

2010 IEEE Globecom Workshops

GC'10 - Workshops: 2010 IEEE Globecom Workshops

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Technical Program

Monday, December 6

8:50 AM - 9:00 AM

Welcome/Opening address

9:00 AM - 9:00 AM

Welcome and Opening Remarks

9:00 AM - 9:30 AM

SaCoNaS Workshop Keynote: Towards Autonomic Event Computing; An Industrial Perspective

Towards Autonomic Event Computing; An Industrial Perspective
Petre Dini (Cisco Systems & Concordia University, Canada)

9:00 AM - 10:30 AM

Hot topics in ACN

Welcome from the ACN Chairs, T. Magedanz, S. Hussain

- Sajid Hussain (Fisk University, USA); Thomas Magedanz (Fraunhofer FOKUS, Germany)
Mitigating Routing Misbehavior in Multi-hop Networks Using Evolutionary Game Theory
Charles A Kamhoua (Florida International University, USA); Niki Pissinou (Florida International University, USA); Jerry Miller (Florida International University, USA)
pp. 1957-1962
- Interference Alignment in the $2 \times (1+N)$ MIMO Model
Mitsuki Yamada (Keio University, Japan); Tomoaki Ohtsuki (Keio University, Japan)
pp. 1963-1967
- Protection Switching for Carrier Ethernet Multicast
Sarah Ruepp (Technical University of Denmark, Denmark); Henrik Wessing (Technical University of Denmark, Denmark); Michael S. Berger (Technical University of Denmark, Denmark); Anna V Manolova (Danish Technical University, Denmark)
pp. 1968-1972
- Game Theoretic Analysis of Cooperation in Autonomous Multi Hop Networks The Consequences of Unequal Traffic Load
Charles A Kamhoua (Florida International University, USA); Niki Pissinou (Florida International University, USA)
pp. 1973-1978

User-provided Networking -- Paper Session

- Protecting User Privacy in WiFi Sharing Networks
Till Elsner (Heinrich Heine University Düsseldorf, Germany); Denis Lütke-Wiesmann (Heinrich Heine University Düsseldorf, Germany); Björn Scheuermann (Heinrich Heine University Düsseldorf, Germany)
pp. 1979-1983
- A Novel Cooperative Virtual-MIMO Structure Using Random Network Coding
Li Chen (Beijing University of Posts and Telecommunications, P.R. China); Lei Cao (Beijing University of Posts and Telecommunications, P.R. China); Xin Zhang (Beijing University of Posts and Telecommunications, P.R. China); Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1984-1989
- Exploiting super peers for large-scale peer-to-peer Wi-Fi roaming
Efstratios Dimopoulos (Athens University of Economics and Business, Greece); Pantelis A. Frangoudis (Athens University of Economics and Business, Greece); George C. Polyzos (Athens University of Economics and Business, Greece)
pp. 1990-1994

Plenary Talk and Panel Discussion

Broadband Single Carrier I

- Recent Advances in Gigabit Wireless Technology
Fumiyuki Adachi (Tohoku University, Japan)
- Analysis of SC-FDMA Spectral Efficiency over Rayleigh Fading Channels
Juan Jesús Sánchez-Sánchez (University of Málaga, Spain); Mari Carmen Aguayo-Torres (University of Málaga, Spain); Unai Fernández-Plazaola (University of Málaga, Spain)
pp. 1290-1295
- Unique Word Prefix in SC/FDE and OFDM: A Comparison
Mario Huemer (Klagenfurt University, Austria); Christian Hofbauer (Klagenfurt University, Austria); Johannes Huber (University of Erlangen-Nuremberg, Germany)
pp. 1296-1301

9:00 AM - 9:50 AM

Keynote

9:00 AM - 10:30 AM

Poster Session I

Cell Collaborative Zones for 4G Cellular Systems

Zander Zhongding Lei (Institute for Infocomm Research, Singapore); Francois Chin (Institute for InfoComm Research, Singapore); Tony Q. S. Quek (Institute for Infocomm Research, Singapore); Edward K. S. Au (Huawei Technologies, P.R. China)
pp. 726-730

Practical Aspects of Broadband Access for Rural Communities using a Cost and Power Efficient Multi-Hop / Relay Network

Faisal Darbari (University of Strathclyde, Glasgow, United Kingdom); Robert Stewart (University of Strathclyde, United Kingdom); Malcolm Brew (Steepest Ascent Ltd, United Kingdom); Stephan Weiss (University of Strathclyde, United Kingdom)
pp. 731-735

Joint Channel Estimation and Equalization for OFDM based Broadband Communications in Rapidly Varying Mobile Channels

Habib Senol (Kadir Has University, Turkey); Erdal Panayirci (Kadir Has University, Turkey); H. Vincent Poor (Princeton University, USA)
pp. 736-740

The Achievable Generalized Degrees of Freedom of Interference Channel with Orthogonal Relay

Song Zhao (Beijing University of Posts and Telecommunications, P.R. China); Tiankui Zhang (Beijing University of Posts and Telecommunications, P.R. China); Zhimin Zeng (Beijing University of Posts and Telecommunications, P.R. China)
pp. 741-745

An Improved MMSE-Based MIMO Detection using Low-Complexity Constellation Search

Cheng-Yu Hung (Academia Sinica, Taiwan); Wei-Ho Chung (Academia Sinica, Taiwan)
pp. 746-750

Impacts of Fast Flat Fading Channel on the Performance of a Primary-Secondary User Power Control Game for Cognitive Radios

Mahmoud A . Alayesh (University of New Mexico, USA); Nasir Ghani (University of New Mexico, USA)
pp. 751-756

Architectural Proposals 1

From Service Delivery to Application Delivery in the Telecommunication Industry

Christian Menkens (Technische Universität München, Germany)
pp. 1339-1344

Taxonomy of cloud computing services

Christina N Hoefler (University of Twente, The Netherlands); Georgios Karagiannis (University of Twente, The Netherlands)
pp. 1345-1350

Transport Service for the Future Internet: Concepts and Operations

Franco Callegati (Università di Bologna, Italy); Aldo Campi (University of Bologna, Italy); Walter Cerroni (University of Bologna, Italy)
pp. 1351-1355

9:00 AM - 9:30 AM

Keynote Talk: Prof. Jeffrey G. Andrews, The University of Texas, Austin

Understanding Femtocell-Overlaid Cellular Networks

9:00 AM - 10:30 AM

HeterWMN Mobile Networks: Session 1

- Method for Efficiently Constructing and Updating Radio Map of Fingerprint Positioning
Xingchuan Liu (Tsinghua, P.R. China); Sheng Zhang (Tsinghua university, P.R. China); Henghui Lu (Tsinghua University, P.R. China); Xiaokang Lin (Tsinghua University, P.R. China)
pp. 74-78
- Average Sum-Rate of Distributed Alamouti Space-Time Scheme in Two-Way Amplify-and-Forward Relay Networks
Trung Q. Duong (Blekinge Institute of Technology, Sweden); Chau Yuen (Singapore University of Technology and Design, Singapore); Hans-Jurgen Zepernick (Blekinge Institute of Technology, Sweden); Xianfu Lei (Southwest Jiaotong University, P.R. China)
pp. 79-83
- MIMO Two-Way Relay Channel with Superposition Coding and Imperfect Channel Estimation
Ioannis Krikidis (University of Cyprus, Cyprus); John Thompson (University of Edinburgh, United Kingdom)
pp. 84-88

HeterWMN Wireless Networks: Session 1

- A Mini-Slot-based Cooperative MAC Protocol for Wireless Mesh Networks
Hongzhi Jiao (University of Agder, Norway); Frank Y. Li (University of Agder, Norway)
pp. 89-93
- Secure Physical-layer Key Generation Protocol and Key Encoding in Wireless Communications
Apirath Limmanee (Jacobs University, Germany); Werner Henkel (Jacobs University Bremen, Germany)
pp. 94-98

HeterWMN Wireless Sensor Networks: Session 1

- A Novel Scalable Routing Scheme Based on Polychromatic Sets Theory for Wireless Sensor Networks
Shancang Li (Swansea University, United Kingdom)
pp. 99-103
- A Selection Region Based Routing Protocol for Random Mobile ad hoc Networks
Di Li (Beijing University of Posts and Telecommunication, P.R. China); Changchuan Yin (Beijing University of Posts and Telecommunications, P.R. China); Changhai Chen (Beijing University of Posts and telecommunications, P.R. China); Shuguang Cui (Texas A&M University, USA)
pp. 104-108
- A Mobility-Aware Medium Access Control Protocol for Wireless Sensor Networks
Waltenegus Dargie (Technische Universität Dresden, Germany)
pp. 109-114

9:00 AM - 9:45 AM

Keynote

- Invited Talk: Network Scalability vs. Evolving Communication Patterns
Mike P Wittie (University of California, Santa Barbara, USA)

Introduction and Key Note

- NetUASC3: An Unmanned Systems Command, Control, Communication, and Sensing Architecture
Brian Argrow (University of Colorado, USA)

9:30 AM - 10:30 AM

Performance Analysis, Modeling and Wireless Sensor Networks I

New generation of transport protocols for autonomous systems

Ernesto Exposito (LAAS-CNRS, Université de Toulouse, France); Christophe Chassot (LAAS/CNRS, France); Michel Diaz (Laas CNRS, France)
pp. 1617-1621

Data-Driven Data Transmission Mechanism for Wireless Sensor Networks in Harsh Communication Environment

Kenji Yoshigoe (University of Arkansas at Little Rock, USA)
pp. 1622-1626

9:30 AM - 10:40 AM

System Analysis of Femtocell Networks

CDMA Uplink Capacity in both Open and Closed Access Two-tier Femtocell Networks

Ping Xia (University of Texas at Austin, USA); Vikram Chandrasekhar (Texas Instruments, USA); Jeffrey Andrews (The University of Texas at Austin, USA)
pp. 648-652

Capacity Comparison for CSG and OSG OFDMA Femtocells

Ang-Hsun Tsai (National Chiao Tung University, Taiwan); Jane-Hwa Huang (National Chi Nan University, Taiwan); Li-Chun Wang (National Chiao Tung University, Taiwan); Ruey-Bing Hwang (National Chiao Tung University, Taiwan)
pp. 653-658

On Interference Analysis of Self-organized Femtocells in Indoor Deployment

Carlos H. M. de Lima (University of Oulu, Finland); Mehdi Bennis (Centre of Wireless Communications, University of Oulu, Finland); Kaveh Ghaboosi (University of Oulu, Finland); Matti Latva-aho (UoOulu, Finland)
pp. 659-663

Outage Analysis for WCDMA Femtocell with Uplink Attenuation

He Wang (Australian National University, Australia); Ming Zhao (Australian Communication and Media Authority, Australia); Mark C. Reed (National ICT Australia, ANU, Australia)
pp. 664-668

9:45 AM - 10:45 AM

Exploiting Shared Media

Overlapped NACKs: Improving Multicast Performance in Multi-access Wireless Networks

Luca Canzian (University of Padova, Italy); Andrea Zanella (University of Padova, Italy); Michele Zorzi (Università degli Studi di Padova, Italy)
pp. 1469-1474

iShare: Exploiting Opportunistic Ad hoc Connections for Improving Data Download of Cellular Users

Long Vu (University of Illinois, USA); Klara Nahrstedt (University of Illinois at Urbana-Champaign, USA); Ivica Rimac (Bell Labs, Alcatel-Lucent, USA); Volker Hilt (Bell Labs/Alcatel-Lucent, USA); Markus Hofmann (Bell Labs/Alcatel-Lucent, USA)
pp. 1475-1480

9:45 AM - 10:30 AM

Aerial Channel Analysis and Physical Data Links

Avoid communication outages in decentralized planning

Sameera Ponda (Massachusetts Institute of Technology, USA); Olivier Huber (ENS Cachan, France); Han-Lim Choi (Massachusetts Institute of Technology, USA); Jonathan How (Massachusetts Institute of Technology, USA)
pp. 1756-1759

