ICUMT

2009

international
conference on
ultra
modern
telecommunications

ENGINEERING THE JOINT FUTURE

October 12-14, 2009 St.Petersburg, Russia


ХРАМЪ МОЙ ХРАМЪ МОЛИТВЫ НАРЕЧЕТСЯ.

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ICUMT
Saint Petersburg, Russia 2009

GREETINGS FROM THE CHAIRS

GREETINGS FROM THE CHAIRS

Prof. Boris Sokolov
SPIIRAS,
St.Petersburg, Russia

Prof. Vladimir Vishnevsky
IRE RAS,
Moscow, Russia

Dear citizens of St. Petersburg and guests of our city!

It is not a coincidence that a new annual international conference in the area of information and telecommunication technologies ICUMT is established and takes place in Saint-Petersburg. This city is not only the Russian "window" to the western countries, is not only one of the most tourist attractive places in the world, it is also a home and a center of Russian science.

It was the founder of the city – Russian emperor Peter the Great – who has found in 1724 the first higher scientific-education institution in Russia – academy of sciences. Therefore from the very beginning of its history until nowadays Saint-Petersburg has been the concentration of academic and university potential of Russia. Periodic table of chemical elements by Dmitry Mendeleev, "Reflexes of the Brain" by Ivan Sechenov, formulas and equations by Leonhard Euler, phagocytosis by Ilya Mechnikov, genetic laws of Nikolai Vavilov, law of large numbers by Pafnuty Chebyshev, atmosphere of Venus by Mikhail Lomonosov, linear programming of Leonid Kantorovich – all these world famous pioneering conceptions and corresponding famous names are closely related to St.-Petersburg. The lives of Nobel Award winners Ivan Pavlov, Ilya Mechnikov, Nikolay Semenov, Ilya Frank, Alexander Prokhorov, Lev Landau, Leonid Kantorovich, Peter Kapica, Jores Alferov are closely related to Saint-Petersburg.

Alexander Popov, who first openly demonstrated the transmission and reception of radio signals on 7th of May 1895 and whose 150 anniversary we are celebrating this year, was working in Saint-Petersburg. Therefore, former capital of Russia is a fatherland of wireless communications and has a long tradition of international scientific collaboration, which we are happy to continue by series of ICUMT conferences. It is our sincere hope that you will enjoy our technical and social program and this visit will remain in your memory.

Welcome to Russian Federation!
Welcome to Saint-Petersburg!
Welcome to the International Conference on Ultra Modern Telecommunications!

ICUMT-2009 General Co-Chairs

Dr. Alexey Vinel
SPIIRAS,
St.Petersburg, Russia

Dr. Qiang Ni
Brunel University,
London, UK

Dear Colleagues! Dear Friends!

We all are becoming the witnesses of the approaching rapid global changes: the changes in the climate on the Earth, changes on the political map, changes of the ways, how people communicate to each other. Cleary the design and analysis of the novel methods to transmit and process the information is among the major research areas worldwide nowadays. Nevertheless, one year ago the idea to establish a new annual international conference on telecommunications in Russia sounded for us ambitious and risky. However, you will never win if you never begin! And as you can see our idea has become true.

The technical program of ICUMT-2009 includes 9 keynote talks from the internationally recognized speakers, 13 specialized workshops and the main conference track. Conference proceedings include more than 300 papers of about 900 authors. These papers have been selected from more than 500 submissions with the help of more than 300 technical program committee members, additional reviewers, workshop chairs and their teams. We would like to take this opportunity to thank all these people for their contributions, reviews, comments and valuable proposals, which have helped us to introduce an interesting and high-level final program.

It is our sincere hope, that your stay in St.-Petersburg will be fruitful both from the professional and personal perspectives. We expect that you will be able to feel the atmosphere of Russian cultural and scientific center, that you will take this feeling back to your home and that you will come back to St.-Petersburg again one day either on business or for holiday with your relatives and friends!

ICUMT-2009 TPC Co-Chairs

Prof. Gennady Yanovsky
State University of
Telecommunications
St.Petersburg, Russia

Associated Professor
Yevgeni Koucheryavy
Tampere University of
Technology
Tampere, Finland

We warmly welcome you to ICUMT 2009 in St. Petersburg, Russia!

Russia (officially known as Russian Federation) is a largest country in the world covering more than eighth of the Earth's land area. It features great history constantly providing significant impact globally in every aspect of human life, especially in fine arts, music and exact science.
IT and telecommunications are becoming major in post-industrial society. However, Russia is still not yet recognized world-wide in those areas. Recently Russian government has initiated a number of new nation-wide projects targeted on challenging issues of economy diversification which currently heavily depends on natural resources. Obviously, IT and telecommunications science is amongst them. Hence, we strongly believe that in near future Russia will get the momentum to achieve proper recognition in that respect. Scientific event such as ICUMT 2009 is one of the strategic components in the re-integration of Russian science. ICUMT is positioned as a premier international annual conference for the presentation of original and fundamental research and engineering results. From very beginning ICUMT becomes the biggest scientific event for IT and telecommunications on the territory of former Soviet Union. The ultimate aim of ICUMT 2009 of bringing together Russian and international players in telecommunications has been successfully achieved; the conference will be attended by over 330 participants from over 45 countries.

After the conference the proceedings (including workshops) will be published in IEEE Xplore and indexed in relevant databases (such as EI-index). Moreover, authors of selected outstanding papers will be invited to submit extended versions of their papers for consideration of publication in special issues. That will allow proper dissemination of scientific results of the conference and will serve as grounds for future implementations of ICUMT.

ICUMT-2009 Publication Co-Chairs

Dr. Sergey Balandin
Nokia Research Center
Finland

Dr. Alexander Sayenko
Research, Technology
and Platforms
Nokia Siemens Networks
Finland

Recent advances in mobile communication technologies showed eloquently a tremendous growth in this area. For the time period of less than ten years the industry has evolved from providing users with simple mobile phones used merely for voice calls to the sophisticated smart phones that provide a rich set of multimedia applications and services and open a door to the fast mobile Internet, available for a user at any place any time. Along with it, there has been an immense upsurge of interest from the academy to the telecommunication research area, which resulted in many brilliant ideas taken and brought to the society by the industry. The more we develop this area, the more new research questions and challenges arise and events like ICUMT are very important for maintaining further progress. We wish the ICUMT conference to follow the tradition of the high level research and become a forum where the academy and industry research meet and find new areas for cooperation.

In the light of cooperation, it is worth emphasizing the importance of the conference location. St. Petersburg has always have been an important gate between the Western and Eastern Europe research and industry communities bringing together distinguished achievements in various areas. We, on behalf of Nokia and Nokia Siemens Networks, welcome you warmly at the ICUMT conference.

ICUMT-2009 Industrial Co-Chairs

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ICUMT
Saint Petersburg, Russia 2009

KEYNOTE SPEAKERS

Dr. Valtteri Niemi
Fellow of Nokia
Research Center
Lausanne, Switzerland

LTE Security

Abstract

LTE is a new radio technology that could be seen as the next generation after GSM and WCDMA. 3GPP has finalized specification work for the first release of LTE in end of 2008 and first products are also expected fairly soon. LTE is accompanied by a new network architecture, called SAE in 3GPP, which allows also other radio technologies (including technologies not specified by 3GPP) to be connected to the one and same core network. This new setting requires many enhancements to 3G security features, and completely novel security techniques are also introduced with LTE. More specifically, the new architecture is flat (compared to GSM or 3G network architectures) which restricts the possibilities of placing security functions on the network side. As a consequence, some important security functions, e.g. encryption of user data, are terminated in the LTE base station site. This kind of very distributed approach to security requires many enhancements to the 3G security model. The new security features would be covered in the talk, with explanations of the background and the reasoning behind the design decisions. Also, comparison to GSM and 3G security architectures is given, and altogether, light is shed on the evolution of security that has happened together with the evolution of the radio and network technologies.

Bio

Valtteri Niemi received a PhD degree from the University of Turku, Finland, Mathematics Department, in 1989. After serving in various positions in Univ of Turku, he was an Associate Professor in the Mathematics and Statistics Department of the University of Vaasa, Finland, during 1993-97. He joined Nokia Research Center (NRC), Helsinki in 1997 and in 1999 he was nominated as a Research Fellow. During 2004-2006, he was responsible for Nokia research in wireless security area as a Senior Research Manager. During 2007-2008, Dr. Niemi lead the Trustworthy Communications and Identities team in the Internet laboratory of NRC, Helsinki. He recently moved to the new NRC laboratory in Lausanne, Switzerland, where his main focus is on privacy-enhancing technologies. He was also nominated as a Nokia Fellow in 2009. Dr. Niemi's work has been on security issues of future mobile networks and terminals, the main emphasis being on cryptological aspects. He has participated 3GPP SA3 (security) standardization group from the beginning. Starting from 2003, he has been the chairman of the group. Before 3GPP, Niemi took part in ETSI SMG 10 for GSM security work. In addition to cryptology and security, Dr. Niemi has done research on the area of formal languages. He has published more than 40 scientific articles and he is a co-author of three books.

Dr. Alexander Sayenko
Senior Specialist Radio Systems
Research, Technology & Platforms Nokia Siemens Networks
Espoo, Finland

State of the Art of Relaying Technologies in Modern Wireless Communication Systems

Abstract

The very high data rate demands for the wireless communication systems create a need for more fundamental enhancements, other than just increasing the transmission bandwidth or introducing higher order modulation and the coding schemes. Along with technologies, such as MIMO and cooperative multi-point transmission, relaying is foreseen as a quite promising solution. At the moment, there are two major wireless technologies where multi-hop relays gained a significant interest from vendors and operators: 3GPP LTE-A and the IEEE 802.16j extensions of the baseline IEEE 802.16 system. In this talk an overview of the relaying standardization activities is given with functional features taken by the industry. Along with the standardization landscape, we will highlight related base station relay station design and deployment issues that create a strong motivation for the relay deployment. In addition, we will present an overview of competing solutions for the in-door coverage, such as femto cells.

