETH Zürich, TIK, Switzerland)

Network-layer Fairness for Adaptive Video Streams

    Ahmed Mansy (Georgia Tech, USA); Marwan Fayed (University of Stirling, United Kingdom); Mostafa Ammar (Georgia Institute of Technology, USA)

Towards Joint Resource Allocation and Routing to Optimize Video Distribution over Future Internet

    Yichao Jin and Yonggang Wen (Nanyang Technological University, Singapore); Cedric Westphal (Huawei Innovation Center, USA)

Thursday, May 21

09:00 - 10:00

Keynote#2: Virtualization techniques: Opportunities for fixed/mobile convergence
  Room: B00

Abstract: Fixed/mobile convergence is a recurrent problem in the design of telecommunication networks. Mobile and fixed networks have been developed in the past few decades independently one of each other, mobile networks relying on highly centralized platforms and a few gateways to interconnect with the Internet for data traffic. The expectations of users with the widespread of tablets, smartphones, etc. are however rapidly changing and there is clearly a need to be able to seamlessly move from one network to another without session interruption. This is all the more essential as users massively use radio technologies to connect to the Internet, for instance through WiFi, cellular connections being in general able to ensure radio coverage between two WiFi hotspots. One major obstacle to fixed/mobile convergence is that networks are built upon functions hosted by dedicated hardware (e.g., the functions of the evolved packet core for cellular networks). With the emergence of virtualization techniques, it becomes possible to instantiate functions on standard hardware, making it possible to host on the same piece of equipment or in the cloud cellular and fixed access functions. In this talk, we exemplify this opportunity by describing the design of a convergent gateway aimed at realizing fixed/mobile convergence, such a gateway being instantiated by a network operating system.

10:30 - 12:00

S-4A: Routing II
  Room: B00

MDTC: An Efficient Approach to TCAM-based Multidimensional Table Compression

    Hanqing Zhu and Mingwei Xu (Tsinghua University, P.R. China); Qing Li (Graduate School at Shenzhen, Tsinghua University, P.R. China); Jun Li (University of Oregon, USA); Yuan Yang (Tsinghua University, P.R. China); Suogang Li (CERNET National Network Center, P.R. China)

Automatic Protocol Field Inference for Deeper Protocol Understanding

    Ignacio Nicolas Bermudez (Narus Inc., USA); Marios Iliofotou (Narus, Inc, USA); Alok Tongaonkar (Narus Inc, USA); Marco Mellia and Maurizio M. Munafo' (Politecnico di Torino, Italy)

On the Inter-domain Scalability of Route-by-Name Information-Centric Network Architectures

> Konstantinos V. Katsaros (University College London, United Kingdom); Xenofon Vasilakos (Athens University of Economics and Business, Greece); Timothy Okwii (University College London, United Kingdom); George Xylomenos (Athens University of Economics and Business, Greece); George Pavlou (University College London, United Kingdom); George C. Polyzos (Athens University of Economics and Business, Greece)

S-4B: Network Architectures
Room: C002

Network Service Embedding across Multiple Providers with Nestor

> David Dietrich, Ahmed Abujoda and Panagiotis Papadimitriou (Leibniz Universität Hannover, Germany)

Multihomed Mobile Network Architecture

> Ibrahim S. Alsukayti and Christopher Edwards (Lancaster University, United Kingdom)

Toward Fully Coordinated Multi-level Multi-carrier Energy Efficient Networks

> Piotr Wiecek (Wroclaw University of Technology, Poland); Majed Haddad (INRIA, France); Habachi Oussama (LIA, France); Yezekael Hayel (LIA, University of Avignon, France)

14:00 - 16:00

S-5A: Data Offloading and the Cloud
Room: B00

Cloudlet Network Design Optimization

> Alberto Ceselli (Università di Milano, Italy); Marco Premoli (Universita' degli Studi di Milano, Italy); Stefano Secci (University Pierre et Marie Curie - Paris 6, France)

Dynamic Service Migration in Mobile Edge-Clouds

> Shiqiang Wang (Imperial College London, United Kingdom); Rahul Urgaonkar (IBM Research, USA); Murtaza Zafer (Nyansa Inc., USA); Ting He (IBM Research, USA); Kevin S Chan (US Army Research Laboratory, USA); Kin K. Leung (Imperial College, United Kingdom)

Energy-Aware Opportunistic Mobile Data Offloading for Users in Urban Environments

> Sylvia T. Kouyoumdjieva (KTH, Royal Institute of Technology, Sweden); Gunnar Karlsson (KTH Royal Institute of Technology, Sweden)

Geographically Fair In-Network Caching for Mobile Data Offloading

> Mahmoud El Chamie (The University of Texas at Austin, USA); Chadi Barakat (INRIA Sophia Antipolis, France); Giovanni Neglia (INRIA Sophia Antipolis Mediterranee, France)

S-5B: Software Defined Networking
Room: C002

DHA: Distributed Decisions on the Switch Migration Toward a Scalable SDN Control Plane

> Guozhen Cheng and Hongchang Chen (National Digital Switching System Engineering & Technological R&D Center, P.R. China); Zhiming Wang (National Digital Switching System Engineering & Technological R&D Center & Individual Purchaser, P.R. China); Shuqiao Chen (National Digital Switching System Engineering & Technological R&D Center, P.R. China)

Online Virtual Links Resource Allocation in Software-Defined Networks
> Mikaël Capelle, Slim Abdellatif, Marie-José Huguet and Pascal Berthou (CNRS/LAAS - Université de Toulouse, France)

Achieving Near-optimal Traffic Engineering Solutions in Hybrid Software Defined Networks
> Jun He and Wei Song (University of New Brunswick, Canada)