Coverage Evaluation of Wireless Networks for Unmanned Aerial Systems

Niklas Goddemeier (TU Dortmund University, Germany); Kai Daniel (TU Dortmund University, Germany); Christian Wietfeld (TU Dortmund University, Germany)
pp. 1760-1765

9:50 AM - 10:30 AM

Session #1: Testbeds and Prototypes

The FUTON Prototype: Broadband Communication through Coordinated Multi-Point using a Novel integrated Optical/Wireless Architecture

Fabian Diehm (Technische Universität Dresden, Germany); Joerg Holfeld (Technische Universität Dresden, Germany); Gerhard Fettweis (Technische Universität Dresden, Germany); Nathan J Gomes (University of Kent, United Kingdom); David Wake (University of Kent, United Kingdom); Anthony Nkansah (University of Kent, United Kingdom); Esther Lopez (Acorde SA, Spain)
pp. 757-762

Practical Considerations for Channel Assignment in Wireless Mesh Networks

Peter Dely (Karlstad University, Sweden); Marcel Cavalcanti de Castro (Karlstad University, Sweden); Andreas J. Kessler (Karlstad University, Sweden); Arild Moldsvor (Karlstad University, Sweden); Sina Soukhakian (Karlstad University, Sweden)
pp. 763-767

11:00 AM - 12:30 PM

Performance Analysis, Modeling and Wireless Sensor Networks II

Efficient network performance assessment using Inter-Packet Arrival Times

René Serral-Gracià (Technical University of Catalunya (UPC), Spain); Eva Marin-Tordera (Technical University of Catalonia UPC, Spain); Marcelo Yannuzzi (Technical University of Catalonia (UPC), Spain); Xavier Masip-Bruin (Universitat Politècnica de Catalunya, Spain); Sergio Sánchez-López (Technical University of Catalonia, Spain)
pp. 1627-1631

Wireless communication networks and process control applications: studying the influence of MAC protocols

Hung Xuan Nguyen (Université de Toulouse, France); Guy Juanole (LAAS CNRS, France); Gerard Mouney (Université de Toulouse, France); Christophe Calmettes (Université de Toulouse, France)
pp. 1632-1637

Interference and Bandwidth Adjusted ETX in Wireless Multi-hop Networks

Nadeem Javaid (University of Paris East Créteil (UPEC), France); Ayesha Bibi (ICIT, Gomal University, Pakistan); Karim Djouani (LISSI Laboratory, Paris Est University, France)
pp. 1638-1643

Handover and Network Selection in Future Broadband Networks

A Distributed Admission Control Mechanism for Multi-Criteria QoS

Georgia Sakellari (Imperial College London, United Kingdom); Erol Gelenbe (Imperial College London, United Kingdom)
pp. 1995-1999

Policy Routing Architecture for IP Flow Mobility in 3GPP's Evolved Packet Core

Marco Liebsch (NEC Europe Ltd, Germany); Paulo Ferrer Loureiro (NEC Europe, Germany); Stefan Schmid (NEC Europe Ltd., Germany)

pp. 2000-2005

On the use of Network QoS Reputation for Vertical Handover Decision Making

Mariam Zekri (Telecom Sud Paris, France); Badii Jouaber (Institut TELECOM - Telecom SudParis, France); Djamel Zeglache (Institut TELECOM, TELECOM SudParis, France)

pp. 2006-2011

Enabling Dynamic Service Delivery in the 3GPP Evolved Packet Core

Marius Corici (Fraunhofer FOKUS, Germany); Jens Fiedler (Fokus Fraunhofer, Germany); Andreea Onofrei (Fraunhofer FOKUS Institute, Germany); Dragos Vingarzan (Fraunhofer-FOKUS Institute, Germany)

pp. 2012-2016

User-provided Networking -- Panel Discussion

Performance Modelling

A Quantitative Framework for Modeling and Analyzing Flash Memory Wear Leveling Algorithms

Mochan Shrestha (Wayne State University, USA); Lihao Xu (Wayne State University, USA)

pp. 1836-1840

Adaptive Endurance Coding for NAND Flash

Ashish Jagmohan (IBM T. J. Watson Research Center, USA); Michele M Franceschini (IBM T.J. Watson Research Center, USA); Luis A Lastras-Montaña (IBM TJ Watson Research Center, USA); John Karidis (IBM TJ Watson Research Center, USA)

pp. 1841-1845

A closed-form expression for Write Amplification in NAND Flash

Rajiv Agarwal (Stanford University, USA); Marcus Marrow (Link_A_Media Devices Corporation, USA)

pp. 1846-1850

An area and latency assessment for coding for memories with stuck cells

Luis A Lastras-Montaña (IBM TJ Watson Research Center, USA); Ashish Jagmohan (IBM T. J. Watson Research Center, USA); Michele M Franceschini (IBM T.J. Watson Research Center, USA)

pp. 1851-1855

Coding for Memories I

Error Characterization and Coding Schemes for Flash Memories

Eitan Yaakobi (University of California, San Diego, USA); Paul H. Siegel (University of California, San Diego, USA); Steven Swanson (University of California, San Diego, USA); Jack Wolf (UCSD, USA); Laura M Grupp (University of California, San Diego, USA); Jing Ma (National University of Singapore, Singapore)

pp. 1856-1860

Rewriting Codes for Flash Memories Based Upon Lattices, and an Example Using the E8 Lattice

Brian Michael Kurkoski (University of Electro-Communications, Japan)

pp. 1861-1865

Rank Modulation with Multiplicity

Anxiao Andrew Jiang (Texas A&M University, USA); Yue Wang (Texas A&M University, USA)

pp. 1866-1870

Not Just for Errors: Codes for Fast and Secure Flash Storage

Yuval Cassuto (EPFL, Switzerland)

pp. 1871-1875

Broadband Single Carrier II

Mobile radio channels' Estimation for SC-FDMA systems by means of adequate Noise and Inter-carrier Interference filtering in a transformed domain

Sothène Yameogo (SUPELEC, France); Jacques Palicot (IETR/Supélec, France); Laurent Cariou (france telecom R&D, France)

pp. 1302-1306

Slepian Based Channel Interpolation for LTE Uplink System with High Mobility

Bahattin Karakaya (University of Istanbul, Turkey); Hakan A. Cirpan (Istanbul Technical University, Turkey); Huseyin Arslan (University of South Florida, USA); Azime Can (Istanbul University, Turkey)

pp. 1307-1311

On the Group Proportional Fairness of Frequency Domain Resource Allocation in L-SC-FDMA based LTE uplink

Irfan Ahmed (Qatar University, Doha, Qatar); Amr Mohamed (Qatar University, Qatar); Ismail Shakeel (Qatar University, Qatar)

pp. 1312-1317

Session #2: Cognitive Radio, VANET and Network Coding

Efficient Spectrum Sharing with Autonomous Primary Users: Distributed Dynamic Spectrum Leasing (D-DSL)

Georges El-Howayek (University of New Mexico, USA); Sudharman K Jayaweera (University of New Mexico, USA)

pp. 768-772

A Robust Power Control Method for Cognitive Radio Networks

Naser Movahhedinia (University of Isfahan, Iran); Ali Tizghadam (University of Toronto, Canada); Alberto Leon-Garcia (University of Toronto, Canada)

pp. 773-777

A Performance Comparison of Cognitive Versus Traditional Radio Networks

Arash Azarfar (Ecole Polytechnique de Montréal, Canada); Jean-François Frigon (Ecole Polytechnique de Montreal and GERAD, Canada); Brunilde Sanso (Ecole Polytechnique de Montreal, Canada)

pp. 778-782

Performance of a Double Cluster Head Routing Scheme in a Motorway Environment

Bilal R Qazi (University of Leeds, United Kingdom); Adnan Muhtar (University of Leeds, United Kingdom); Wanod Kumar (University of Leeds, United Kingdom); Jaafar Elmighani (University of Leeds, United Kingdom)

pp. 783-787

Efficient Resource Minimization Scheme for Network Coding-Assisted Multicast System

SeyedAmin Hejazi (Simon Fraser University, Canada); Muhammad Naeem (Simon Fraser University, Canada); Daniel Lee (Simon Fraser University, Canada)

pp. 788-792

Socially-Aware P2P Systems

SARACEN: A platform for adaptive, socially aware multimedia distribution over P2P networks

Rui Santos Cruz (Instituto Superior Técnico - Universidade Técnica de Lisboa, Portugal); Mario S Nunes (INESC, Portugal); Charalampos Patrikakis (National Technical University of Athens, Greece); Nikolaos Papaoulakis (National Technical University of Athens, Greece)

pp. 1356-1360

An apparatus for P2P classification in Netflow traces

Andrew Gossett (North Carolina State University, USA); Ioannis Papapanagiotou (North Carolina State University, USA); Michael Devetsikiotis (North Carolina State University, USA)

pp. 1361-1366

CAP: Capability-Aware one-hop DHT lookup algorithm for P2P overlay

Lei Qu (Beijing University of Posts and Telecommunications, P.R. China); Kai Shuang (Beijing University of Posts and Telecommunications, P.R. China); Sen Su (Beijing University of Posts & Telecommunications (BUPT), P.R. China); FangChun Yang (Beijing University of Posts & Telecommunications, P.R. China)

pp. 1367-1371

11:00 AM - 11:30 AM

Keynote Talk: Prof. Giuseppe Caire, University of Southern California, USA

Cognitive Femtocells for 4G Cellular Networks

11:00 AM - 12:30 PM

HeterWMN Mobile Networks: Session 2

Cooperative diversity with OSTBC transmission and adaptive-gain amplify-and-forward MIMO relaying
Lei Cao (Beijing University of Posts and Telecommunications, P.R. China); Li Chen (Beijing University of Posts and Telecommunications, P.R. China); Xin Zhang (Beijing University of Posts and Telecommunications, P.R. China); Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 115-119

Interference Alignment Through User Cooperation for Two-cell MIMO Interfering Broadcast Channels
Wonjae Shin (Samsung Advanced Institute of Technology (SAIT), Korea); Namyoon Lee (Samsung Advanced Institute of Technology, Korea); Jong Bu Lim (Samsung Electronics Co., Ltd., Korea); Changyong Shin (Samsung Advanced Institute of Technology, Korea); Kyunghun Jang (Samsung Advanced Institute of Technology, Korea)
pp. 120-125

Design and Analysis of Compress-and-Forward Cooperation in a Virtual-MIMO Detection System
Jing Jiang (University of Edinburgh, United Kingdom); John Thompson (University of Edinburgh, United Kingdom); Peter Grant (Edinburgh School of Engineering and Electronics, United Kingdom)
pp. 126-130

HeterWMN Wireless Networks: Session 2

Range-based Localization in Wireless Networks using Decision Trees
T. Aaron Gulliver (University of Victoria, Canada); Khalid Almuzaini (University of Victoria, Canada)
pp. 131-135

Service Discovery for Delay Tolerant Networks
Zijian Wang (Rensselaer Polytechnic Institute, USA); Eyuphan Bulut (Rensselaer Polytechnic Institute, USA); Boleslaw K Szymanski (Rensselaer Polytechnic Institute, USA)
pp. 136-141

Managing QoS in Mixed Wireless Networks using the Power Performance Measure
Yacob Astatke (Morgan State University, USA); Dean Richard (Morgan State University, USA)
pp. 142-147

HeterWMN Wireless Sensor Networks: Session 2

Mobility in a Description based Clustered Ad Hoc Network
Tharinda Nishantha Vidanagama (Waseda University, Japan); Hidenori Nakazato (Waseda University, Japan)
pp. 148-152

Building a Trust-Aware Dynamic Routing Solution for Wireless Sensor Networks
Guang Jin (Intelligent Automation Inc, USA); Hongmei Deng (Intelligent Automation Inc., USA); Roger Xu (Intelligent Automation Inc., USA); Weisong Shi (Wayne State University, USA)
pp. 153-157