Bio

Alexander Sayenko obtained the BSc degree from the Kharkov State University of RadioElectronics (Ukraine) in 2001. In 2002, he received the MSc degree from the University of Jyväskylä (Finland). After enrolling to the PhD program, he focused on scheduling, the QoS, network management and signaling mechanisms for the core wired networks. While working on the signaling solutions, he took part in the IETF NSIS and TS WGs. Starting from 2007, he worked for Nokia Research Center as a senior research engineer. His responsibility was terminal architectures and the resource and power management solutions for mobile terminals. In 2008, he joined Nokia Siemens Networks as a senior specialist where his research responsibilities are simulation and performance analysis of wireless systems, such as IEEE 802.16 WiMAX and 3GPP HSPA+. Starting from 2007, he has been taking part in the WiMAX Forum in AWG and TWG working groups. His research interest include simulations, performance analysis and resource management in wireless and wired networks.

Prof. Silvia Giordano
Professor
University of Applied Science (SUPSI)
Ticino, Switzerland

The future is mobile (ad hoc) networking?

Abstract

In the last decade, mobile ad hoc networking has been suggested as a technology for realizing the ubiquitous computing vision. However, after more than ten years of research in this field, this promising technology has not yet entered the mass market. One of the main reasons for this is the lack of a pragmatic approach to the design of infrastructure-less multi-hop ad hoc networks. However, this paradigm was successfully applied in several classes of networks that are penetrating the mass market. In this tutorial, we discuss as examples mesh, opportunistic, vehicular, and sensor networks, where the multi-hop ad hoc paradigm is applied in a pragmatic way to extend the Internet and/or to support well-defined application requirements. In particular, we highlight how the proliferation of mobile devices is driving our reality toward a pervasive world, where all these classes of networks have concrete and effective use, as for example: location-based or social-based applications. We describe some examples of current and future application that can be realized only thanks to those classes of networks that exploit the mobile ad hoc networking paradigm.

Bio

Silvia Giordano is Professor at the University of Applied Science - SUPSI in Ticino, Switzerland. She is in the directorate of the Institute of Systems for Informatics and Networking (ISIN) at SUPSI, and head of the Networking Lab. She is teaching several courses in the area of: Wireless and Mobile Networking, Quality of Services and Networks Applications. Previously, she was on the faculty of the EPFL and of the University of Pisa. Since October 2001, she is also an associate researcher at CNR, Pisa. She is co-editor of the book "Mobile Ad Hoc Networking" (IEEE-Wiley 2004). She has published extensively on journals, magazines and conferences in the areas of quality of services, traffic control, wireless and mobile ad hoc networks. She has participated in several European ACTS/IST projects and European Science Foundation (ESF) activities. Since 1999 she serves as Technical Editor of IEEE Communications Magazine, and is currently the series co-editor of the new series on adhoc and sensor networks of the IEEE Communication Magazine. She is an area editor of the Elsevier journal Computer Communications (ComCom). She is also Editor of Ad hoc networks journal of Elsevier and Ad Hoc & Sensor Wireless Networks journal, Ocpscience. She was already co-editor of several special issues of JSAC, IEEE Communications Magazine and Baltzer MONET and Cluster Computing on mobile ad hoc networking and QoS networking. She is co-founder of the International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS), General chair of WoWMoM 2009, program vice-chair of PerCom 2009, program chair of MASS 2007, workshop chair of WoWMoM 2007, tutorial chair of MobiHoc 2006, general chair of the 2005 edition of IFIP conference WONS (Wireless On-demand Network Systems), co-founder of the International Workshop on Autonomic and Opportunistic Communication (AOC) and is/was on the executive committee and TPC of several international conferences, and serves as reviewer on transactions and journals, as well as for several important conferences. She is a member of IEEE Computer Society and IFIP WG 6.8. Her current research interests include opportunistic networking, wireless, mobile ad hoc and sensor networks and QoS and traffic control.

Prof. Yuri Ryzhikov
Professor
Saint-Petersburg Institute for Informatics and Automation,
Russian Academy of Sciences, Russia

Numerical Methods of the Queuing Theory and Their Program Realization

Abstract

Theoretical basis is considered and the structure of the software package for calculation of queuing systems with the substantial role of the factor of time is explained. Versions of a package are described.

Bio

Yu. I. Ryzhikov was born on October 10, 1933. Has survived through the blockade of Leningrad. In 1958 has finished engineering faculty of the Black Sea Supreme Naval School. Since 1962 works in Leningrad Military Air Academy named after A. F. Mozhajsky. He has defended the PhD thesis in 1965, doctor's of technical sciences in 1969 (both in the area of inventory control theory). Now he is the professor of faculty of a computer software, the Honorable professor of the Academy, the Honored worker of a science of the Russian Federation.

Since 2008 additionally he is the leading scientist of the St.-Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences. He is expert on computing methods, applied programming, numerical methods of the queuing theory, inventory control and "science on science", he has authored over 230 scientific contributions.

Dr. Leonid Perlovsky
Harvard University
USA

Communicating with Understanding. Cognition, Language, and Emotions

Abstract

Today communications are intended for human understanding. Computers transfer contents of images, texts, and speech into communicable codes, but do not understand these contents. Future communication systems will understand the meanings of what is communicated, will understand user needs, and will be a part of integrated human-computer systems, in which computers and human users will learn from each other. Cognitive research indicates that emotional mechanisms are fundamental to cognition and to interaction between cognition and language. Creating cognitive algorithms for understanding text, language, and surrounding world has met difficulties since the 1950s. The talk briefly reviews past mathematical difficulties of artificial intelligence and new mathematical techniques of dynamic logic (DL), which overcome these difficulties. DL evolve fuzzy concepts and contents into crisp ones. Computational and neural mechanisms of concepts, emotions, instincts are described; they are inseparable from perception and cognition. Engineering applications illustrate orders of magnitude improvement in recognition, data mining, fusion, financial predictions. DL is extended to language, to mechanisms of joint operations of language and cognition, and to understanding complex situations. The brain imaging experiments have confirmed mechanisms of DL and language-cognition interactions in the human brain. Development of algorithms involving emotional, conceptual, and language mechanisms is still at an incipient stage. The talk discusses the current state of art and future research directions. These include developing future adaptive self-improving web tools capable of learning and understanding contents, web search engines with human level understanding, relating engineering algorithms and human instinctual mechanisms, emotional intelligence and emotional contents of languages, understanding differences among languages and cultures in their emotional contents, and developing approaches to improve inter-cultural communication.

Bio

Dr. Leonid Perlovsky is Visiting Scholar at Harvard University, Technical Advisor and Principal Research Physicist at the Air Force Research Laboratory. His research interests include computational intelligence and neural networks; mathematical modeling of the mind and brain including higher cognitive functions, consciousness, emotions; abilities for beautiful, sublime, music; evolution of languages, cognition and cultures. He serves as Program Manager for DOD Semantic Web program and for several research projects. From 1985 to 1999 Chief Scientist at Nichols Research, a $0.5 B high-tech organization, leading the corporate research in intelligent systems, neural networks, sensor fusion, and data mining; previously, Professor at Novosibirsk University and New York University. He participated as a principal in commercial startups developing tools for natural language text understanding, biotechnology, and financial predictions. His financial company predicted the market crash following 9/11 a week before the event, apparently detecting illegal Al Qaeda trades, and later helped SEC tracking the perpetrators. Dr. Perlovsky delivered invited keynote and plenary talks, tutorial lectures at conferences and Universities worldwide; published about 60 papers in refereed scientific journals, 250 papers in conferences, authored 10 book chapters and three books, "Neural Networks and Intellect," Oxford University Press 2001 (currently in the 3rd printing); "Neurodynamics of Higher-Level Cognition and Consciousness" (co-author R. Kozma), Springer 2007' "Sapient Systems" (co-author R. Mayorga), Springer 2007. He leads an IEEE NNTC Task Force on The Mind and Brain; serves as a Member of the Board of Governors, International Neural Networks Society; Chair IEEE Boston Computational Intelligence Chapter, on several IEEE Committees, Organizing Committees for WCCI'06, IJCNN'07, Program Co-Chair for IJCNN'09, Program and General Chair for several IEEE conferences, Assistant Editor for "Transactions on Neural Networks," Editor-at-large for "Natural Computations," Editor-in-Chief for "Physics of Life Reviews." He is interviewed on Radio and TV about workings of the human mind. Dr. Perlovsky received prestigious National and International awards, including several Best Paper awards, IEEE Distinguished Member Award, Boston Section 2005; Dr. Charles E. Ryan Memorial Award for outstanding in-house scientific efforts and achievement 2007, Air Force Research Laboratory; International Neural Network Society Gabor Award, 2007; McLucas Award 2007 (the top scientific US Air Force award).

Prof. James P.G. Sterbenz
Professor
The University of Kansas, USA
and Lancaster University, UK

Resilience, Survivability, and Heterogeneity in the Postmodern Internet

Abstract

Society increasingly relies on computer networks in general, and the Internet in particular. The Internet has become indispensable to the routine operation of businesses and to the global economy. Governments depend on networks for their daily operation, service delivery, and response to natural disaster and terrorist attacks. Furthermore, the Internet is being used in ways not anticipated by its designers and evolution of the protocols, in particular: TCP, IP, DNS, HTTP. Emerging application paradigms and mashups coupled with usage scenarios that are increasingly disconnected and mobile challenge the current architecture. This has been recognized by research and development initiatives including NSF FIND (Future Internet Design), GENI (Global Environments for Network Innovation), and EU FIRE (Future Internet Research and Experimentation). We will focus on two key aspects of the future Internet: resilience and heterogeneity and then describe research in two domain-specific realms.