Developing a Traffic Classification Platform for Enterprise Networks with SDN: Experiences & Lessons Learned
> Bryan Ng, Matthew J Hayes and Winston K.G. Seah (Victoria University of Wellington, New Zealand)

16:30 - 18:00

S-6A: Measurements
Room: B00

IPv4 versus IPv6 - Who connects faster?
> Vaibhav Bajpai and Jürgen Schönwälder (Jacobs University Bremen, Germany)

Lightweight Mobile Bandwidth Availability Measurement
> Foivos Michelinakis, Nicola Bui, Guido Fioravantti and Joerg Widmer (IMDEA Networks Institute, Spain); Fabian Kaup and David Hausheer (TU Darmstadt, Germany)

Exploiting Intra-Packet Dependency for Fine-Grained Protocol Format Inference
> Qun Huang (The Chinese University of Hong Kong, P.R. China); Patrick Pak-Ching Lee (The Chinese University of Hong Kong, Hong Kong); Zhibin Zhang (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China)

S-6B: Network Dependability and Security
Room: C002

FastID: an Undeceived Router for Real-time Identification of WiFi Terminals
> Li Lu (University of Electronic Science and Technology of China, P.R. China); Wang Runzhe (UESTC, P.R. China); Jing Ding, Mao Wubin and Wei Chen (University of Electronic Science and Technology of China, P.R. China); Hongzi Zhu (Shanghai Jiao Tong University, P.R. China)

Global VoIP Security Threats -- Large Scale Validation Based on Independent Honeynets
> Markus Gruber, Florian Fankhauser, Christian Schanes and Thomas Grechenig (Vienna University of Technology, Austria); Dirk Hoffstadt and Adan Aziz (University of Duisburg-Essen, Germany); Erwin P. Rathgeb (Universität Duisburg-Essen, Germany)

Survivable Routing Meets Diversity Coding
> Alija Pašić, János Tapolcai and Péter Babarczi (Budapest University of Technology and Economics, Hungary); Erika R. Kovács (Eötvös University, Budapest, Hungary); Zoltán Király (Eötvös University, Hungary); Lajos Rónyai (Budapest University of Technology and Economics (BME), Hungary)

Friday, May 22

08:30 - 10:00

S-7A: Localization and Sensors
Room: B00

Scalable Sensor Localization via Ball-Decomposition Algorithm
> Yasushi Kawase (Tokyo Institute of Technology, Japan); Takanori Maehara (Shizuoka University, Japan); Ken-ichi Kawarabayashi (National Institute of Informatics, Japan)

Dynamic Active Area Clustering with Inertial Information for Fingerprinting based Indoor Localization Systems
> Fan Yang and Jia-Liang Lu (Shanghai Jiao Tong University, P.R. China); Fabrice Theoleyre (CNRS - University of Strasbourg, France); Wei Shu (The University of New Mexico, USA); Min-You Wu (Shanghai JiaoTong University, P.R. China)

Algorithms for Distributed Feature Extraction in Multi-camera Visual Sensor Networks
> Emil Eriksson (Royal Institute of Technology, Sweden); György Dán (KTH Royal Institute of Technology, Sweden); Viktoria Fodor (KTH, Sweden)

S-7B: Peer to Peer Systems
Room: C002

Decentralized credit mining in P2P systems
> Mihai Capotă and Johan Pouwelse (Delft University of Technology, The Netherlands); Dick Epema (Delft University of Technology & Eindhoven University of Technology, The Netherlands)

How Dynamic Is ISP Address Space? Towards Internet-Wide DHCP Churn Estimation
> Giovane C. M. Moura, Carlos Gañán, Qasim Lone, Payam Poursaied, Hadi Asghari and Michel van Eeten (Delft University of Technology, The Netherlands)

TopT: Supporting Flash Crowd Events in Hybrid Overlay-based Live Streaming
> Julius Rückert, Björn Richerzhagen, Eduardo Lidanski and Ralf Steinmetz (Technische Universität Darmstadt, Germany); David Hausheer (TU Darmstadt, Germany)

10:30 - 11:30

Keynote#3: Storms in Mobile Networks: Modelling, Detection and Mitigation
Room: B00

Abstract: Network attacks are designed to be simple to set up for the attacker, and ideally they exploit deficiencies in the network that is being attacked. A good example are the storm attacks against mobile networks that actually exploit the intrinsic characteristics of the network's normal operations. In this paper we will show how storm attacks can be set up, how they can be mitigated against, and how they could be considerably attenuated if we could change some of the standards used in mobile telephony.

11:30 - 12:30

S-8A: Cognitive Radio
Room: B00

Spectrum Aware Virtual Coordinates Assignment and Routing in Multihop Cognitive Radio Network

> Di Li and Zhichao Lin (RWTH-Aachen University, Germany); Mirko Stoffers (RWTH Aachen University, Germany); James Gross (Royal Institute of Technology (KTH), Sweden)

Distributed Spectrum Management in TV White Space Cognitive Radio Networks

> Jocelyne Elias (Université Paris Descartes & Sorbonne Paris Cité, France); Marwan Krunz (University of Arizona, USA)

S-8B: Traffic Analysis
Room: C002

Online Social Networks Anatomy: on the Analysis of Facebook and WhatsApp in Cellular Networks

> Pierdomenico Fiadino, Pedro Casas and Mirko Schiavone (Telecommunications Research Center Vienna (FTW), Austria); Alessandro D'Alconzo (Telecommunications Research Center Vienna (ftw.), Austria)

Impact of Provider Failures on a University's Traffic

> Rodrigo Duarte (UFJF, 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)

14:00 - 14:15

Closing Session
Room: B00