Analysis on Capacity and Delay for Redundant Multiple Source Routing in Mobile Ad Hoc Networks
Zhuxiu Yuan (Dalian University of Technology, P.R. China); Lei Wang (Dalian University of Technology, P.R. China); Cheng Meng (Dalian University of Technology, P.R. China); Chunlei Liu (Dalian University of Technology, P.R. China); Trung Q. Duong (Blekinge Institute of Technology,

Sweden); Lei Shu (Osaka University, Japan)
pp. 158-163

Wireless Sensor Network Interconnection Protocol

Kurt Smolderen (University of Antwerp, Belgium); Peter De Cleyn (University of Antwerp, Belgium);
Chris Blondia (University of Antwerp, Belgium)
pp. 164-168

Multihop Wireless & Security

Integrating Network Coding and Superposition Coding in Extended Two-way Relay Networks

Li Chen (Beijing University of Posts and Telecommunications, P.R. China); Lei Cao (Beijing University
of Posts and Telecommunications, P.R. China); Xin Zhang (Beijing University of Posts and
Telecommunications, P.R. China); Dacheng Yang (Beijing University of Posts and Telecommunications,
P.R. China)
pp. 1481-1486

QoS Multicast Routing and Transmission Scheduling in Multi-hop Cognitive Radio Networks

Liming Xie (City University of Hong Kong, P.R. China); Xiaohua Jia (City University of Hong Kong,
Hong Kong)
pp. 1487-1491

Efficient Key Management Model and Scheme for Content Access Control in Hierarchies

Hani Ragab-Hassen (University of Kent, United Kingdom)
pp. 1492-1496

Connectivity and Coverage Optimization for UAVs

Dynamic UAV Relay Positioning for the Ground-to-Air Uplink

Feng Jiang (University of California, Irvine, USA); Lee Swindlehurst (University of California at Irvine,
USA)
pp. 1766-1770

Maintaining Connectivity in UAV Swarm Sensing

Luke Teacy (University of Ulster, United Kingdom); Jing Nie (University of Ulster, United Kingdom);
Sally I McClean (University of Ulster, Coleraine, United Kingdom); Gerard P. Parr (University of Ulster,
United Kingdom)
pp. 1771-1776

A Discrete Stochastic Process for Coverage Analysis of Autonomous UAV Networks

Evsen Yanmaz (University of Klagenfurt, Austria); Carmelo Costanzo (University of Calabria, Italy);
Christian Bettstetter (University of Klagenfurt, Austria); Wilfried Elmenreich (University of Klagenfurt,
Austria)
pp. 1777-1782

Link Quality Dependent Mobility Strategies for Distributed Aerial Sensor Networks

Sebastian Rohde (TU Dortmund University, Germany); Niklas Goddemeier (TU Dortmund University,
Germany); Kai Daniel (TU Dortmund University, Germany); Christian Wietfeld (TU Dortmund
University, Germany)
pp. 1783-1787

Connectivity of Aeronautical Ad hoc Networks

Hua Li (Shanghai Jiao Tong University, P.R. China); Bo Yang (Shanghai Jiao Tong University, P.R.
China); Cailian Chen (Shanghai Jiao Tong University, P.R. China); Xinping Guan (Shanghai Jiao Tong
University, P.R. China)
pp. 1788-1792

11:30 AM - 12:40 PM

System Design of Femtocell Networks

Imbalance Issues in Heterogeneous DO Networks

Kambiz Azarian (Qualcomm Inc., USA); Christopher Lott (Qualcomm, Inc., USA); Donna Ghosh (Qualcomm Corp R&D, USA); Rashid Attar (QUALCOMM Inc., USA)
pp. 669-673

Self-Organization for LTE Enterprise Femtocells

Guillaume de la Roche (University of Bedfordshire, United Kingdom); Ákos Ladányi (Budapest University of Technology and Economics, Hungary); David López-Pérez (King's College London, United Kingdom); Chia-Chin Chong (DOCOMO USA Labs, USA); Jie Zhang (University of Bedfordshire, United Kingdom)
pp. 674-678

Hybrid User Access Control in HSDPA Femtocells

Yang-Yang Li (University of Toronto, Canada); Leon Chung-Dai Yen (University of Toronto, Canada); Elvino Silveira Sousa (University of Toronto, Canada)
pp. 679-683

A Non-Cooperative Method for Path Loss Estimation in Femtocell Networks

Qinliang Su (Zhejiang University, P.R. China); Aiping Huang (Zhejiang University, P.R. China); Zhaoyang Zhang (Zhejiang University, P.R. China); Kai Xu (China Broadband Communication Research Lab, Applied Research Center, Motorola, P.R. China); Jin Yang (China Broadband Communication Research Lab, Applied Research Center, Motorola, P.R. China)
pp. 684-689

1:50 PM - 2:20 PM

Keynote Talk: Prof. Merouane Debbah, Supelec, France

Flexible Small Cell Green Networks: Breaking the Spectral Efficiency Barrier

2:00 PM - 3:30 PM

Protocol, Architecture and Ubiquitous Computing I

An Autonomic Virtualized Architecture for Clouds and Sky

Guy Pujolle (University of Paris 6, France)
pp. 1644-1647

QoS BeeManet: a new QoS multipath routing protocol for mobile ad-hoc networks

Salim Bitam (Mohamed Khider University of Biskra, Algeria); Batouche Mohamed (King Saud University, Saudi Arabia); Abdelhamid Mellouk (UPEC, University Paris-Est Creteil Val de Marne, France)
pp. 1648-1652

Autonomous discovery, localization and recognition of smart objects through WSN and image features

Emanuele Menegatti (University of Padua, Italy); Matteo Danieletto (University of Padova, Italy); Marco Mina (University of Padova, Italy); Alberto Pretto (University of Padua, Italy); Stefano Zanconato (University of Padova, Italy); Pietro Zanuttigh (University of Padua, Italy); Andrea Zanella (University of Padova, Italy)
pp. 1653-1657

Content and Service Delivery above LTE/EPC

IMS Service Plane Enabled Heterogeneous Networks for Multimedia Applications

Luying Zhou (Institute for Infocomm Research, Singapore); Lek Heng Ngoh (Institute for Infocomm Research, Singapore); Xu Shao (Institute for Infocomm Research, Singapore); Teck Yoong Chai (Institute for Infocomm Research, Singapore); Teck Kiong Lee (Institute for Infocomm Research, Singapore); Joseph Chee Ming Teo (Institute for InfoComm Research, Singapore)
pp. 2017-2021

Personalization Enablers by Telecom Operators

Miklós Bódi (Nokia Siemens Networks, Hungary); Jean-Pierre le Rouzic (Orange labs, France); Vincent Hiribarren (Bell Labs, France); Menuka Jain (France Telecom, United Kingdom); Jon Maurologoitia (CBT Communication Engineering, Spain)

pp. 2022-2027

Interconnected Content Distribution in LTE Networks

Christian Schwartz (University of Wuerzburg, Germany); Jochen Eisl (Nokia Siemens Networks, Germany); Artan Halimi (A1 Telekom Austria, Austria); Albert Rafetseder (University of Vienna, Austria); Kurt Tutschku (University of Vienna, Austria)

pp. 2028-2033

A Feasibility Study on Physical Implementation of Global Wireless Communication Services Recognition System

Hendra Setiawan (Kyushu Institute of Technology, Japan); Masayuki Kurosaki (Kyusyu Institute of Technology, Japan); Hiroshi Ochi (Kyushu Institute of Technology, Japan)

pp. 2034-2038

Tele-health Services and Applications

Remote medical treatment at home using the Java Mobile Sensor API

Michael Maaser (IHP microelectronics, Germany); Steffen Ortmann (IHP microelectronics, Germany)

pp. 2039-2043

Compact Representation of Coordinated Sampling Policies for Body Sensor Networks

Shuping Liu (University of Southern California, USA); Anand Panangadan (Childrens Hospital Los Angeles, USA); Ashit Talukder (Jet Propulsion Laboratory, NASA, Pasadena, California, USA); Cauligi Raghavendra (University of Southern California, USA)

pp. 2044-2048

On the Detection of Elderly Equilibrium Degradation Using Multivariate-EMD

Abdelkader Miraoui (University of Technologie of Troyes, France); Nourddine Azzaoui (Université Blaise Pascal, France); Hichem Snoussi (University of Technologie of Troyes, France); Jacques Duchêne (Université de Technologie de Troyes, France)

pp. 2049-2053

Fall Detection by using K-Nearest Neighbor algorithm on WSN Data

Senol Zafer Erdogan (Maltepe University, Turkey); Turgay Bilgin (Maltepe University, Turkey); Juphil Cho (Kunsan National University, Korea)

pp. 2054-2058

Modelling for Storage Media

Challenges and opportunities for information theory-based design of Phase Change Memories

Andrea Marinoni (University of Pavia, Italy); Alessandro Cabrini (University of Pavia, Italy); Eugenio Costamagna (University of Pavia, Italy); Guido Torelli (University of Pavia, Italy); Paolo Gamba (Università degli Studi di Pavia, Italy)

pp. 1876-1880

Exploration on Sub-nanosecond Spin Torque Random Access Memory

Xiaobin Wang (Seagate Technology, USA)

pp. 1881-1885

Understanding of switching phenomena in unipolar NiO-based RRAM

Hyung Dong Lee (Stanford University, USA); Yoshio Nishi (Stanford University, USA)

pp. 1886-1889

The inner workings of phase change memory: lessons from prototype PCM devices

Geoffrey W Burr (IBM Almaden Research Center, USA); Alvaro Padilla (IBM Almaden Research Center, USA); Michele M Franceschini (IBM T.J. Watson Research Center, USA); Bryan Jackson (IBM Almaden Research Center, USA); Diego Dupouy (IBM Almaden Research Center, USA); Charles T. Rettner (IBM Almaden Research Center, USA); Kailash Gopalakrishnan (IBM Almaden Research Center, USA); Rohit Shenoy (IBM Almaden Research Center, USA); John Karidis (IBM TJ Watson Research Center, USA)

pp. 1890-1894

Coding for Memories II

A Multibit-Per-Cell Memory Model and Nonbinary LDPC Codes

Seungjune Jeon (Carnegie Mellon University, USA); Euseok Hwang (Carnegie Mellon University, USA); B. V. K. Vijaya Kumar (Carnegie Mellon University, USA); Michael K. Cheng (Jet Propulsion Laboratory, USA)

pp. 1895-1899

Agile Encoder Architectures for Strength-Adaptive Long BCH Codes

Raghunath Cherukuri (CodePhy Inc., USA)

pp. 1900-1904

Rebuilding for Array Codes in Distributed Storage Systems

Zhiying Wang (California Institute of Technology, USA); Alex Dimakis (University of Southern California, USA); Jehoshua Bruck (California Institute of Technology, USA)

pp. 1905-1909

Modeling, Detection, and LDPC Codes for Bit-Patterned Media Recording

Kui Cai (Data Storage Institute, Singapore); Zhiliang Qin (Data Storage Institute, Singapore); Songhua Zhang (Data Storage Institute, Singapore); Yibin Ng (Data Storage Institute, Singapore); Rathnakumar Radhakrishnan (Data Storage Institute, Singapore)

pp. 1910-1914

Broadband Single Carrier III

Effectiveness of peak power reduction schemes for OFDM and single-carrier systems

Hideki Ochiai (Yokohama National University, Japan)