Highly dynamic mobile wireless networks present unique challenges to end-to-end communication, particularly caused by the time varying connectivity of high-velocity nodes combined with the unreliability of the wireless communication channel. Our research explores the tradeoffs in the location of functionality such as error control and location management for high-velocity multihop airborne-sensor networks and presents cross-layer optimizations between the MAC, link, network, and transport layers to enable a domain specific network architecture, which provides high reliability for telemetry applications. We have designed new transport, network, and routing protocols for this environment: TCP-friendly AeroTP, IP-compatible AeroNP, and AeroRP, which show significant performance improvement over the traditional TCP/IP/MANET protocol stack.

Weather Disruption-Tolerant Millimeter-Wave Mesh Networking Millimeter-wave networks have the potential to supplement fiber in providing high-speed Internet access, as well as backhaul for emerging mobile 3G and 4G services. However, due to the high frequency of operation (70-90 GHz), such networks are highly susceptible to attenuation from rain. Our research investigates mechanisms to overcome the disruptive effects of rain storms on network connectivity and service reliability. We propose two novel domain-specific predictive routing algorithms: P-WARP that uses real-time radar data to dynamically reroute traffic in advance of link failures, as well as a modified link-state algorithm XL-OSPF that uses cross-layering to instantaneously react to link failures. Simulations evaluate the effectiveness of the proposed algorithms based on data from real storms in the Midwest US.

Bio

Dr. James P.G. Sterbenz is Associate Professor of Electrical Engineering & Computer Science and on staff at the Information & Telecommunication Technology Center at the University of Kansas, and is a Visiting Professor of Computing in InfoLab 21 at Lancaster University in the UK. He has previously held senior staff and research management positions at BBN Technologies, GTE Laboratories, and IBM Research. His research interests include resilient, survivable, and disruption tolerant networking, future Internet architectures, active and programmable networks, and high-speed networking and components. He is currently in the NSF-funded FIND and GENI programs, and the EU-funded FIRE ResumeNet project. He received a doctorate in computer science from Washington University in 1991. He has been program chair for IEEE GBN and HotI, IFIP IWSOS, PfHSN, and IWAN, and is on the editorial board of IEEE Network. He is principal author of the book High-Speed Networking: A Systematic Approach to High-Bandwidth Low-Latency Communication.

ICUMT
Saint Petersburg, Russia 2009

PROGRAM AT A GLANCE

Monday, October 12, 2009

	8:45 - 10:00	10:00 - 10:30	10:30 - 12:30	12:30 - 13:30	13:30 - 14:15	14:15 - 14:45	14:45 - 19:00
Room A	Opening Keynote talk by Dr. V. Niemi	Coffee Break	WSN I	Lunch	Keynote talk by Dr. Alexander Sayenko	Coffee Break	WSN II
Room B			PHY I				PHY II Imaging
Room C			Protocols and techniques for wireless networks I				VANETs Protocols and techniques for wireless networks II
Room D			SASN 2009				SASN 2009
Room 4			SEACUBE 2009				SEACUBE 2009
Room 8			CWCN 2009				CWCN 2009
Room 7			UMSA 2009				UMSA 2009
Room 5	MENS 2009		MENS 2009		MENS 2009		MENS 2009

Tuesday, October 13, 2009

	9:00 - 9:45	9:45 - 10:15	10:15 - 12:35	12:35 - 13:20	13:20 - 14:15	14:15 - 14:45	14:45 - 18:45
Room A	Keynote talk by Prof. S. Giordano	Coffee Break	RMTfWC	Lunch	Keynote talk by Prof. Y. Ryzhikov Keynote talk by Dr. L. Perlovsky	Coffee Break	P2PDVE P2P I
Room B			CSPRENI Web technologies				Queueing Theory NGN techniques
Room C			NG-WANTES Optical Networks				CAMCD NGUNS RFID
Room D			SASN 2009				SASN 2009
Room 5			WI-OPT 2009				WI-OPT 2009
Room 6			OPNTDS 2009				OPNTDS 2009
Room 4	Nets4Cars		Nets4Cars		Nets4Cars		Nets4Cars

Wednesday, October 14, 2009

	9:00 - 9:45	9:45 - 10:15	10:15 - 12:35	12:35 - 13:30	13:30 - 15:30	15:30 - 16:00	16:00 - 19:00
Room A	Keynote talk by Prof. J.P.G. Sterbenz	Coffee Break	Traffic, queuing and congestion control P2P II	Lunch	Security I	Coffee Break	IP networking II Methods and algorithms for advanced technologies
Room B			IP networking I		[Distributed] Video		Energy efficiency in WSNs Coding techniques II Security II
Room C			Coding techniques I		WiMAX WSN III		Advanced applications and services Economical issues
Room 6			OPNTDS 2009		OPNTDS 2009		OPNTDS 2009
Room 9			ANVIT 2009		ANVIT 2009		ANVIT 2009
Room 7			WMCNT 2009		WMCNT 2009		WMCNT 2009
Room 5	RNDM 2009		RNDM 2009		RNDM 2009		RNDM 2009
Room 4	Nets4Cars		Nets4Cars		Nets4Cars		Nets4Cars
Room 8	P2PNET 2009		P2PNET 2009		P2PNET 2009		P2PNET 2009
Room 12	E-DTN 2009		E-DTN 2009		E-DTN 2009		E-DTN 2009

Monday, October 12, 2009

8:15	Registration
8:45 – 9:15	Opening
9:15 – 10:00	Keynote. Room A+B+C
10:00 – 10:30	Coffee Break
10:30 – 12:30	Technical presentations. Rooms A, B, C
12:30 – 13:30	Lunch
13:30 – 14:15	Keynote. Room A+B+C
14:15 – 14:45	Coffee Break
14:45 – 19:00	Technical presentations. Rooms A, B, C
19:30	Welcome Reception

Tuesday, October 13, 2009

8:30	Registration
9:00 – 9:45	Keynote. Room A+B+C
9:45 – 10:15	Coffee Break
10:15 – 12:35	Technical presentations. Rooms A, B, C
12:35 – 13:20	Lunch
13:20 – 13:35	Keynote. Room A+B+C
13:30 – 14:15	Keynote. Room A+B+C
14:15 – 14:45	Coffee Break
14:45 – 18:45	Technical presentations per each room
19:30	Bus Excursion

Wednesday, October 14, 2009

8:30	Registration
9:00 – 9:45	Keynote. Room A+B+C
9:45 – 10:15	Coffee Break
10:15 – 12:35	Technical presentations. Rooms A, B, C
12:35 – 13:30	Lunch
13:30 – 15:30	Technical presentations. Rooms A, B, C
15:30 – 16:00	Coffee Break
16:00 – 19:00	Technical presentations. Rooms A, B, C
19:30	Fare-the-well party

ICUMT
Saint Petersburg, Russia 2009

ICUMT 2009 TECHNICAL PROGRAM

Monday, October 12, 10:30 - 12:30

	Technical Session Title and Contents
Room A	**Wireless Sensor Networks I** Chair: Abdallah Makhoul (University of Pau, FR) **Location Aware Multihop Wireless Sensor Network** Tapio Heikkilä (Technical Research Centre of Finland, FI); Jari Rehu (Technical Research Centre of Finland, FI); Marko Korkalainen (Technical Research Centre of Finland, FI); Kalle Määttä (Technical Research Centre of Finland, FI); Vesa Pentikäinen (VTT Technical Research Centre of Finland, FI) **Centralized Boundary Discovery Algorithm for Anchor-Free Localization in Wireless Sensor Networks** Milan Simek (Brno University of Technology, CZ); Komosny Dan (Brno University of Technology, CZ); Ricardo M Silva (University of Coimbra, PT); Radim Burget (Brno University of Technology, CZ); Patrik Moravek (Brno University of Technology, CZ) **ADAL: A Distributed Range-Free Localization Algorithm Based on a Mobile Beacon for Wireless Sensor Networks** Esteban Guerrero (Beijing University of Aeronautics and Astronautics, CN); Huagang Xiong (Beihang University, CN); Qiang Gao (Beihang University, CN); Gabriel Cova (Beihang University (Beijing University of Aeronautics & Astronautics, CN); Ricardo Ricardo (Beijing University of Aeronautics and Astronautics, CN); Jose C Estevez Losada (Beihang University, CN) **Extending Middleware frameworks for Wireless Sensor Networks** Syed Rehan Afzal (Katholieke Universiteit Leuven, BE); Christophe Huygens (Katholieke Universiteit Leuven, BE); Wouter I Joosen (University of Leuven, BE) **Wireless Sensor Network for Swift Bird Farms Monitoring** Al-Khalid Othman (UNIMAS, MY); K.M. Lee (UNIMAS, MY), Hushairi Zen (Edith Cowan University, MY); Wan Azlan Wan Zainal Abidin (UNIMAS, MY); M.F. M Sabri (UNIMAS, MY) **Bailigh: Low Power Cross-Layer Data Gathering Protocol for Wireless Sensor Networks** Wojciech Bober (University College Dublin, IE); Chris J Bleakley (University College Dublin, IE)
Room B	**PHY I** Chair: Youssef Nasser (Institut National des Sciences Appliqu, FR) **Downlink Scheduling for Intercell Interference Fluctuation Mitigation in Partial-Loaded Broadband Cellular OFDMA Systems** Angela Hernandez-Solana (University of Zaragoza, ES); Israel Guio (University of Zaragoza, ES); Antonio Valdovinos (University of Zaragoza, ES) **Per Sub-block Equalization and Channel Estimation for Next Generation Handheld DVB** Paolo Baracca (University of Padova, IT); Stefano Tomasin (University of Padova, IT); Lorenzo Vangelista (University of Padova, IT);Nevio Benvenuto (University of Padova, IT); Alberto Morello (RAI CRIT Research Center, IT) **Empirical Calculation of Shadowing Deviation for Complex Indoor Propagation Topologies at 2.4 GHz** Theofilos Chrysikos (University of Patras, GR); Giannis Georgopoulos (University of Patras, GR); Stavros Kotsopoulos (Wireless Telecommunications Laboratory, GR)