Chained Turbo Equalization for SC-FDMA Systems without Cyclic Prefix

Zhou Hui (Japan Advanced Institute of Science and Technology, Japan); Khoirul Anwar (Japan Advanced Institute of Science and Technology, Japan); Tad Matsumoto (Japan Advanced Institute of Science and Technology, Japan)

pp. 1318-1322

On the Design of Iterative FDE Receivers for OQAM Modulations

Miguel Luzio (Instituto de Telecomunicações/UNINOVA/FCT-UNL, Portugal); Rui Dinis (Instituto de Telecomunicações/UNINOVA/FCT-UNL, Portugal); Paulo Montezuma (FCT-UNL, Portugal)

pp. 1323-1327

Session #3: RRM and MIMO

On Opportunistic Power Control for MIMO-OFDM Systems

Gabor Fodor (Ericsson Research, Sweden); Norbert Reider (Budapest University of Technology and Economics, Hungary)

pp. 793-798

Active-Mode Power Optimization in OFDMA-Based Wireless Networks

Sergey Andreev (Tampere University of Technology, Finland); Yevgeni Koucheryavy (Tampere University of Technology, Finland); Nageen Himayat (Intel Corporation, USA); Pavel Gonchukov (St. Petersburg State University of Aerospace Instrumentation, Russia); Andrey Turlikov (Saint-Petersburg State University of Aerospace Instrumentation, Russia)

pp. 799-803

CSI Feedback for Closed-Loop MIMO-OFDM Systems based on B-splines

Ren-Shian Chen (National Cheng-Kung University, Taiwan)

pp. 804-808

System Level Evaluation of TDD based LTE-Advanced MIMO-OFDMA Systems

Harri Pennanen (University of Oulu, Finland); Tuomas Haataja (University of Oulu, Finland); Jouko Tapio Leinonen (University of Oulu, Centre for Wireless Communications (CWC), Finland); Antti Tölli (University of Oulu, Finland); Matti Latva-aho (UoOulu, Finland)

pp. 809-813

Sum-Rate Maximization for Multiple Users in Partial Frequency Reuse Cellular Networks

Bujar Krasniqi (Vienna University of Technology, Austria); Martin Wolkerstorfer (Telecommunications

Research Center Vienna (FTW), Austria); Christian Mehlführer (Vienna University of Technology, Austria); Christoph F Mecklenbräuker (Vienna University of Technology, Austria)
pp. 814-818

Poster Session II

A REM Enabled Soft Frequency Reuse Scheme

Sébastien Grimoud (France Telecom R&D, France); Berna Sayrac (Orange Labs, France); Sana Ben Jemaa (France Telecom Research and Development Division, France); Eric Moulines (Telecom ParisTech, France)
pp. 819-823

Novel Power and Time Allocation Algorithm for a Dynamic TDMA Slot Assignment Multiuser Transmission Schemes

Abbes Yosra (Supcom, Tunisia); Fatma Abdelkefi (Ecole Supérieure des Communications de Tunis, Tunisia); Hichem Besbes (Ecole Supérieure de Communications de Tunis, Sup'Com TUNISIA, Tunisia)
pp. 824-828

Joint Admission Control and Resource Allocation with GoS and QoS in LTE Uplink

Oscar Delgado (Concordia University, Canada); Brigitte Jaumard (Concordia University, Canada)
pp. 829-833

Assessment of the benefits of introducing a HSDPA carrier at 900MHz

Antolin Moral (Universidad Politecnica de Madrid, Spain); Arturo Vergara (Universidad Politecnica de Madrid, Spain); Jorge Pérez (Universidad Politecnica de Madrid, Spain); Catalina Ovando (Universidad Politecnica de Madrid, Spain)
pp. 834-838

Generalised Spatial Modulation with Multiple Active Transmit Antennas

Jinlin Fu (Tianjin University, P.R. China); Chunping Hou (Tianjin University, P.R. China); Wei Xiang (University of Southern Queensland, Australia); Yonghong Hou (Tianjin University, P.R. China)
pp. 839-844

Architectural Proposals 2

XMPP based Context Management Architecture

Diogo Gomes (Universidade de Aveiro, Portugal); João Gonçalves (PT Inovação, Portugal); Ricardo Santos (Portugal Telecom Inovação, Portugal); Rui L Aguiar (University of Aveiro, Portugal)
pp. 1372-1377

Enhanced Service Provisioning in Wireless Multi-hop Networks via Socially-driven Inverse Topology Control

Eleni G Stai (National Technical University of Athens / Institute of Com. and Computer Syst., Greece); Vasileios A Karyotis (National Technical University of Athens, Greece); Symeon Papavassiliou (Institute of Comm. and Comp. Systems/National Technical University of Athens, Greece)
pp. 1378-1382

HeterWMN Mobile Networks: Session 3

Joint control of bandwidth and playout-delay for streaming traffic over faded links

Tatiana Patriarca (University of Rome, Sapienza, Italy); Enzo Baccarelli (University of Rome "La Sapienza", Italy); Nicola Cordeschi ("Sapienza" University of Rome, Italy)
pp. 169-174

Unified Analysis of Ergodic Capacity of Cooperative Non-Regenerative Relaying with Adaptive Source Transmission Policies

Annamalai Annamalai (Prairie View A&M University, USA)
pp. 175-180

On the Connection Availability between Relay Nodes in a VANET

André Cardote (Carnegie Mellon University / University of Aveiro, Portugal); Susana Isabel Barreto de Miranda Sargento (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Peter Steenkiste (Carnegie Mellon University, USA)

pp. 181-185

Communication Theoretic Analysis of Underwater Ad-Hoc Networks in the Presence of Interference
Andrej Stefanov (Northeastern University, USA); Milica Stojanovic (Northeastern University, USA)
pp. 186-190

HeterWMN Wireless Networks: Session 3

Performance Analysis of Cooperative Handover in Heterogeneous Wireless Networks
Zhiwei Gao (Tongji University, P.R. China); Yusheng Ji (National Institute of Informatics, Japan)
pp. 191-195

Multi-Channel Anycast Routing in Wireless Mesh Networks
Andreas Lavén (Karlstad University, Sweden); Andreas J. Kassler (Karlstad University, Sweden)
pp. 196-201

Group-based Secure Source Authentication Protocol for VANETs
You Lu (Beijing University of Posts and Telecommunications, P.R. China); Biao Zhou (UCLA, USA); Fei Jia (University of California, Los Angeles, USA); Mario Gerla (University of California at Los Angeles, USA)
pp. 202-206

HeterWMN Wireless Sensor Networks: Session 3

A Clustering/Multi-hop Hybrid Routing Method for Wireless Sensor Networks with Heterogeneous Node Types
Sampath Priyankara (University of Osaka, Japan); Kazuhiko Kinoshita (Osaka University, Japan); Hideki Tode (Osaka Prefecture University, Japan); Koso Murakami (Osaka University, Japan)
pp. 207-212

Effects of Sampling Rate on Collision Probability in Hybrid MAC Protocols in WSN
Waltenegus Dargie (Technische Universität Dresden, Germany); Qian Dong (Technical University of Dresden, Germany); Alexander Schill (Technische Universität Dresden, Germany)
pp. 213-218

Storage-aided Reliable Sensing for Dynamic Heterogeneous Sensor Networks; a Graph-Theoretic Analysis
Amar H Kabashi (University of Leeds, United Kingdom); Jaafar Elmirghani (University of Leeds, United Kingdom)
pp. 219-224

A Refinement Scheme for Location Estimation Process in Indoor Wireless Sensor Networks
Oleksandr Artemenko (University of applied sciences Erfurt, Germany); Gunar Schorcht (Erfurt University of Applied Sciences, Germany); Mikhail Tarasov (Ilmenau University of Technology, Germany)
pp. 225-229

Internet Routing

Managing multicast tree reachability with PIM
Benoit Hilt (University of Haute Alsace, France); Jean-Jacques Pansiot (LSIIT - University of Strasbourg, France)
pp. 1497-1502

UAV Based Mesh and Sensor Networks for Cooperative UAVs

Model-free Trajectory Optimization for Wireless Data Ferries among Multiple Sources
Benjamin Pearre (University of Colorado, Boulder, USA); Timothy Brown (University of Colorado, USA)
pp. 1793-1798

Measuring Diversity on a Low-Altitude UAV in a Ground-to-Air Wireless 802.11 Mesh Network
Ht Kung (Harvard University, USA); Chit-Kwan Lin (Harvard University, USA); Tsung-Han Lin (Harvard University, USA); Steve Tarsa (Harvard University, USA); Dario Vlah (Harvard University, USA)

pp. 1799-1804

Multi-Source Cooperative Communications Using Multiple Small Relay UAVs
Xin Li (Villanova University, USA); Yimin Zhang (Villanova University, USA)

pp. 1805-1810

Performance Analysis of Multi-Carrier Relay-Based UAV Network Over Fading Channels
Ibrahim Y Abualhaol (Khalifa University of Science, Technology, and Research, UAE); Mustafa
Muhammad Matalgah (University of Mississippi, USA)

pp. 1811-1815

2:20 PM - 3:30 PM

Interference Management for Femtocell Networks

System Level Performance Evaluation of Inter-cell Interference Coordination Schemes for Heterogeneous Networks in LTE-A System

Young-Jun Hong (Samsung Electronics Co., Ltd., Korea); Namyoon Lee (Samsung Advanced Institute of Technology, Korea); Bruno Clerckx (Samsung Advanced Institute of Technology, Korea)

pp. 690-694

Femto-Macro Cellular Interference Control with Subband Scheduling and Interference Cancellation
Sundeeep Rangan (Polytechnic University of New York University, USA)

pp. 695-700

Power Control Based Interference Mitigation in Multi-tier Network

Shu-ping Yeh (Intel Corporation, USA); Shilpa Talwar (Intel, USA); Nageen Himayat (Intel Corporation, USA); Kerstin Johnsson (Intel, USA)

pp. 701-705

A Q-learning Based Approach to Interference Avoidance in Self-Organized Femtocell Networks

Mehdi Bennis (Centre of Wireless Communications, University of Oulu, Finland); Dusit Niyato (Nanyang Technological University, Singapore)

pp. 706-710

3:50 PM - 4:45 PM

Advanced Techniques for Femtocell Networks

Interference Cancellation Schemes for Uplink Transmission in Femtocells

Chan Dai Truyen Thai (Aalborg University, Denmark); Petar Popovski (Aalborg University, Denmark)

pp. 711-715

LTE Femtocell System Through Amplify-and-Forward Over Cable Links

Jonathan Gambini (Politecnico di Milano, Italy); Umberto Spagnolini (Politecnico di Milano, Italy)

pp. 716-720

Interference Mitigation in Cognitive Femtocells

Gustavo W. O. Costa (Aalborg University, Denmark); Andrea F. Cattoni (Aalborg University, Denmark); Víctor Roig (Universitat Politecnica de Catalunya, Spain); Preben Mogensen (Nokia Siemens Networks, Aalborg, Denmark)

pp. 721-725

4:00 PM - 5:30 PM

Protocol, Architecture and Ubiquitous Computing II

Adaptive Sensing Cycle for Multichannel Cognitive Radio Networks Based on Packet Statistics

Yalin Zhang (Shenzhen Graduate School, Harbin Institute of Technology, Canada); Elvino Silveira Sousa (University of Toronto, Canada); Liang Song (University of Toronto, Canada); Qinyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, P.R. China); Dimitrios Hatzinakos

(University of Toronto, Canada)

pp. 1658-1662

Fault Repair Algorithm using Localization and Controlled mobility in WSN

Kapu Venkat Sayeesh (National Institute of Technology, Warangal, India); K. Vinod Kumar (National Institute of Technology, Warangal, India); G Lakshmi Phani (National Institute of Technology, Warangal, India); Sandhya Thaskani (IIIT-Hyderabad, India); Rama Garimella (IIIT Hyderabad, India)
pp. 1663-1667

MDP and Learning Based Approach for Ubiquitous Services Composition

Ali Yachir (Paris-Est University (France), EMP School and USTHB University (Algeria), Algeria); Karim Tari (LISSI Lab, University of Paris-Est Creteil Val de Marne (UPEC), France); Yacine Amirat (University Paris XII, France); Abdelghani Chibani (LISSI Lab., France); Nadjib Badache (University of Sciences and Technology Houari Boumediene (USTHB), Algeria)
pp. 1668-1673