Room B	**Orthogonal Well-Localized Weyl-Heisenberg Basis Construction and Optimization for Multicarrier Digital Communication Systems** Dmitry Petrov (Moscow state university, physical faculty, chair of mathematics, RU); Valery Volchkov (Moscow technical university of communication and informatics, RU) **A 2.4GHz 0.18um-CMOS Sub-Harmonic Mixer for Direct-Down Conversion Receivers** Gholamreza Baghersalimi (Guilan University, IR); Mitra Gilasgar (Guilan University, IR); Alireza Saberkari (IUST, IR) **Analysis on size miniaturization in printed circular disc monopole antennas for UWB communications** Ramu Pillalamarri (Jawaharal Nehru Tech, Univ. Kakinada, IN); SasiBhushana G (Andhra University, IN)
Room C	**Protocols and techniques for wireless networks I** Chair: Ian Wells (Swansea Metropolitan University, UK) **On the Adaptivity of today's Energy-Efficient MAC Protocols under varying Traffic Conditions** Philipp Hurni (University of Bern, CH); Torsten Braun (University of Bern, CH) **Adaptive Resource Control in 2-hop Ad-Hoc Networks** Yimeng Yang (University of Twente, NL); Geert Heijenk (University of Twente, NL); Boudewijn R. Haverkort (University of Twente, NL) **Cooperative RTS/CTS MAC Protocol with Relay Selection in Distributed Wireless Networks** He Xin (University of Agder, NO); Frank Y. Li (University of Agder, NO) **DiS-MAC: A MAC protocol for Sensor Networks used for Roadside and Highway Monitoring** Theodora Karveli (CTR, King's College London, UK); Konstantinos Voulgaris (CTR, King's College London, UK); Mohammad Ghavami (UCG, King's College London, UK); A.H. Aghvami (CTR, King's College London, UK) **A New Approach to the Design of Wireless Data Broadcasting Systems: An Analysis-Based Cost-Effective Scheme** Christos Liaskos (Aristotle University, GR); Sophia G Petridou (Aristotle University, GR); Georgios Papadimitriou (Aristotle University, GR)

Monday, October 12, 14:45 - 19:00

	Technical Session Title and Contents
Room A	**Wireless Sensor Networks II** Chair: Milan Simek (Brno University of Technology, CZ) **Cluster-based Perimeter-coverage Technique for Heterogeneous Wireless Sensor Networks** Andrey Koucheryavy (ZNIIS, RU); Ahmed Abd Elftah Salim (PhD student, RU)

Room A

Node Pattern Simulation of an Undersea Sensor Network using RF Electromagnetic Communications
Ian Wells (Swansea Metropolitan University, UK); Adam Davies (Swansea Metropolitan University, UK); Xianhui Che (Swansea Metropolitan University, UK); Paul Kear (Swansea Metropolitan University, UK); Gordon Dickers (Swansea Metropolitan University, UK); Xiaochun Gong (Swansea Metropolitan University, UK); Mark Rhodes (Wireless Fibre Systems Ltd, UK)

Realistic Physical Layer Modelling for Georouting Protocols in Wireless Ad-Hoc and Sensor Networks
Adnan Khan (University of Birmingham, UK); Costas Constantinou (University of Birmingham, UK); Ivan Stojmenovic (University of Ottawa, CA)

Simulation Tool for Wireless Sensor Network Constellations in Space
Walter Colitti (Vrije Universiteit Brussel, BE); Kris Steenhaut (Vrije Universiteit Brussel, BE); Bart Lemmens (Vrije Universiteit Brussel, BE); Joris Borms (Vrije Universiteit Brussel, BE)

An Adaptive Cross-Layer Multichannel QoS-MAC Protocol for Cluster Based Wireless Multimedia Sensor networks
Gholam Hossein Ekbatani Fard (Ferdowsi University of Mashhad, IR); Mohammad Hossien Yaghmaee Moghaddam (Ferdowsi University of Mashhad, IR); Reza Monsefi (Ferdowsi University of Mashhad (FUM), IR)

Data reduction using clustering method in wireless sensor network
Saeed Mirshams (University of Isfahan, IR); Kamal Jamshidi (University of Isfahan, IR); Ali Bohlooli (Student, IR); Abbas Dehghani (Isfahan University, IR)

Coverage and Adaptive Scheduling algorithms for Criticality Management on Video Wireless Sensor Networks
Abdallah Makhoul (University of Pau, FR); Rachid Saadi (University of Pau, FR); Pham CongDuc (Univ. of Pau, FR)

Two methods for body parameter analysis using Body Sensor Networks
Gianni Fenu (University of Cagliari, IT); Gary Steri (University of Cagliari, IT)

Ontology-based Abstractions for M2M Virtual Nodes and Topologies
Inge Gronbak (Telenor, NO); Pratik Biswas (Scientific Research Corporation, US)

Partial Network Coding with Cooperation: A Cross-layer Design for Multi-hop Wireless Networks
Mario Magana (oregonstate, US); Panupat Poocharoen (Oregon State University, US); Eduardo Alban (Oregon State University, US)

A Time-Power Efficient Fixed Point Single Purpose Processor for Mapping Using Ultrasound Sensors
Prabhakar Mishra (PES Institute of Technology, Bangalore, IN)

Efficient Coverage Criterion for Accurate Target Tracking Using Cooperative Wireless Sensor Networks
Mohamed Hamdi (Carthage University, TN); Nejla Essaddi (Carthage University, TN)

Room B

PHY II
Chair: Alexey Dudkov (NRPL Group, RU)

Effects of Rayleigh Cochannel Interference on Switch and Stay Diversity System over Correlated Rician Fading Channels
Aleksandra S. Panajotovic (Faculty of Electronic Engineering, University of Nis, RS); Mihajlo

Room B

Stefanovic (Faculty of Electronic Enginering, University of Nis, RS); Dragan Draca (Faculty of Electronic Engineering, University of Nis, RS); Ivana Petrovic (High school for electrotechnics and computer science, Belgrade, RS)

Linear detector performance in ill-conditioned MIMO OFDM channel
Rehoboam Radzokota (University of Cape Town, ZA); Eugene Golovins (University of Cape Town, ZA); Neco Ventura (University of Cape Town, ZA)

The Impact of Channel Reuse on the Performance of Multi-Hop Virtual MIMO Systems
Alberto Zanella (Istituto di Elettronica e di Ingegneria dell'Inform. e delle Telecomunicazioni, IT); Chiara Buratti (University of Bologna, IT)

A simulation analysis of anti-interference performance in EBPSK system
Man Feng (Southeast University, CN); WU Lenan (Southeast University, CN)

Relay selection for Multiuser MIMO Amplify-and-Forward relaying systems
MohammadAli Mohammadi (K.N.Toosi University of Technology, IR)

Analysis of Power Spectrum of Continuous Phase Waveform for Binary Modulation Communications
Feng He (Southeast University, CN); WU Lenan (Southeast University, CN)

Diversity Combining and Packet Size Adaptation for Maximizing Throughput of ARQ Protocols in AWGN and Fading Channel
Rajendrakumar Anantrao Patil (Indian Institute of Technology, Bombay, IN); Prasanna Chaporkar (IIT Bombay, IN); Abhay Karandikar (IIT Bombay, IN)

Single Parity Check Product Code in MB-OFDM UWB System
Norulhusna Ahmad (University of Technology Malaysia, MY); Norsheila Fisal (Universiti Teknologi Malaysia, MY); Sharifah K. Syed-Yusof (Universiti Teknologi Malaysia, MY)

Performance Degradation of OFDM Signals Passing Through Nonlinear Circuits
Mohammad Hossein Madani (Amirkabir University of Technology, IR); Abdolali Abdipour (Amirkabir University of Technology, IR);Abbas Mohammadi (Amirkabir University of Technology, IR)

Effective PRCs Positioning for PAPR Reduction Using PRCs in OFDM Systems
Chong Eng Tan (Universiti Malaysia Sarawak, MY)

Two-Dimensional Wavelet Transform Model for MC-CDMA
Salih Mohammed Salih (University of Anbar, IQ)

Imaging

Chair: Ebroul Izquierdo (Queen Mary, University of London, UK)

A Spectral Technique For Image Clustering
Elena Tsomko (Korea University, KR); Ebroul Izquierdo (Queen Mary, University of London, UK); Valia Guerra Ones (Queen Mary, University of London, UK); Hyoung-Joong Kim (Korea University, KR)

Performance Evaluation of Cooperative Peer Selection Methods for P2P Video-on-Demand
Masatoshi Kawarasaki (University of Tsukuba, JP), Kei Suzuki (University of Tsukuba, JP)

Room C

VANETs
Chair: Alexey Vinel (SPIIRAS, RU)

A multi-domain framework for Wireless Vehicular Sensor Network
Salvatore Flavio Pileggi (Polytechnic University of Valencia, ES)

Location Security in Geographic Ad Hoc Routing for VANETs
Ziwei Ren (Southern Polytechnic State University, US); Wenfan Li (Southern Polytechnic State University, US); Qing Yang (Auburn University, US); Shaoen Wu (University of Southern Mississippi, US); Lei Chen (Sam Houston State University, US)

WAVE/DSRC-based Intersection CollisionWarning System
Chia-Hsiang Chang (Institute for Information Industry, TW); Chih-Hsun Chou (Institute for Information Industry, TW); Cheng-Jung Lin (Institute for Information Industry, TW); Ming-Da Lee (Institute for Information Industry, TW)

Map-Based Location Service for VANET
Mounir Boussedjra (Esigelec-Irseem, FR); Joseph Mouzna (Esigelec-Irseem, FR); Pradeep Bangera (Manipal Institute of Technology, Manipal University, IN); Manohara Pai (Manipal Institute of Technology, Manipal University, IN)