FUSECO Panel: Challenges and Opportunities for emerging Seamless Communication Infrastructures

3GPP Packet Core Evolution Prospects under mature 3GPP EPC Standard Environment

Wolfgang Hahn (Nokia Siemens Networks, Germany)

Mass Broadband Communication impact on the Core Network Evolution

Marius Corici (Fraunhofer FOKUS, Germany)

A Novel Architecture for Internet Traffic Offload

Parviz Yegani (Director & Head of SP Architecture and Technology Standards, Juniper Networks, USA)

Enabling customized services in 4G networks through virtualization

Sampath Rangarajan (NEC Labs America, USA)

Algorithms and Techniques for Mobile and Wireless Networks

Unpredictable Software-based Attestation Solution for Node Compromise Detection in Mobile WSN

Xinyu Jin (Florida International University, USA); Pasd Putthapipat (Florida International University, USA); Deng Pan (Florida International University, USA); Niki Pissinou (Florida International University, USA)

pp. 2059-2064

TCP-FIT - A Novel TCP Congestion Control Algorithm for Wireless Networks

Wang Jingyuan (Tsinghua University, P.R. China); Jiangtao Wen (Tsinghua University, P.R. China); Jun Zhang (Tsinghua University, P.R. China); Yuxing Han (UCLA, USA)

pp. 2065-2069

Network Traffic Anomaly Detection based on Catastrophe Theory

Wei Xiong (Huazhong University of Science & Technology, P.R. China); Xiong Naixue (Georgia State University, US, USA); Laurence T. Yang (St. Francis Xavier University, Canada); Athanasios Vasilakos (University of Western Macedonia, Greece); Qian Wang (Zhongnan University of Economic & Law, P.R. China); Hanpin Hu (Huazhong of University, P.R. China)

pp. 2070-2074

A Novel Advanced Identity Management Scheme for Seamless Handoff in 4G Wireless Networks

Mohamed Hamdi (Carthage University, Tunisia); Nouredine A. Boudriga (University of Carthage, Tunisia); Manel Abdelkader (University of Carthage, Tunisia)

pp. 2075-2080

Web-Based Wireless Sensor Network Testbed For Industrial Applications

Sajid Hussain (Fisk University, USA)

Device Technologies

Techniques for Embracing Intra-Cell Unbalanced Bit Error Characteristics in MLC NAND Flash Memory

Guiqiang Dong (Rensselaer Polytechnic Institute, USA); Ningde Xie (Intel Inc., USA); Tong Zhang (Rensselaer Polytechnic Institute, USA)

- pp. 1915-1920
The Role of Non-Volatile Memory from an Application Perspective
Brett Kettering (DoD, USA); James Nunez (Los Alamos National Lab, USA)
- pp. 1921-1925
Predicting Disk I/O Time of HPC Applications on Flash Drives
Mitesh R Meswani (San Diego Supercomputer Center, USA); Pietro Cicotti (UC San Diego, USA); Jiahua He (University of California, San Diego, USA); Allan Snively (University of California, San Diego, USA)
- pp. 1926-1929
Beyond the Datasheet: Using Test Beds to Probe Non-Volatile Memories' Dark Secrets
Laura M Grupp (University of California, San Diego, USA); Adrian M. Caulfield (UCSD, USA); Joel Coburn (UCSD, USA); John Davis (Microsoft Research, USA); Steven Swanson (University of California, San Diego, USA)
- pp. 1930-1935

Robust Memory Design

- Towards Longer Lifetime of Emerging Memory Technologies Using Number Theory
Lara Dolecek (UCLA, USA)
pp. 1936-1940
- Scrubbing with Partial Side Information for Radiation-Tolerant Memory
Euseok Hwang (Carnegie Mellon University, USA); Seungjune Jeon (Carnegie Mellon University, USA); Rohit Negi (Carnegie Mellon University, USA); B. V. K. Vijaya Kumar (Carnegie Mellon University, USA); Michael K. Cheng (Jet Propulsion Laboratory, USA)
pp. 1941-1945
- FFT Processing Through Faulty Memories in OFDM based Systems
Muhammad S Khairy (University of California, Irvine, USA); Amin Khajeh (University of California, Irvine, USA); Ahmed Eltawil (University of California, Irvine, USA); Fadi J Kurdahi (University of California, Irvine, USA)
pp. 1946-1951
- Peer-to-peer Technologies Applied to Data Warehouses
Simone Cirani (University of Parma, Italy); Lorenzo Melegari (University of Parma, Italy); Luca Veltri (University of Parma, Italy)
pp. 1952-1956

Broadband Single Carrier IV

- Frequency domain equalization and multiple access: The second childhood of single carrier modulation
Stefano Tomasin (University of Padova, Italy)
- Low Complexity Turbo Equalization for Mobile OFDM Systems with Application to DVB-H
Devan Namboodir (Rutgers, USA); Hong Liu (Broadcom Corporation, USA); Predrag Spasojevic (Rutgers University, USA)
pp. 1328-1333
- A Comparative Study of Frequency Domain HARQ Chase Combining Schemes for Broadband Single Carrier MIMO CDMA Communication
Houda Chafnaji (INPT Rabat/Telecom Bretagne, Morocco); Tarik Ait-Idir (INPT, Morocco); Samir Saoudi (Telecom-Bretagne, France)
pp. 1334-1338

Session #4: Coding for MIMO Systems

- Performance Enhancement in Limited Feedback Precoded Spatial Multiplexing MIMO-OFDM Systems by Using Multi-Block Channel Prediction
Shichuan Ma (University of Nebraska-Lincoln, USA); Deborah Duran-Herrmann (University of Nebraska-Lincoln, USA); Yaoqing (Lamar) Yang (University of Nebraska-Lincoln, USA); Hamid Sharif (University of Nebraska-Lincoln, USA)

pp. 845-849

Coordinated Multi-Point Transmission with Limited Feedback

Jing Jin (Beijing University of Posts and Telecommunications, P.R. China); Qixing Wang (China Mobile Research Institute (CMRI), P.R. China); Chongsheng Lin (Wireless Research Center, Beijing University of Posts and Telecommunications, P.R. China); Hongwen Yang (Beijing University of Posts and Telecommunications, P.R. China); Yafeng Wang (Beijing University of Posts and Telecommunications, P.R. China)

pp. 850-854

Adaptive Decoding for Space Time Codes with Imperfect Channel Estimation, Using the Bootstrap Algorithm

Amir Laufer (New Jersey Institute of Technology, USA); Yeheskel Bar-Ness (New Jersey Institute of Technology, USA)

pp. 855-859

Uplink Cooperation in Wireless Networks With NICE Processing

Mehmet Kemal Karakayali (Bell Labs, Alcatel-Lucent, USA); Krishna Balachandran (Bell Labs, Alcatel-Lucent, USA); Joseph H. Kang (Bell Labs, Alcatel-Lucent, USA); Kiran M Rege (Bell Laboratories, Alcatel-Lucent, USA)

pp. 860-865

QRD-Based MU-MIMO Transmission Scheme Towards Evolved LTE TDD System

Xiaolin Hou (DOCOMO Beijing Communications Laboratories Co., Ltd, P.R. China); Zhan Zhang (DoCoMo Beijing Labs., P.R. China); Hidetoshi Kayama (Ntt Docomo, Inc., Japan)

pp. 866-870

Designs of precoding for LTE TDD using cell specific reference signals

Fan Sun (Aalborg University, Denmark); Lu Lu (Royal Institute of Technology, Sweden); Troels B. Sørensen (Aalborg University, Denmark)

pp. 871-875

Performance of Service-Oriented Systems

Performance Modeling of Virtual Collaborative Environments

Nilesh Gavaskar (North Carolina State University, USA); Michael Kallitsis (North Carolina State University, USA); George Michailidis (University of Michigan, USA); Michael Devetsikiotis (North Carolina State University, USA); Mitzi Montoya (North Carolina State University, USA)

pp. 1383-1387

HeterWMN Panel Discussion

4:00 PM - 6:00 PM

P2P, Anycast, and New Distribution Models

On Shared Medium Capacity Awareness in Heterogeneous Application-Layer Multicast

Christian Hübsch (Karlsruhe Institute of Technology (KIT), Germany); Oliver P. Waldhorst (Karlsruhe Institute of Technology (KIT), Germany)

pp. 1503-1507

P2P Multicasting Network Design Problem - Heuristic Approach

Krzysztof Walkowiak (Wroclaw University of Technology, Poland)

pp. 1508-1512

Anycast-based Context-Aware Server Selection Strategy for VoD Services

Soraya Ait Chellouche (University of Bordeaux, France); Daniel Negru (University of Bordeaux, France); Eugen Borcoci (University POLITEHNICA of Bucharest (CCSRST), Romania); Eric LeBars (Thomson Grass Valley, France)

pp. 1513-1517

Analyzing Implicit Group Messaging: a novel messaging paradigm for group-oriented content distribution

Neil Cowzer (University College Dublin, Ireland); Paddy Nixon (University College Dublin (UCD), Ireland)

pp. 1518-1522

4:00 PM - 5:30 PM

System Design Aspects and Protocols for UAV-Based Sensor Networks

Moving Ground Target Tracking in Urban Terrain Using Air/Ground Vehicles

Mark Owen (Brigham Young University, USA); Huili Yu (Brigham Young University, USA); Tim McLain (Brigham Young University, USA); Randy Beard (Brigham Young University, USA)

pp. 1816-1820

UAV-Based Passive Geolocation Based on Channel Estimation

Qilian Liang (University of Texas at Arlington, USA); Sherwood Samn (AFRL, USA)

pp. 1821-1825

QoS Constraint with Prioritized Frame Selection CDMA MAC Protocol for WSN Employing UAV

Dac-Tu Ho (Waseda University, Japan); Jingyu Park (University of Waseda, Japan); Shigeru Shimamoto (Waseda University, Japan)

pp. 1826-1830

Decentralised Cooperative Aerial Surveillance for Harbour Security: A Formal Verification Approach

Gopinadh Sirigineedi (Cranfield University, United Kingdom); Antonios Tsourdos (Cranfield University, United Kingdom); Brian White (Cranfield University, United Kingdom); Peter M G Silson (Cranfield University, United Kingdom)

pp. 1831-1835

4:45 PM - 5:30 PM

Panel Discussion

The Future of Heterogeneous Networks

Friday, December 10

8:15 AM - 9:00 AM

Opening & Keynote Talk

Keynote by Chip Elliot (BBN Technologies, USA)

9:00 AM - 10:30 AM

Research Topics on Mobile Ad-hoc Networks

Neighbor Coordinated Positioning Based Power Control for Cognitive Radio Ad Hoc Networks

Nan Hao (Inha university, Korea); Sang-jo Yoo (Inha University, Korea)

pp. 1082-1086

Raptor Code for Wireless Ad Hoc Vehicular Safety Broadcast

Nor Fadzilah Abdullah (University of Bristol, United Kingdom); Robert J Piechocki (University of Bristol, United Kingdom); Angela Doufexi (University of Bristol, United Kingdom)

pp. 1087-1091

An RFID based System for Digital Investigation in Vehicular Adhoc Networks

Bayrem Triki (ISETCOM, Tunisia); Slim Rekhis (University of the 7th of November at Carthage, Tunisia); Nouredine A. Boudriga (University of Carthage, Tunisia)

pp. 1092-1096

A Genetic Approach for Trajectory Planning in Non-Autonomous Mobile Ad-Hoc Networks with QoS Requirements

Ala I Al-Fuqaha (Western Michigan University, USA); Dionysios Kountanis (Western Michigan University, USA)
pp. 1097-1102