A Platform for Secure Multi-Service Vehicular Communication
Mohamed Hamdi (Carthage University, TN); Mhamed Chammem (ISETCom, TN)

Protocols and techniques for wireless networks II
Chair: Alexander Sayenko (Nokia Siemens Networks, FI)

Simulation Analysis of Bluetooth Piconets´ Self-disturbance in Industrial Applications: a Case Study
Muhammad Kamran Khan (Ostwestfalen-Lippe University of Applied Sciences, DE); Ahmad Ali Tabassam (inIT - Institut Industrial IT, Ostwestfalen-Lippe University of Applied Sciences, DE); Farhan Azmat Ali (Gent University, BE)

FLS : a Fuzzy-based Location-Service in Mobile Ad-Hoc Wireless Networks
Amjad Osmani (Qazvin branch Azad university, IR); Abolfazl T. Haghighat (Islamic azad university of Qazvin, IR); Mehdi Kargahi (Tehran University, IR)

QoS-Aware Architecture for FHMIP Micromobility
Nuno Vasco Lopes (University of Minho, PT); Maria Joao M. R. da C. Nicolau (University of Minho, PT); Alexandre Santos (University of Minho, PT)

Limited Forwarding Capability in Wireless Networks with Relaying
Pejman Khadivi (Isfahan University of Technology, IR); Tahereh Nodehi (Isfahan University of Technology, IR); Hossein Saidi (Isfahan University of Technology, IR)

The Design of an Autonomic Element for Managing Emerging Networks and Services
John Strassner (Pohang University of Science and Technology (POSTECH), US); Sven van der Meer (Waterford Institute of Technology, IE); James W. Hong (POSTECH, KR)

Analyzing the Capacity of Wireless Ad Hoc Networks with Rate Adaptation Capability
Roya Rezagah (Amirkabir University of Technology, IR); Abbas Mohammadi (Amirkabir University of Technology, IR)

Defining Bandwidth Constraints with Cooperative Games
Edilayne M. Salgueiro (Federal University of Pernambuco, BR); Paulo Cunha (Federal University of Pernambuco, BR); Jose Augusto Suruagy Monteiro (Universidade Salvador, BR); Paulo Maciel (Federal University of Pernambuco, BR); Ricardo Salgueiro (Federal University of Sergipe, BR)

Room C	**Seamless Handoff Based on Network Discovery for Future Heterogeneous Mobile Networks** Ihsan Ul Haq (NWFP University of Engineering and TechnologyPeshawar, Pakistan, PK); Khawaja Yahya (NWFP University of Engineering and Technology, PK); James Irvine (University of Strathclyde, UK); Raziq Yaqub (Toshiba America Research, Inc., US); Tariq M Jadoon (Lahore University of Management Sciences, PK) **Guard Capacity Implementation in OPNET Modeler WiMAX Suite** Natalia Vassilieva (UPS, ES), Yevgeni Koucheryavy (Tampere University of Technology, FI), Francisco Barcelo (UPC, ES)

Tuesday, October 13, 10:15 - 12:35

	Technical Session Title and Contents
Room A	**Special session RMTfWC** Organized by: Ozgur Ertug (Gazi University, TR) Chair: Sergey Andreev (State University of Aerospace Instrumentation, RU) Invited Talk **Congestion in Randomly Deployed Wireless Ad-Hoc and Sensor Networks** Alonso Silva (INRIA, FR); Patricio Reyes (INRIA Sophia Antipolis, FR); Merouane Debbah (Supelec, FR) **Large System Analysis of Beamforming for MIMO Systems with Limited Training** Francisco Rubio (CTTC, ES); Dongning Guo (Northwestern University, US); Mike Honig (Northwestern University, US); Xavier Mestre (CTTC, ES) **Approximation to the Condition Number Distribution of Almost Square Matrices** Lu Wei (Helsinki University of Technology, FI); Olav Tirkkonen (Helsinki University of Technology, FI) **Finite Dimensional Statistical Inference** Antonia Masucci (Supelec, FR); Oyvind Ryan (University of Oslo, NO); Sheng Yang (Supelec, FR); Merouane Debbah (Supelec, FR) **Further Results on MIMO Networks Based on the Distribution of the Eigenvalues of Arbitrarily Correlated Wishart Matrices** Marco Chiani (University of Bologna, IT); Moe Win (Massachusetts Institute of Technology, US); Hyundong Shin (Kyung Hee University, KR)
Room B	**Special session CSPRENI** Chair: Eugene Golovins (University of Cape Town, ZA) **An Efficient Community-centric IPTV Deployment Model for Developing Regions** Keoikantse O.A Marungwana (University of Cape Town, ZA); Lesang Dikgole (University of Cape Town, ZA); Neco Ventura (University of Cape Town, ZA) **The Use of Resource List Servers in IMS Presence for Developing Networks** Michael J Pitman (University of Cape Town, ZA); Neco Ventura (University of Cape Town, ZA) **Monetizing IMS-Based IPTV through Personalized Advertising** Phillippa Rosa Wilson (University of Cape Town, ZA); Vitalis Gavole Ozianyi (University of Cape

Room B

Town, ZA); Neco Ventura (University of Cape Town, ZA)

An Evaluation of the QoS Capabilities of a NGN Test-bed
Bessie Malila (University of Cape Town, ZA)

Mobility In the IP Multimedia Subsystem Network Centric Mobility vs. Device Centric Mobility
Tapfuma Mvere (University of Cape Town, ZA)

Web technologies
Chair: Yevgeni Koucheryavy (TUT, FI)

Integrating QoS Management within a Web Service Architecture
Christos Chrysoulas (University of Patras, GR)

Popularity-based Partial Caching Management Scheme for Streaming Multimedia on Proxy Servers over IP Networks
Beomgu Kang (Hanyang University, KR); Eun-jo Lee (Hanyang University, KR); Sung-kwon Park (Hanyang univ., KR); HoSook Lee (ETRI (Electronics Telecommunications Research Institute) KR)

Room C

Special session NG-WANTES
Chair: Robil Daher (University of Rostock, DE)

Optimization of Multicast Routing Based on a Reliable Effective Framework in Wireless Mesh Networks
Ehsan Pourfakhar (Islamic Azad University, IR); Amir Masoud Rahmani (Science and research branch, Islamic Azad University, IR)

A Resource Allocation Algorithm for Cluster-based Cooperative MIMO in Wireless Sensor Networks
Xiaojun Wen (University of Edinburgh, UK)

A Multichannel Collision Free MAC Protocol for Wireless Ad Hoc Networks
Claudia Cormio (Politecnico di Bari, IT); Pietro Camarda (Politecnico di Bari, IT); Gennaro Boggia (Politecnico di Bari, IT); Luigi Alfredo Grieco (Politecnico di Bari, IT)

A Pre-Loading Mechanism for QoS Enhancement in Wireless Mesh Backbone Networks
Martin Krohn, Robil Daher, Alexander Gladisch and Djamshid Tavangarian (University of Rostock, DE)

Optical Networks
Chair: S.K.Sudheer (VIT University, IN)

Maximum Flow Based Routing and Wavelength Assignment
Pasquale Gurzi' (Vrije Universiteit Brussel (University of Brussels), BE); Walter Colitti (Vrije Universiteit Brussel, BE); Kris Steenhaut (Vrije Universiteit Brussel, BE); Ann Nowé (University of Brussels, BE)

Survivability on Optical Networks: Protecting the Protection
Alisson Souza (State University of Ceará, BR); Joaquim Celestino Júnior (State University of Ceará, BR); Ana Luiza Bessa Barros (Universidade Estadual do Ceará, BR); Antônio Sérgio Vieira (State University of Ceará, BR); Jessyca Silva (State University of Ceará, BR)

Optical Properties of Cirrus clouds during monsoon over Indian sub continent
Krishnakumar V (University of Kerala, IN)

Tuesday, October 13, 14:45 - 18:45

	Technical Session Title and Contents
Room A	**Special session P2PDVE** Chair: Laura Ricci (University of Pisa, IT) **Service and Resource Discovery Supports over P2P Overlays** Emanuele Carlini (IMT, Institutions Market, Technology, IT); Massimo Coppola (Institute of Information Science and Technologies (ISTI/CNR), IT); Patrizio Dazzi (ISTI, CNR, Pisa, IT); Domenico Laforenza (Information Science and Technologies Institute (ISTI), IT); Susanna Martinelli (isti, CNR, IT); Laura Ricci (University of Pisa, IT) **Coping with Hotspots: AOI Adaption Strategies for P2P Networked Virtual Environments** Stephan M Krause (Universität Karlsruhe (TH), DE) **Hierarchical P2P Overlays for DVE: An Additively Weighted Voronoi Based Approach** Michele Albano (University of Pisa, IT); Laura Ricci (University of Pisa, IT); Luca Genovali (IMT, IT) **Challenges in Designing an Interest-based Distributed Aggregation of Users in P2P Systems** Matteo Mordacchini (ISTI, CNR, Pisa, IT); Patrizio Dazzi (ISTI, CNR, Pisa, IT); Gabriele Tolomei (ISTI, CNR, Pisa, IT); Ranieri Baraglia (ISTI-CNR, IT); Fabrizio Sivestri (ISTI-CNR, IT); Salvatore Orlando (University of Venice, IT) **Discovery of Physical Neighbors for P2P 3D Streaming** Chang-Hua Wu (National Central University, TW); Shun-Yun Hu (National Central University, TW); Li-Ming Tseng (Dept. of Computer Science and Information Engineering, National Central University, Taiwan, TW) **Some Considerations on the Design of a P2P Infrastructure for Massive Simulations** Gennaro Cordasco (University of Salerno, IT); Rosario De Chiara (University of Salerno, IT); Ugo Erra (University of Salerno, IT);Vittorio Scarano (University of Salerno, IT) **Evaluation of P2P Overlays for AoI Management in Distributed Virtual Environments** Christian Bettinger (Trier University of Applied Sciences, DE); Rainer Oechsle (Trier University of Applied Sciences, DE); Markus Esch (University of Luxembourg, LU); Hermann Schloss (Univeristy of Trier, DE); Peter Sturm (University of Trier, DE) **Disconnection Prediction in Mobile P2P Networks using publish/subscribe** Massimiliano de Leoni (University of Rome "La Sapienza", IT); Massimo Mecella (SAPIENZA -- Universita' di Roma, IT); Paolo Manfre' (Faculty of Computer Engineering, IT); Franchi Valerio (Faculty of Computer Engineering, IT); Daniele Graziano (Faculty of Computer Engineering, IT) **P2P I** Chair: Laura Ricci (University of Pisa, IT) **Rewarding Techniques in Peer-to-peer Video Streaming Systems with Tree and Forest Topology** Paolo Giacomazzi (Politecnico di Milano, IT); Alessandro Poli (Politecnico di Milano, IT) **A COP for Cooperation in a P2P Streaming Protocol** María Elisa Bertinat (Universidad de la República, UY); Daniel De Vera (Universidad de la República, UY); Darío Padula (Universidad de la República, UY); Franco Robledo Amoza (Facultad de Ingeniería, Universidad de la República, UY); Pablo Rodríguez-Bocca (Universidad de la República, UY); Pablo Gabriel Romero (Universidad de la República, UY); Gerardo Rubino (Inria/Irisa, FR)

Room B

Special session on Queueing theory

Chair: Konstantin Samouylov (Peoples' Friendship University of Russia, RU)

Invited talk: Teletraffic Theory for Next Generation Wireless Systems and Services
Valeriy Naumov (University of Oulu, FI); Konstantin Samouylov (Peoples' Friendship University of Russia, RU)

A New Approach to Estimation Network Survivability
Olga Sokolova (Institute of Computational Mathematics and Mathematical Geophysics, RU); Anastasia Yurgenson (Institute of Computational Mathematics and Mathematical Geophysics SB RAS, RU)

Duplex Cyclic Polling System to Serve Mixed Queues
Olga Semenova (ZAO Research and Development Company "INSET", RU); Vladimir Vishnevsky (Russian Academy of Sciences, RU); Sergey Shpilev (Institute for Information Transmission Problems, RU)

Queueing Network with Negative Customers and the Route Change
Ciro D'Apice (University of Salerno, IT); Manzo Rosanna (University of Salerno, IT); Alexander V. Pechinkin (Institute of Informatics Problems, RAS, RU); Sergey Shorgin (Institute of Informatics Problems, RU)

Analitycal Model of Cell Supporting Dual Rate Speech Codec
Gely Basharin (Peoples' Friendship University of Russia, RU); Sergey Nikolaevich Klapouschak (People's Friendship University, RU); Abel Konnon (People's Friendship University, RU)

On the Resource Allocation Problem for a Multiservice Network Link with Unicast and Multicast Connections
Mikhail Luzgachev (Peoples' Friendship University of Russia, RU); Konstantin Samouylov (Peoples' Friendship University of Russia, RU)

Optimal Control of M/M/1 Queueing System with Constant Retrial Rate and Non-Reliable Removable Server
Dmitry Efrosinin (Peoples' Friendship University of Russia, RU); Olga Semenova (ZAO Research and Development Company "INSET", RU)

Queueing Systems with General Renovation
Ivan Zaryadov (Peoples' Friendship University of Russia, RU)

New model of nonhomogeneous traffic
Ciro D'Apice (University of Salerno, IT); Yury Khokhlov (Peoples' Friendship University of Russia, RU)

NGN techniques

Chair: Olav Tikkonen (Helsinki University of Technology, Fi)

A Two stage Genetically inspired algorithm for spectrum sharing between two UMTS operators
Gbenga Salami (University of Surrey, UK); Rahim Tafazolli (University of Surrey, UK)

Performance of relay-enabled uplink in cellular networks - a flow level analysis
Desislava Dimitrova (University of Twente, NL); Hans van den Berg (University of Twente, NL); Geert Heijenk (University of Twente, NL)

Concurrent MAC with Short Signaling for Multi-hop Wireless Mesh Networks
Vigneswara Rao (Universiti Teknikal Malaysia Melaka, MY); Mohd Riduan Bin Ahmad (Universiti Teknikal Malaysia Melaka, MY); Mohamad Kadim Haji Suaidi (Telecommunication Engineering, MY); Muhammad Syahrir Johal (Telecommunication Engineering, MY); Eryk Dutkiewicz (Macquarie University, AU)

Room C

Special session CAMCD

Chair: Vasos Vassiliou (University of Cyprus, CY)

Architecture for Context-Aware Multiparty Delivery in Mobile Heterogeneous Networks
Josephina Antoniou (University of Cyprus, CY); Susana Sargento (Instituto de Telecomunicaçoes, Universidade de Aveiro, Portugal, PT); Jose Simoes (Fraunhofer FOKUS, DE); Augusto Neto (Universidade Federal de Goiás, Brazil, BR); Christoforos Christoforou (University of Cyprus, CY); Mounir Kellil (CEAL-List, FR)

Exploiting User and Network Context for Intelligent Radio Network Access
Christian Mannweiler (University of Kaiserslautern, DE); Andreas Klein (University of Kaiserslautern, DE); Joerg Schneider (University of Kaiserslautern, DE); Hans D. Schotten (University of Kaiserslautern, DE)

Context Management and Reasoning for Adaptive Service Provisioning
Moltchanov Boris (Telecom Italia, IT); Michael Knappmeyer (University of Applied Sciences Osnabrück, DE); Omri Fuchs (IBM Haifa Research Lab, IL); Elio Paschetta (Telecom Italia, IT)

A Context-Aware Handoff Scheme and All-IP Mobile Multicast Service for Heterogeneous Wireless Networks
Chih-Chao Wen (National Chung Cheng University, TW); Cheng-Shong Wu (National Chung-Cheng University, TW); Hui-Kai Su (National Formosa University, TW)

Towards a Concept for Inclusion of Social Network Information as Context Information
Katarina Stanoevska-Slabeva (University of St. Gallen, CH); Thomas Wozniak (University of St. Gallen, CH); Isabella Hoffend (University of St. Gallen, CH); Jana Ebermann (University of St. Gallen, CH)

Special session NGUNS

Chair: Gyu Myoung Lee (SudParis, FR)

QoS Optimization of In-elastic Flows Stripped over Multiple Asymmetric Channels in Mobile Networks
Syed Zubair Ahmad (Mohammad Ali Jinnah University, Islamabad campus, PK); Muhammad Abdul Qadir (Mohammad Ali Jinnah University, PK); Muhammad Saeed Akbar (Mohammad Ali jinnah University, PK)

QoS Measurement Aspects for Triple Play Services
Tadeus Uhl (University of Applied Sciences Flensburg, DE)

Unified Policy Management in Next Generation Networks
Fabricio Gouveia (Fraunhofer FOKUS, DE); Alberto Diez Albaladejo (Fraunhofer FOKUS, DE); Irina Boldea (Technische Universität Berlin, DE); Thomas Magedanz (Fraunhofer FOKUS, DE)

An Adaptive Access Selection with Multple Attributes in Cognitive Radio Network
SeungKwon Baek (ETRI, KR)

RFID

Chair: Yevgeni Koucheryavy (TUT, FI)

New concept of RFID reader networks structure: hardware and software architecture
Vladimir Dashevsky (SPIIRAS, RU); Boris Sokolov (St. Petersburg Institute for Informatics and Automation of RAS, RU)

Wednesday, October 14, 10:15 - 12:35

	Technical Session Title and Contents
Room A	**Traffic, queuing and congestion control** Chair: Yoshitaka Takahashi (Waseda University, JP) **A Single-Server Queueing System with Modified Service Mechanism: An Application of the Diffusion Process** Yoshitaka Takahashi (Waseda University, JP); Yoshiaki Shikata (Shobi University, JP); Andreas Frey (University of Applied Sciences Osnabrueck, DE) **Traffic Performance for a Time-out Scheme Communication System** Kentaro Hoshi (Waseda University, JP); Sumito Iijima (Waseda University, JP); Yoshitaka Takahashi (Waseda University, JP);Naohisa Komatsu (Waseda University, JP) **Evaluating the performance of multi-path routing and congestion control in presence of network resource management** Luca Muscariello (Orange Labs, FR); Diego Perino (Orange Labs, FR) **Congestion Optimized Routing in Unidirectional De Bruijn WDM Networks in Presence of Node Faults** Monish Chatterjee (Asansol Engineering College, IN); Abhijit Sharma (Bengal Engineering & Science University, IN); Uma Bhattacharya (Bengal Engineering & Science University, IN) **P2P II** Chair: Yevgeni Koucheryavy (TUT, FI) **Multimedia File Exchange and P2P Social Networking: Efficient Allocation of Users into Communities of Interest** Pantelis N. Karamolegkos (National Technical University of Athens, GR); Nikolaos D. Doulamis (National Technical University of Athens, GR) **On the architecture and the design of P2P live streaming system schedulers** Athanasios Christakidis (University of Patras, GR); Nikolaos Efthymiopoulos (University of Patras, GR); Spyros Denazis (University of Patras, GR); Odysseas Koufopavlou (University of Patras, GR)
Room B	**IP networking I** Chair: Nuno Vasco Lopes (University of Minho, PT) **Assessing Data Quality by a Cross-Layer Approach** Mattia Monga (Universita degli Studi di Milano, IT); Sabrina Sicari (Universita degli Studi dell'Insubria, IT) **Analysis of Evolution Scenarios for End-to-end Quality of Services Provisioning in the Internet** Eugene Myakotnykh (Norwegian University of Science and Technology, NO); Bjarne E. Helvik (Norwegian University of Science and Technology, NO) **A Repair Mechanism for Reliable Multicast in Integrated Communication and Broadcast Networks** Hideya Yoshiuchi (Hitachi (China) Research and Development Corporation, JP); Jiping Lv (Hitachi (China) Research & Development Corporation, CN); Satoshi Yoshizawa (Hitachi (China) Research and Development Corporation, JP); Zhisheng Niu (Tsinghua University, CN)