Dominant Pruning based Query Routing in Peer Databases over MANETs

Theodosios Aggelidis (University of Ioannina, Greece); Evangelos Papapetrou (University of Ioannina, Greece)
pp. 1103-1107

Recent Trends in Mesh – Networking for Wireless Communications

Resource Adaptations for Revenue Optimization in Cognitive Mesh Network Using Reinforcement Learning
Ayoub Alsarhan (Concordia university, Canada); Anjali Agarwal (Concordia University, Canada)
pp. 1108-1112

Fault-Tolerant and Scalable Channel Assignment for Multi-Radio Multi-Channel IEEE 802.11a-based Wireless Mesh Networks

Aizaz Chaudhry (Carleton University, Canada); Roshdy H Hafez (Carleton University, Canada); Osama Aboul-Magd (Carleton University, Canada); Samy Mahmoud (Carleton University, Ottawa, Canada)
pp. 1113-1117

Context-Based Connectivity and Characterization of Wireless Mesh Networks: Simulation Study

Ricardo Matos (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Carlos Marques (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Susana Isabel Barreto de Miranda Sargento (Instituto de Telecomunicações, Universidade de Aveiro, Portugal)
pp. 1118-1123

Power Entangling and Matching in Cognitive Wireless Mesh Networks by Applying Conjecture Based Multi-agent QQ-learning Approach

Xianfu Chen (Zhejiang University, P.R. China); Zhifeng Zhao (Zhejiang University, P.R. China); Honggang Zhang (Zhejiang University, P.R. China)
pp. 1124-1129

rt-Winf: Real Time Wireless Inference Mechanism

Bruno Rés (Instituto de Telecomunicações, Universidade de Aveiro, Portugal); Luis Barreto (Escola Superior de Ciências Empresariais, Inst. Politécnico de Viana do Castelo, Portugal); Susana Isabel Barreto de Miranda Sargento (Instituto de Telecomunicações, Universidade de Aveiro, Portugal)
pp. 1130-1135

Resource Management and Routing in Heterogeneous Networks

An Adaptive Desktop Transfer Protocol for Mobile Thin Client

Tomoharu Imai (Fujitsu Laboratories Ltd., Japan); Kenichi Horio (Fujitsu Laboratories Ltd., Japan); Takashi Ohno (Fujitsu Labs., Japan); Kazuki Matsui (Fujitsu Laboratories Ltd., Japan)
pp. 1136-1140

Federation Agreements Performance in Heterogeneous Environments: Non-Cooperative Games Approach

Dimitris Charilas (National Technical University of Athens, Greece); Polychronis Mathioudakis (NTUA, Greece); Athanasios D. Panagopoulos (National Technical University of Athens, Greece); Philip Constantinou (National Technical University of Athens, Greece)
pp. 1141-1145

Determining dependencies in multi technology inter domain wireless access; A case study

Eirik L Følstad (Norwegian University of Science and Technology, Norway); Bjarne E. Helvik (Norwegian University of Science and Technology, Norway)
pp. 1146-1150

Self-Organizing Multiple Access with Minimal Information: Networking in El Farol Bar

Marina Petrova (RWTH Aachen University, Germany); Maria Michalopoulou (RWTH Aachen University, Germany); Petri Mähönen (RWTH Aachen University, Germany)
pp. 1151-1156

Multi-Connection and Rate Allocation in Heterogeneous Wireless Networks

Weihuang Fu (University of Cincinnati, USA); Dharma P Agrawal (University of Cincinnati, USA)
pp. 1157-1161

Multimedia Communications_a

Finite Horizon Scheduling in Wireless Ad hoc Networks

Murad Khalid (USF, USA); Xuan Hung Le (University of Rochester, USA); Inho Ra (Kunsan National University, Korea); Ravi Sankar (University of South Florida, USA)
pp. 876-881

Server Selection with Delay Constraints for Online Games

Yuh-Rong Chen (University of Oklahoma, USA); Sridhar Radhakrishnan (University of Oklahoma, USA); Sudarshan Dhall (University of Oklahoma, USA); Suleyman Karabuk (University of Oklahoma, USA)
pp. 882-887

Multimedia Applications_a

Hierarchical Modulation with Vector Rotation for Multimedia Broadcasting

Hui Zhao (Beijing University of Posts and Telecommunications, P.R. China); Xiaoping Zhou (Beijing University of Posts and Telecommunications, P.R. China); Wenbo Wang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 888-892

4K Digital Cinema Home Theater over High Throughput Wireless Transmission System

Masayuki Kurosaki (Kyusyu Institute of Technology, Japan); Masateru Matsuo (Kyushu Institute of Technology, Japan); Kuroki Yoshimitsu (Kurume national College of Technology, Japan); Ryuta Imashioya (Kyushu Institute of Technology, Japan); Sai Baiko (Rohm Co, Japan); Hiroshi Ochi (Kyushu Institute of Technology, Japan)
pp. 893-897

Performance Evaluation of Video Streaming over Mobile WiMAX Networks

Mengke Hu (Institut Telecom SudParis, France); Hongguang Zhang (Institut Telecom, Telecom SudParis, France); Tien Anh Le (Institut Telecom, Telecom SudParis, France); Hang Nguyen (Institut Telecom, Telecom SudParis, France)
pp. 898-902

9:00 AM - 10:00 AM

Keynote speech 1

Keynote 1: Impact of IPv6 on Network Management, Autonomicity, Cloud Computing, Internet of Things & SmartGrids

Latif Ladid (IPv6 Forum, Luxemburg)

9:00 AM - 10:30 AM

Mobility in Heterogeneous Wireless Networks

Network-Assisted Handover for Heterogeneous Wireless Networks

Claudio Cicconetti (Intecs S.p.A., Italy); Francesco Galeassi (Intecs S.p.A., Italy); Raffaella Mambrini (Intecs S.p.A., Italy)
pp. 1-5

A Concept for Context-Enhanced Heterogeneous Access Management

Andreas Klein (University of Kaiserslautern, Germany); Christian Mannweiler (University of Kaiserslautern, Germany); Joerg Schneider (University of Kaiserslautern, Germany); Hans D. Schotten (University of Kaiserslautern, Germany)
pp. 6-10

On Modeling Speed-Based Vertical Handovers in Vehicular Networks "Dad, slow down, I am watching the movie"

Flavio Esposito (Boston University, USA); Anna Maria Vegni (University of ROMA TRE, Italy); Ibrahim Matta (Boston University, USA); Alessandro Neri (University of ROMA TRE, Italy)
pp. 11-15

Proxy Mobile IP with Distributed Mobility Anchors
H Anthony Chan (Huawei Technologies, USA)
pp. 16-20

Invited Talk

Advanced Sensor Integration Technology 01

Geographic Routing in Random Duty-cycled Wireless Multimedia Sensor Networks

Kun Wang (Dalian University of Technology, P.R. China); Lei Wang (Dalian University of Technology, P.R. China); Can Ma (Dalian University of Technology, P.R. China); Lei Shu (Osaka University, Japan); Joel J. P. C. Rodrigues (Instituto de Telecomunicações, University of Beira Interior, Portugal)
pp. 230-234

Integration of Component-based frameworks with Sensor modelling Languages for the Sensor Web

Ramiro Liscano (University of Ontario Institute of Technology, Canada); Kimia Kazemi (UOIT, Canada)
pp. 235-240

Cooperative STBC with Fuzzy Election Applied to Surveillance Wireless Video Sensor Networks

Marcelo Portela Sousa (Federal University of Campina Grande, Brazil); Rafael Fernandes Lopes (Federal University of Campina Grande, Brazil); Ajey Kumar (Federal University of Campina Grande, Brazil); Waslon Terllizzie Araujo Lopes (UFCG - Federal University of Campina Grande, Brazil); Marcelo S. Alencar (Federal University of Campina Grande, Brazil)
pp. 241-245

Complex & Communication Networks 1

Connectivity of Two-Tier Networks

Qing Zhou (Texas A&M University, USA); Long Gao (Hitachi America, Ltd, USA); Shuguang Cui (Texas A&M University, USA)
pp. 368-372

A Case for Community-Centric Controls for Information Sharing on Online Social Networks

Amin Ranjbar (McGill University, Canada); Muthucumaru Maheswaran (McGill University, Canada)
pp. 373-377

On the Design of Complex Networks through a Branch-and-Price Algorithm

Fernanda S H Souza (Federal University of Minas Gerais, Brazil); Alexandre Cunha (Universidade Federal de Minas Gerais, Brazil); Geraldo R Mateus (Universidade Federal de Minas Gerais, Brazil)
pp. 378-382

9:00 AM - 10:00 AM

Greeting and Keynote Presentation

Keynote by Suresh Singh

9:00 AM - 10:30 AM

Virtualization & Cross-Layer Approach

A Distributed Approach for Virtual Network Discovery

João Nogueira (University of Aveiro, Portugal Telecom Inovação, Portugal); Márcio Melo (Portugal

Telecom Inovação, University of Aveiro, Portugal); Jorge Carapinha (PT Inovação S.A. Telecom Group, Portugal); Susana Isabel Barreto de Miranda Sargento (Instituto de Telecomunicações, Universidade de Aveiro, Portugal)

pp. 277-282

Network Troubleshooting with Mirror VNets

Andreas Wundsam (Deutsche Telekom Laboratories, TU Berlin, Germany); Muhammad Amir Mehmood (TU Berlin/Deutsche Telekom Laboratories, Germany); Anja Feldmann (TU-Berlin, Germany); Olaf Maennel (Loughborough University, United Kingdom)

pp. 283-287

Performance Evaluation of Open Virtual Router

Muhammad Siraj Rathore (KTH University Stockholm, Sweden); Markus Hidell (KTH - Royal Institute of Technology, Sweden); Peter Sjödin (KTH, Sweden)

pp. 288-293

Meta-Headers: Top-Down Networking Architecture with Application-Specific Constraints

Murat Yuksel (University of Nevada - Reno, USA)

pp. 294-299

9:00 AM - 9:10 AM

Welcome

9:00 AM - 9:50 AM

Invited speaker - Pablo Cesar, CWI (Centrum Wiskunde & Informatica), The Netherlands

Multimedia and the Web of Things

9:10 AM - 10:40 AM

Modulation and Coding

Constellation Design for Color-Shift Keying Using Billiards Algorithms

Robert J. Drost (Army Research Laboratory, USA); Brian Sadler (Army Research Laboratory, USA)

pp. 980-984

Rateless Codes for Slant Path Free Space Optical Channels

Ling Liu (School of Electrical and Computer Science, Peking University, P.R. China); Anhong Dang (Peking University, P.R. China); Hong Guo (School of Electrical and Computer Science, Peking University, P.R. China)

pp. 985-989

On the Performance of Space Shift Keying for Optical Wireless Communications

Thilo Fath (EADS Deutschland GmbH, Germany); Marco Di Renzo (French National Center for Scientific Research (CNRS), France); Harald Haas (The University of Edinburgh, United Kingdom)

pp. 990-994

Performance of Two Dimensional Asymmetrically Clipped Optical OFDM

Md. Rubaiyat Mondal (Monash University, Australia); Jean Armstrong (Monash University, Australia); Kusha Panta (Monash University, Australia)

pp. 995-999

Link Adaptation for Parallel Channels with Encoder Rate and Modem Symbol Rate Constraints

Yi Tang (University of Virginia, USA); Maite Brandt-Pearce (University of Virginia, USA); Stephen G. Wilson (University of Virginia, USA)

pp. 1000-1004

9:50 AM - 10:30 AM

Ubiquitous computing

Service Advertisements in MANETs (SAM): A Decentralized Web Services Discovery Protocol
Frank T. Johnsen (Norwegian Defence Research Establishment (FFI), Norway); Trude Hafsøe
(Norwegian Defence Research Establishment (FFI), Norway)
pp. 1674-1678