Room B

A Syntactic Approach for Identifying Multi-Protocol Attacks
Bela Genge ("Petru Maior" University of Targu Mures, RO); Piroska Haller ("Petru Maior" University of Targu Mures, RO)

A workflow on the dynamic composition and distribution of orchestration for testbed provisioning
Christos Tranoris (University of Patras, GR); Spyros Denazis (University of Patras, GR); Anastsius Gavras (Eurescom, DE)

A Parameterized NoC Simulator Using OMNet++
Ruqaiya Al-Badi (Sultan Qaboos University, OM); Maha Al-Riyami (Sultan Qaboos University, OM); Nasser Alzeidi (Sultan Qaboos University, OM)

Room C

Coding techniques I

Chair: Alexey Dudkov (NRPL Group, RU)

An Adaptive and Complexity Reduced Decoding Algorithm for Convolutional Codes and its Application to Digital Broadcasting Systems
Jan Geldmacher (TU Dortmund University, DE); Klaus Hueske (TU Dortmund University, DE); Juergen Goetze (TU Dortmund University, DE)

Efficient Weakly-Constrained Codes for Mitigation of Patterning Effects in Digital Communications
Alex Shafarenko (University of Hertfordshire, UK); Misha P Fedoruk (ICT, Russian Academy of Science, 630090, Novosibirsk, RU);Anton Skidin (Instutute of Computational Technologies SB RAS, RU); Sergei Turitsyn (Aston University, UK)

Large-scale Face Images Retrieval: A distribution coding approach
Jean-Paul Kouma (Umea University, SE); Haibo Li (Umea University, SE)

On Hard and Soft Detection of Space-Time Block Codes by a Novel Soft Output Sphere Decoder
Alberto Vigato (University of Padova, IT); Nevio Benvenuto (University of Padova, IT); Stefano Tomasin (University of Padova, IT);Lorenzo Vangelista (University of Padova, IT)

An Efficient Pseudo-Codeword Search Algorithm for Belief Propagation Decoding of LDPC Codes
Shahkar Kakakhail (ENSEA/University of Cergy Pontoise, FR); Sylvain Reynal (ENSEA/University of Cergy Pontoise, FR); David Declercq (ETIS lab. ENSEA/UCP/CNRS UMR-8051, FR); Vincent Heinrich (STMicroelectronics, FR)

Joint Source-Channel Coding Using Typicality of Sequences
Mohammad Chiniforoushan (KNT University of Technology, IR); Mahmoud Ahmadian (KNT University of Technology, IR)

Wednesday, October 14, 13:30 - 15:30

	Technical Session Title and Contents
Room A	**Security I** Chair: Mohamed Hamdi (Carthage University, TN) **Towards Security in Decentralized Workflows** Zaharina Velikova (Fraunhofer SIT, DE); Julian H Schütte (Fraunhofer Institute SIT, DE); Nicolai Kuntze (Fraunhofer SIT, DE) **The influence of the cryptographic protocols on the quality of the radio transmission** Nikitin Valery (SUT, RU), Yurkin Dmitry (SUT, RU), Naveen Chilamkurti (University Melbourne, AU) **Protecting Location Privacy through Identity Diffusion** Lingyan Wang (Auburn University, US); Shaoen Wu (University of Southern Mississippi, US) **Key Distribution Scheme without Deployment Knowledge** Pranav Agrawal (Indian Institute of Science, IN); Joy Kuri (Indian Institute of Science, IN) **Pattern-based digital investigation of x-hole attacks in wireless networks** Slim Rekhis (University of the 7th of November at Carthage, TN); Noureddine A. Boudriga (University of Carthage, TN)
Room B	**[Distributed] Video** Chair: Alexander Chuikov (State University of Aerospace Instrumentation, RU) **Improved Reconstruction for Distributed Video Coding** Ralph Hänsel (University of Rostock, DE); Erika Müller (University of Rostock, DE) **Temporal scalability comparison of the H.264/SVC and Distributed Video Codec** Xin Huang (Technical University of Denmark, DK); Anna Ukhanova (Saint-Petersburg State University of Aerospace Instrumentation, RU); Eugeniy Belyaev (Saint-Petersburg State University of Aerospace Instrumentation, RU); Soren Forchhammer (Technical University of Denmark, DK) **Refining Fusion of Side Information for Transform Domain Distributed Multiview Video Coding** Yongmin Liu (Beijing University of Aeronautics and Astronautics, CN); Rong Ke Liu (Beihang University, CN) **A New Approach to Video Bandwidth Prediction** Michael P McGarry (University of Akron, US); Rami Haddad (University of Akron, US); John McAlarney (University of Akron, US) **Efficient Motion Estimation For Video Coding In Wireless Surveillance Applications** Muhammad Akram (Queen Mary University of London, UK); Naeem Ramzan (Queen Mary, University of London, UK); Ebroul Izquierdo (Queen Mary, University of London, UK) **H.264/AVC analysis of quality in wireless channel** Alexander Chuikov (State University of Aerospace Instrumentation, RU)
Room C	**WiMAX** Chair: Alexander Sayenko (NSN, FI) **IEEE 802.16m Energy-Efficient Sleep Mode Operation Analysis with Mean Delay Restriction** Alexey Anisimov (State University of Aerospace Instrumentation, RU); Sergey Andreev (Saint-Petersburg State University of Aerospace Instrumentation, RU); Andrey Turlikov (Saint-Petersburg State University of Aerospace Instrumentation, RU)

Room C

Aspects of bandwidth scheduling in WiMAX subscriber station
Sergey Berezin (Motorola, RU); Anton Prokopenko (Motorola, RU); Yevgeny Ryannel (University of Testing, RU)

Evaluation of guard channel admission control schemes for IEEE 802.16 with integrated nb-LDPC codes
Adam Flizikowski (University of Technology and Life Sciences, PL)

WSN III
Chair: Gyu Myoung Lee, SudParis (France)

A Fair Routing Protocol Using Generic Utility Based Approach in Wireless Sensor Networks
AmirHossien Mohajerzadeh (Ferdowsi University of Mashhad, IR); Mohammad Hossien Yaghmaee Moghaddam (Ferdowsi University of Mashhad, IR)

Wednesday, October 14, 16:00 - 19:00

	Technical Session Title and Contents

Room A

IP networking II
Chair: Hiroshi Fujinoki (Southern Illinois University Edwardsville, US)

Analyses on Ideal Network Structures to Improve Reliability by Multi-path and Multi-homing BGP Routing in the Internet
Hiroshi Fujinoki (Southern Illinois University Edwardsville, US)

Towards real implementations of dynamic robust routing paradigms exploiting path diversity
Luca Muscariello (Orange Labs, FR); Diego Perino (Orange Labs, FR); Bruno Nardelli (Rice University, US)

The Study of Overlay-Multicast-Based Internet Broadcasting in Parallel Media Stream Server
Mi-Young Kang (Chonnam National University, KR)

Methods and algorithms for advanced technologies
Chair: Sergey Andreev (State University of Aerospace Instrumentation, RU)

Bio-inspired Self-Organizing Architecture for Distributed Components
Kiwon Yeom (Korea Institute of Science and Technology, KR)

Data migration in the scalable storage cloud
Dmitry L Petrov (St. Petersburg Electrotechnical University, RU); Yury Tatarinov (St. Petersburg Electrotechnical University, RU)

Testing the Properties of Large Quasigroups
Eliska Ochodkova (VSB - Technical University of Ostrava, CZ); Jiri Dvorsky (Technical University of Ostrava, CZ); Vaclav Snasel (VSB-Technical University of Ostrava, FEECS, CZ); Ajith Abraham (Norwegian University of Science and Technology, NO)

A Selective-Abstraction Modeling Approach for Simplifying Computer Network Studies
Xianhui Che (Swansea Metropolitan University, UK); Ian Wells (Swansea Metropolitan University, UK)

Room A

AIM Architecture Evaluation and Validation Testbed
Maria Barros (Eurescom, DE); Halid Hrasnica (Eurescom, DE); Spyros Tombros (Keletron, GR); Michael Caragiozidis (Keletron, GR)

A Machine Vision of Non-Supervised Learning System
Samia Jones (Texas A&M University at Qatar, QA)

Room B

Energy efficiency in WSNs
Chair: Yimeng Yang (University of Twente, NE)

An Efficient Energy Aware Routing Protocol for Real Time Traffic in Wireless Sensor Networks
AmirHossien Mohajerzadeh (Ferdowsi University of Mashhad, IR); Mohammad Hossien Yaghmaee Moghaddam (Ferdowsi University of Mashhad, IR)

Three-layer Architecture Model for Energy Conservation in Wireless Sensor Networks
Sugam Sharma (Iowa State University USA, US)

Joint Power Control, Scheduling and Routing for Multicast in Multihop Energy Harvesting Sensor Networks
Vinay Joseph (Indian Institute of Science, Bangalore, IN); Vinod Sharma (Indian Institute of Science, IN); Utpal Mukherji (Indian Institute of Science, IN); Kashyap M Jataprolu (Indian Institute of Technology, Madras, IN)

Coding techniques II
Chair: Alexey Dudkov (NRPL Group, RU)

Experimental Application of Channel Coding for Wireless Transmission of Compressed Video Data
Tomas Fryza (Brno University of Technology, CZ); Jan Prokopec (Brno University of Technology, CZ)

On Turbo Code Interleavers Optimized by Bit Error Rate Evolution and Free Distance Evolution
Pavel Kromer (VSB-Technical University of Ostrava, FEECS, CZ); Vaclav Snasel (VSB-Technical University of Ostrava, FEECS, CZ); Jan Platos (VSB-Technical University of Ostrava, FEECS, CZ); Ouddane Nabil (VSB-TUO Technical university of Ostrava, CZ)