MASS: editor for mobile ad-hoc network scenarios

Sergio Cabrero (University of Oviedo, Spain); Xabiel García Pañeda (University of Oviedo, Spain);
David Melendi (University of Oviedo, Spain); Roberto Garcia (University of Oviedo, Spain)
pp. 1679-1683

10:00 AM - 10:30 AM

Autonomic Networking, Cognitive Networking, and Self-Management (A)

Towards Autonomic Network Performance Management in Mobile Ad Hoc Networks

Abdelhamid G Moursy (University of Louisiana at Lafayette, USA); Bide Xu (University of Louisiana at
Lafayette, USA); Dmitri Perkins (University of Louisiana at Lafayette, USA); Magdy Bayoumi (University
of Louisiana, USA)
pp. 448-453

Achieving distributed load balancing in self-organizing LTE radio access network with autonomic network
management

Heng Zhang (Beijing University of Posts and Telecommunications, P.R. China); Qiu Xue-song (Beijing
University of Posts and Telecommunications, P.R. China); Luoming Meng (Beijing University of Posts
and Telecommunications, P.R. China); Xidong Zhang (Beijing University of Posts and
Telecommunications, P.R. China)
pp. 454-459

Management of P2P Networks and Ad-Hoc Networks (A)

CATS: A Topology Construction Based On Semantic Group for Capacity-Aware in Heterogeneous P2P
Networks

Wenwu Shen (Beijing University of Posts and Telecommunications, P.R. China); Sen Su (Beijing
University of Posts & Telecommunications (BUPT), P.R. China); Peng Xu (Beijing University of Posts
and Telecommunications, P.R. China); Jingshu Xia (Beijing University of Posts and
Telecommunications, P.R. China)
pp. 460-464

Implementing Hierarchical Trick Play for HTTP Video Streaming

Guanhua Zhang (Samsung Electronics, Korea); Hojin Ha (Samsung Electronics, Korea); O-Hoon Kwon
(Samsung Electronics, Korea); Sungbin Im (Samsung Electronics, Korea)
pp. 465-468

Best Paper Presentation

An Analytical Model for Designing and Controlling New-Generation Green Devices

Raffaele Bolla (University of Genoa, Italy); Roberto Bruschi (CNIT, Italy); Alessandro Carrega
(University of Genoa, Italy); Franco R Davoli (University of Genoa, Italy)
pp. 1388-1393

11:00 AM - 12:30 PM

Recent Advances in Cognitive Radio Systems and Networks

Sequential Search of Available Channels in Cognitive Radios

Ruben de Francisco (IMEC / Holst Centre, The Netherlands)

pp. 1162-1166

Opportunistic Cognitive Radio Broadcast Channel: Asymptotic Performance

Yang Li (University of Texas at Dallas, USA); Aria Nosratinia (University of Texas, Dallas, USA)

pp. 1167-1171

Subcarrier and Power Allocation for Multiuser OFDM-based Cognitive Radio Uplink Systems

Wei-Cheng Pao (National Central University, Taiwan); Yung-Fang Chen (National Central University, Taiwan); Chao-Chun Lai (National Central University, Taiwan)

pp. 1172-1176

Research on Cooperative Communications and Relay Utilization

Power Allocation for Cooperative-Based Jamming in Wireless Networks with Secrecy Constraints

Ioannis Krikidis (University of Cyprus, Cyprus); John Thompson (University of Edinburgh, United Kingdom); Peter Grant (Edinburgh School of Engineering and Electronics, United Kingdom); Steve McLaughlin (University of Edinburgh, United Kingdom)

pp. 1177-1181

The Optimal Performance of Cooperative Communication Systems as a Function of Location Information Quality

Arvind Chakrapani (University of New South Wales, Australia); Jun Li (University of New South Wales, Australia); Robert Malaney (University of New South Wales, Australia); Jinhong Yuan (University of New South Wales, Australia)

pp. 1182-1186

Location-based Relay Selection and Power Adaptation Enabling Simultaneous Transmissions

Jimmy J Nielsen (Aalborg University, Denmark); Tatiana Madsen (Aalborg University, Denmark); Hans-Peter Schwefel (Forschungszentrum Telekommunikation Wien, Austria)

pp. 1187-1191

On the Delay Optimal Downlink Scheduling with Relay Stations

Seung Baek (Korea University, Korea)

pp. 1192-1196

Multimedia Communications_b

A High-Speed Key Exchange Multi-Core SoC Architecture for IPsec Real-Time Internet Traffic

Patrick Moore (Queen's University Belfast, United Kingdom); Maire O'Neill (Queen's University Belfast, United Kingdom); Kieran McLaughlin (Queen's University Belfast, United Kingdom); Sakir Sezer (Queen's University Belfast, United Kingdom)

pp. 903-907

Design and Implementation of Web-Telecom Hybrid Services Bus based Execution Platform over Convergence Networks

Bo Cheng (Beijing University of Posts & Telecommunications, P.R. China); Yang Zhang (Beijing University of Posts & Telecommunications, P.R. China); Junliang Chen (Beijing University of Posts & Telecommunications, P.R. China)

pp. 908-912

System-assisted Service Evolution for a Future Internet - The HAMcast Approach to Pervasive Multicast

Sebastian Meiling (Hamburg University of Applied Sciences, Germany); Dominik Charousset (HAW Hamburg, Germany); Thomas C. Schmidt (HAW Hamburg (DE), Germany); Matthias Wählisch (Freie Universität Berlin, Germany)

pp. 913-917

Multimedia Applications_b

Reliable Data Transmission Using IBRC and LT Codes Over AWGN Channels

Sida Lv (Zhejiang University, P.R. China); Zhifeng Zhao (Zhejiang University, P.R. China); Honggang Zhang (Zhejiang University, P.R. China)
pp. 918-923

Moving Average Based Predictors for MPEG-4 VBR Traffic Sources

Harikrishna N (Indian Institute of Science, Bangalore, India); Raghuvveera Tripuraribhatla (Anna University, India); Easwarakumar K.s. (Anna University, India)
pp. 924-928

IPTV Performance in IEEE 802.11n WLANs

Marcelo Atenas (Universidad Politécnica de Valencia, Spain); Sandra Sendra (Universidad Politécnica de Valencia, Spain); Miguel Garcia (Polytechnic University of Valencia, Spain); Jaime Lloret (Universidad Politécnica de Valencia, Spain)
pp. 929-933

Autonomic Networking, Cognitive Networking, and Self-Management (B)

Autonomic Fault-Management and Resilience from the Perspective of the Network Operation Personnel

Nikolay Tcholtchev (FOKUS Fraunhofer Institute for Open Communication Systems, Germany); Ranganai Chaparadza (Fraunhofer Fokus, Germany)
pp. 469-474

Probabilistic Trans-Algorithmic Search for Automated Network Management and Configuration

Bilal Gonen (University of Nevada, Reno, USA); Murat Yuksel (University of Nevada - Reno, USA); Sushil Louis (University of Nevada - Reno, USA)
pp. 475-480

Proactive Fault Management based on Risk-Augmented Routing

Bruno Vidalenc (Alcatel-Lucent Bell Labs France, France); Laurent Ciavaglia (Alcatel-Lucent, France)
pp. 481-485

On the Performance of Host-Based Business Process Aware QoS Management

Patrick-Benjamin Bök (Ruhr-University Bochum, Germany); Dennis Pielken (Ruhr-University Bochum, Germany); York Tüchelmann (Ruhr-University Bochum, Germany)
pp. 486-491

A Platform for the Integration and Management of Cognitive Systems in Future Networks

Vera Stavroulaki (University of Piraeus, Greece); Nikos Koutsouris (University of Piraeus, Greece); Kostas Tsagkaris (University of Piraeus, Greece); Panagiotis Demestichas (University of Piraeus, Greece)
pp. 492-497

Applying distributed monitoring techniques in autonomic networks

Anastasios Zafeiropoulos (Greek Research and Technology Network, Greece); Athanssios Ch. Liakopoulos (National Technical University of Athens, Greece); Constantinos Marinos (National Technical University of Athens, Greece); Mary Grammatikou (National Technical University of Athens, Greece); Nikolay Tcholtchev (FOKUS Fraunhofer Institute for Open Communication Systems, Germany); Panagiotis Gouvas (National Technical University of Athens, Greece)
pp. 498-502

Management of P2P Networks and Ad-Hoc Networks (B)

A Simple Packet Authentication Mechanism Based on Stateless Core Approach

Shuai Hao (Beijing University of Posts and Telecommunications, P.R. China); Xiaohong Huang (Beijing University of Posts and Telecommunications, P.R. China); Yan Ma (Beijing University of Posts and Telecommunications, P.R. China)
pp. 503-507

Trust Management for Collusion Prevention in Mobile Ad Hoc Networks

Marcin Serebinski (University of Luxembourg, Luxembourg); Pascal Bouvry (University of Luxembourg, Luxembourg)

pp. 508-513

An Analytical Model of the Service Provisioning Time within the Harmony Network Service Plane
Alexander Willner (University of Bonn, Germany); Jordi Ferrer Riera (Fundació i2CAT, Internet i Innovació Digital a Catalunya, Spain); Joan A. Garcia-Espin (Fundació i2CAT, Internet i Innovació Digital a Catalunya, Spain); Sergi Figuerola (Fundació i2CAT, Internet i Innovació Digital a Catalunya, Spain); Marc De Leenheer (Ghent University, Belgium); Chris Develder (Ghent University - IBBT, Belgium)

pp. 514-518

Topology Investigation of a large-Scale P2P VoD Overlay Network based on Active Measurement
Bing Li (Tianjin University, P.R. China); Maode Ma (Nanyang Technological University, Singapore); Zhigang Jin (Tianjin University, P.R. China); Dongxue Zhao (Tianjin University, P.R. China)

pp. 519-523

Distributed Energy Self-Adaptation in ad hoc Networks

Patricia Ruiz (, Luxemburg); Pascal Bouvry (University of Luxembourg, Luxemburg)

pp. 524-528

Keynote Talk and Panel Discussion

Wireless Sensor Network

Energy Efficient Routing for Wireless Sensor Networks in Urban Environments

Sanjay Dhurandher (NSIT, University of Delhi, India); Mohammad S. Obaidat (Monmouth University, USA); Deepank Gupta (Netaji Subhas Institute of Technology, India); Nidhi Gupta (Netaji Subhas Institute of Technology, India); Anupriya Asthana (Netaji Subhas Institute of Technology, India)

pp. 1523-1527

A Robust Pair-wise and Group Key Management Protocol for Wireless Sensor Network

Md. Musfiq Rahman (Dalhousie University, Canada); Srinivas Sampalli (Dalhousie University, Canada); Sajid Hussain (Fisk University, USA)

pp. 1528-1532

A Scalable and Efficient Key Establishment Protocol for Wireless Sensor Networks

Ali Fanian (Isfahan University of Technology, Iran); Mehdi Berenjkoub (IUT, Iran); Hossein Saidi (Isfahan University of Technology, Iran); T. Aaron Gulliver (University of Victoria, Canada)

pp. 1533-1538

Efficient Key Management in Sensor Networks

Abhishek Parakh (Oklahoma State University, USA); Subhash Kak (Oklahoma State University, USA)

pp. 1539-1544

Advanced Sensor Integration Technology 02

An Ultra Wideband Communication Channel Model for the Human Abdominal Region

Stig Støa (Rikshospitalet University Hospital, Norway); Raul Chavez-Santiago (Rikshospitalet University Hospital, Norway); Ilangko Balasingham (Norwegian University of Science & Technology, Norway)

pp. 246-250

A Large Scale Content-Based Network Considering Publish/Process/Subscribe

Hideya Ochiai (The University of Tokyo, Japan); Shingo Kimura (Nara Institute of Science and Technology, Japan); Kazutoshi Fujikawa (Nara Institute of Science and Technology, Japan); Hideki Sunahara (Keio University, Japan)

pp. 251-255

A Novel Gait Recognition Analysis System based on Body Sensor Networks for Patients with Parkinson's Disease

Shancang Li (Swansea University, United Kingdom); Jue Wang (Xi'an Jiaotong University, P.R. China)

pp. 256-260

Complex & Communication Networks 2

Social Network Aware Routing and Prefetching on Dual-Mode Wireless Networks
L. Richard Carley (Carnegie Mellon University, USA); Kathleen Carley (CMU, USA)
pp. 383-388

Impact of complex network properties on routing in backbone networks
Philippe Giabbanelli (Simon Fraser University, Canada)
pp. 389-393

A New Power Law in Topology Discovery Based on Shortest-path
Yahui Wang (Beihang University, P.R. China); Danning Wang (Beihang University, P.R. China);
Mingming Chen (Beihang University, P.R. China); Shiyao Qian (State Key Lab. of Software
Development Environment, Beihang University, P.R. China); Ke Xu (State Key Lab. of Software
Develop Environment Beihang University, P.R. China)
pp. 394-399

Deriving Network Topologies from Real World Constraints
Mahmood A Hameed (University of Kansas, USA); Abdul Jabbar (The University of Kansas, USA);
Egemen K Çetinkaya (University of Kansas, USA); James P. G. Sterbenz (University of Kansas &
Lancaster University (UK), USA)
pp. 400-404

Performance vs. Energy Trade-Offs

On the Transmission-Computation-Energy Tradeoff in Wireless and Fixed Networks
Peter Rost (NEC Laboratories Europe, Germany); Gerhard Fettweis (Technische Universität Dresden,
Germany)
pp. 1394-1399

Joint Bandwidth-Power Allocation for Energy Efficient Transmission in Multi-user Systems
Shunqing Zhang (Huawei Technologies, Co. Ltd., P.R. China); Yan Chen (Huawei, P.R. China);
Shugong Xu (Huawei, P.R. China)
pp. 1400-1405

Bit per Joule Efficiency of Cooperating Base Stations in Cellular Networks
Albrecht J Fehske (Technische Universität Dresden, Germany); Patrick Marsch (Technische Universität
Dresden, Germany); Gerhard Fettweis (Technische Universität Dresden, Germany)
pp. 1406-1411

What Can Green Hybrid Optical Circuit Architecture Achieve?
Katsushi Kobayashi (RIKEN, Japan); Dai Mochinaga (Mitsubishi Research Institute, Japan); Ichiro
Murase (MRI (Mitsubishi Research Insititute), Japan); Tomohiro Kudoh (AIST, Japan)
pp. 1412-1416

Greening the Availability Design of Optical WDM Networks
Burak Kantarci (University of Ottawa, Canada); Hussein Mouftah (University of Ottawa, Canada)
pp. 1417-1421

ID/Locator Separation & Overlay Networks

Context-Aware Location in the Internet of Things
Federico Andreini (Intecs S.p.A., Italy); Claudio Cicconetti (Intecs S.p.A., Italy); Flavio Crisciani (Intecs
S.p.A., Italy); Raffaella Mambrini (Intecs S.p.A., Italy)
pp. 300-304

On The Change Rate of Identifier (ID)-to-locator Mappings in Networks with ID/Locator Separation
Luo Hongbin (Beijing Jiaotong University, P.R. China); Zhang Hongke (Beijing Jiaotong University, P.R.
China); Chunming Qiao (State University of New York at Buffalo, USA)
pp. 305-309

On the Cost of Supporting Mobility and Multihoming
Vatche Ishakian (Boston University, USA); Ibrahim Matta (Boston University, USA); Joseph Akinwumi
(Boston University, USA)
pp. 310-314

Self transforming to power law topology for overlay networks
Suyong Eum (OSAKA University, Japan); Shin'ichi Arakawa (Osaka University, Japan); Murata

Masayuki (Osaka University, Japan)
pp. 315-320

Diversity Techniques

- Experimental evaluation of transmitter and receiver diversity in a terrestrial FSO link
Jaime A. Anguita (University of the Andes, Chile); Jaime Cisternas (University of the Andes, Chile)
pp. 1005-1009
- Selection Diversity for Wireless Optical Communications with Non-coherent Detection without CSI
Hassan Moradi (University of Oklahoma, USA); Hazem Refai (Oklahoma University, USA); Peter LoPresti (Tulsa University, USA); Mohammed Atiquzzaman (University of Oklahoma, USA)
pp. 1010-1014
- Diversity Gains for MIMO Wireless Optical Intensity Channels With Atmospheric Fading and Misalignment
Ahmed A. Farid (McMaster University, Canada); Steve Hranilovic (McMaster University, Canada)
pp. 1015-1019
- A New Scheme on Time-diversity Atmospheric OCDMA System over Atmospheric Turbulence Channels
Peng Liu (WASEDA University, Japan); Tien Dat Pham (Waseda University, Japan); Kazuhiko Wakamori (Waseda University, Japan); Mitsuji Matsumoto (Waseda University, Japan)
pp. 1020-1025
- Field Conjugation Adaptive Arrays in Atmospheric Coherent Optical Links
Aniceto Belmonte (Technical University of Catalonia UPC, Spain); Joseph Kahn (Stanford University, USA)
pp. 1026-1030

11:00 AM - 12:40 PM

Ubiquitous networks

- Context-aware Media Player (CaMP): Developing context-aware applications with Separation of Concerns
Nearchos Paspallis (University of Cyprus, Cyprus); Achilleas Achilleos (University of Cyprus, Cyprus); Konstantinos Kakousis (University of Cyprus, Cyprus); George Papadopoulos (University of Cyprus, Cyprus)
pp. 1684-1689
- Towards Congestion-Aware All-to-All Information Dissemination in Mobile Ad-Hoc Networks
Albana Gaba (Vrije Universiteit Amsterdam, The Netherlands); Spyros Voulgaris (Vrije Universiteit, The Netherlands); Maarten van Steen (VU University Amsterdam, The Netherlands)
pp. 1690-1695
- Interference Aware Multipath Routing Protocol for Wireless Sensor Networks
Zijian Wang (Beihang University, P.R. China); Jun Zhang (Beihang University, Algeria)
pp. 1696-1700
- A Measurement Allocation Scheme for Reliable Data Gathering in Spatially Correlated Sensor Networks
Sang-Seon Byun (Norwegian University of Science and Technology, Norway); Ilangko Balasingham (Norwegian University of Science & Technology, Norway)
pp. 1701-1706
- Content Caching and Replication Schemes for Peer-to-Peer File Sharing in Wireless Mesh Networks
Amr G M Al Asaad (The University of British Columbia, Canada); Sathish Gopalakrishnan (University of British Columbia, Canada); Victor CM Leung (The University of British Columbia, Canada)
pp. 1707-1711

2:00 PM - 3:30 PM

Radio Resource Management in Wireless Networks

A Coordinated Scheduling Strategy in Multi-Cell OFDM Systems

Li Chen (Beijing University of Posts and Telecommunications, P.R. China); Lei Cao (Beijing University of Posts and Telecommunications, P.R. China); Xin Zhang (Beijing University of Posts and Telecommunications, P.R. China); Dacheng Yang (Beijing University of Posts and Telecommunications, P.R. China)
pp. 1197-1201

Proportional Fair Scheduling with Probabilistic Interference Avoidance in the Uplink of Multicell OFDMA Systems

Elias Yaacoub (Qatar University Wireless Innovations Center (QUWIC), Qatar); Zaher Dawy (American University of Beirut, Lebanon)
pp. 1202-1206

Radio Resource Management for Churn Rate Control in Cellular Data Operators

Francisco Rafael Marques Lima (Wireless Telecom Research Group (GTEL), Brazil); Francisco R. P. Cavalcanti (Federal University of Ceará, Brazil); Raimundo Abreu Neto (Federal University of Ceara, Brazil)
pp. 1207-1211

Cross-Layer Resource Allocation for Downlink Access Using Instantaneous Fading and Queue Length Information

Luis M. Lopez-Ramos (Universidad Rey Juan Carlos, Spain); Antonio G. Marques (Universidad Rey Juan Carlos, Spain); Antonio J. Caamaño (Rey Juan Carlos University of Madrid, Spain); F. Javier Ramos (Rey Juan Carlos University, Spain)
pp. 1212-1216

Adaptive Resource Allocation and Dynamic Call Admission Control in Wireless Networks

Georgios Tsiropoulos (Wireless and Satellite Communication Group, Greece); Dimitrios Stratogiannis (Wireless and Sattelite Communications Group, Greece); Thomas Lagkas (University of Western Macedonia, Kozani, Greece); Periklis Chatzimisios (Alexander TEI of Thessaloniki, Greece); Panayotis Cottis (National Technical University of Athens, Greece)
pp. 1217-1221

QoS Provision for Wireless Networks

Robust Worst-Case Design for Optimizing Average Performance in OFDM using Quantized CSI

Ana Belén Rodríguez-González (Rey Juan Carlos University, Spain); Luis M. Lopez-Ramos (Universidad Rey Juan Carlos, Spain); Antonio G. Marques (Universidad Rey Juan Carlos, Spain); F. Javier Ramos (Rey Juan Carlos University, Spain); Antonio J. Caamaño (Rey Juan Carlos University of Madrid, Spain)
pp. 1222-1226

Multi-objective Reliable Multipath Routing for Wireless Sensor Networks

Hind Alwan (University, Canada); Anjali Agarwal (Concordia University, Canada)
pp. 1227-1231

DMQR: A Spatial Routing Protocol to Enable VoIP over High-Mobility Wireless Multihop Networks

Amir Aminzadeh Gohari (University of California, Santa Barbara, USA); Volkan Rodoplu (University of California, Santa Barbara, USA)
pp. 1232-1237

Controlled Random Access with Multipacket Reception and Traffic Uncertainty

Majid Ghanbarinejad (University of Alberta, Canada); Christian Schlegel (University of Alberta, Canada)
pp. 1238-1242

Towards a QoS-Aware IEEE 802.16 Downlink Sub-Frame Mapping Scheme

Panagiotis Sarigiannidis (Aristotle University Thessaloniki, Greece); Malamati D Louta (University of Western Macedonia, Greece); Dimitrios Stratogiannis (Wireless and Sattelite Communications Group, Greece); Georgios Tsiropoulos (Wireless and Satellite Communication Group, Greece)
pp. 1243-1247

Propagation, Modeling and Physical Layer Security in Wireless Networks

- Security Solution Suitability Analysis using Modified Multiplicative Analytic Hierarchy Process
Zoltan Faigl (Budapest University of Technology and Economics, Hungary); Stefan Lindskog (Karlstad University, Sweden); Anna Brunstrom (Karlstad University, Sweden)
pp. 1248-1253
- Masked-OFDM: A Physical Layer Encryption for Future OFDM Applications
Arsenia Chorti (Middlesex University, United Kingdom)
pp. 1254-1258
- Likelihood-Ratio Propagation and Consensus in Wireless Networks with Markov Random Field Models
Federico Penna (Politecnico di Torino, Italy); Roberto Garello (Politecnico di Torino, Italy); Maurizio A. Spirito (ISMB, Italy)
pp. 1259-1263
- Indoor Mobility Modelling
Raphael Ernst (University of Bonn, Germany); Nils Aschenbruck (University of Bonn, Germany); Peter Martini (University of Bonn, Germany)
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Ranganai Chaparadza (Fraunhofer Fokus, Germany); Symeon Papavassiliou (Institute of Comm. and Comp. Systems/National Technical University of Athens, Greece); Said Soulhi (Ericsson, Sweden); Jianguo Ding (University of Luxembourg, Luxembourg)
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Takaya Miyazawa (National Institute of Information and Communications Technology(NICT), Japan); Hideaki Furukawa (NICT, Japan); Kenji Fujikawa (NICT, Japan); Naoya Wada (NICT, Japan); Hiroaki Harai (National Institute of Information and Communications Technology, Japan)
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