Security II
Chair: Alexey Dudkov (NRPL Group, RU)

Dynamic Iris Localisation: A Novel Approach suitable for Fake Iris Detection
Rajesh Mungasaji Bodade (Military College of Telecommunication Engineering, IN); Sanjay Nilkanth Talbar (Shri Guru Gobind Singhji Insitute of Engineering andTechnology, IN)

Room C

Advanced applications and services
Chair: Manfred Schneps-Schneppe (Ventspils University College, LV)

Data reverse engineering on a smartphone
Fabio Dellutri (Universita degli Studi di Roma "Tor Vergata", IT); Vittorio Ottaviani (University of Rome "Tor Vergata", IT); Daniele Bocci (University of Rome "Tor Vergata", IT); Giuseppe F. Italiano (University of Rome "Tor Vergata", IT); Gianluigi Me (Universita di Roma "Tor Vergata", Dipartimento di Informatica, Sistemi e Produzione, IT)

Implementation and Testing of an EPC global-aware Discovery Service for Item-level Traceability
Luigi Patrono (University of Salento, IT); Ugo Barchetti (University of Salento, IT); Alberto Bucciero (University of Salento, IT); Mario De Blasi (University of Lecce, IT); Luca Mainetti (University of Salento, IT)

Room C

OCR for Malayalam Script Using Neural Networks
Abdul Rahiman M (Karpagam University, Coimbatore, IN)

Economical issues

Chair: Yevgeni Koucheryavy (TUT, FI)

A Business Model for Managing Municipal Metropolitan Area Networks: The Special Case of Greece
Costas Troulos (National Technical University of Athens, GR); Vassilis Merekoulias (National Technical University of Athens, GR);Basil Maglaris (National Technical University of Athens, Greece, GR)

Minimum CAPEX/OPEX Design of Optical Backbone Networks
Abdallah Jarray (Universite de Montreal, CA); Brigitte Jaumard (Concordia University, CA); Alain Houle (Université de Sherbrooke, CA)

ICUMT
Saint Petersburg, Russia 2009

WORKSHOPS TECHNICAL PROGRAM

The International Workshop on Scalable Ad Hoc and Sensor Networks, SASN 2009

Chairs: Marcello Caleffi (University of Naples Federico II, IT) and Luigi Paura (University of Naples Federico II, IT)

Monday, October 12, 2009

Room D

8:45 – 9:15 Opening (Room A+B+C)

9:15 – 10:00 Keynote Talk by Dr. V. Niemi (Nokia Research Center, Switzerland) (Room A+B+C)

10:00 – 10:30 Coffee Break

10:30-12:20 Work in Progress track

Chair: Dr. Angela Sara Cacciapuoti (University of Naples Federico II, IT)

An Approach to Designing Lightweight Security Protocol on Binary CDMA Sensor Networks
Roh Jae Hoon (Korea Telecom, KR); Mi-Yeon Kim (KT korea, KR); HoKun Moon (KT, KR)

A Gateway Solution for IPv6 Wireless Sensor Network
Gopinath Rao Sinniah (MIMOS Berhad, MY); Zeldy Suryady (MIMOS Berhad, MY); Usman Sarwar (MIMOS Bhd, MY); Mazlan Abbas (Mimos Bhd, MY)

A Neighbor-Based Detection Scheme for Wireless Sensor Networks Against Node Replication Attacks
Lee-Chun Ko (Industrial Technology Research Institute, TW); Hung-Yuan Chen (Industrial Technology Research Institute, TW); Guan-Rong Lin (Industrial Technology Research Institute, TW)

Design a Cross-Layer Integrated MAC and Routing Protocol for Surveillance Systems Using WSNs
Samira Niafar (Iran University of Science and Technology, IR); Hadi Shahriar Shahhoseini (Iran University of Science and Technology, IR)

Iterative Concatenated Zigzag Decoding and Blind Data Fusion of Correlated Sensors
Javier Del Ser (TECNALIA-Telecom, ES); Javier Garcia-Frias (University of Delaware, US); Pedro M. Crespo (CEIT and TECNUN (University of Navarra), ES)

Multipath Geographic Routing Using False Destinations
Daniele De Caneva (University of Udine, IT); Pier Luca Montessoro (University of Udine, IT); Davide Pierattoni (University of Udine, IT)

Process Algebra to Model Self-Organizing Behavior in Wireless Sensor Networks
Dalimir Orfanus (University of Paderborn, DE); Tales Heimfarth (Federal University of Rio Grande do Sul, BR); Flavio Rech Wagner (Federal University of Rio Grande do Sul, BR)

Scalability in an Adaptive Cooperative System for Wireless Sensor Networks
Marcelo Sousa (Federal University of Campina Grande, BR); Ajey Kumar (Federal University of Campina Grande, BR); Marcelo Sampaio de Alencar (Universidad Federal de Campinha Grande, BR); Waslon Terllizzie Araujo Lopes (AREA1 - College of Science and Engineering, BR)

12:30 – 13:30 Lunch

13:30 – 14:15 Keynote talk by Dr. Alexander Sayenko (Nokia Siemens Networks, Finland) (Room A+B+C)

14:15 – 14:45 Coffee Break

Room D

14:45-16:00 Tracking and Localization track

Chair: Prof. Sergio Palazzo, University of Catania (IT)

A Prediction-based Algorithm for Target Tracking in Wireless Sensor Networks
Seyed Mahdi Rashti (Tarbiat Modares University, IR); Mohsen Mollanoori (Tarbiat Modares University, IR); Morteza Shahriari Nia (Tarbiat Modares University, IR); Nasrollah Moghadam Charkari (Tarbiat Modares University, IR)

Discrete Probabilistic DV-Hop: Reengineering High Accuracy Range-free WSN Localization
Morteza Shahriari Nia (Tarbiat Modares University); Mohsen Khaksar (Tarbiat Modares University); Seyed Mahdi Rashti (Tarbiat Modares University); Nasrollah Moghadam Charkari (Tarbiat Modares University)

Free-CLASH - Improved Localization Free Clustering in Large Wireless Sensor Networks
Jakob Salzmann (University of Rostock, DE); Ralf Behnke (University of Rostock, DE); Jiaxi You (University of Rostock, DE); Dirk Timmermann (University of Rostock, DE)

Mobile Object Tracking Techniques in Wireless Sensor Networks
Marjan Naderan (Amirkabir University of Technology, IR); Mehdi Dehghan (Amirkabir University of Technology, IR)

16:15-18:55 WSN track

Chair: Prof. Sergio Palazzo, University of Catania (IT)

Agent-based Scalable Design of a Cross-Layer Security Framework for Wireless Sensor Networks Monitoring Applications
Luigi Pomante (University of L'Aquila, IT); Fortunato Santucci (University of l'Aquila, IT); Marco Pugliese (University of L'Aquila, IT)

A Bayesian Analysis of Compressive Sensing Data Recovery in Wireless Sensor Networks
Riccardo Masiero (University of Padova, IT); Giorgio Quer (Universita' di Padova, IT); Michele Rossi (University of Padova, IT); Michele Zorzi (University of Padova, IT)

SecSyWiSe: A Secure Time Synchronization Scheme in Wireless Sensor Networks
Johannes Barnickel (RWTH Aachen University, DE); Ulrike Meyer (RWTH Aachen, DE)

Mobility-Aware MAC Protocol for Delay-Sensitive Wireless Sensor Networks
Shereen Abd El-Hameed (The Faculty of Computers and Information Sciences, Ain Shams University, EG); Hossam Faheem (Ain shams, EG); Eman Shaaban (Ain Shams University, EG); Said Ghoneimy (Ain Shams University, EG)

Improving Geometric Distance Estimation for Sensor Networks and Unit Disk Graphs
Arne Vater (University of Freiburg, DE); Christian Schindelhauer (University of Freiburg, DE); Faisal Aslam (University of Freiburg, Germany, DE)

micro-XMPP: Lightweight Implementation for Low Power Operating System Contiki
Adrian J Hornsby (Tampere University of Technology, FI); Eloi Bail (Tampere University of Technology, FI)

19:30 Welcome Reception at Pulkovskaya Park Inn

Tuesday, October 13, 2009

Room D

9:00 – 9:45 Keynote Talk by Prof. Silvia Giordano (University of Applied Science (SUPSI) Ticino, Switzerland) (Room A+B+C)

9:45 – 10:15 Coffee Break

Room D

10:15-12:20 MANET and VANET track

Chair: Dr. Pan Hui, University of Cambridge, UK/ Deutsche Telekom Laboratories

Analysis of DSRC based MAC protocols for VANETs
Shankar Yanamandram (San Francisco State University, US); Hamid Shahnasser (San Francisco State University, US)

A MANET protocol considering link stability and bandwidth efficiency
Celimuge Wu (University of Electro-Communications, JP)

A theoretical model for opportunistic routing in ad hoc networks
Angela Sara Cacciapuoti (University of Naples Federico II, IT); Marcello Caleffi (University of Naples "Federico II", IT); Luigi Paura (Universita' di Napoli Federico II, IT)

Bandwidth Efficient Multicast Routing in Multi-channel Multi-radio Wireless Mesh Networks
Hoang Lan Nguyen (York University, CA); Uyen Trang Nguyen (York University, CA)

On the efficiency and trustworthiness of DHT-based P2P search algorithms in mobile wireless networks
Laura Galluccio (University of Catania, IT); Sergio Palazzo (University of Catania, IT); Corrado Rametta (University of Catania, IT)

12:20 – 13:20 Lunch

13:20 – 13:35 Keynote talk by Prof. Yuri Ryzhikov (Saint-Petersburg Institute for Informatics and Automation, Russian Academy of Sciences, Russia) (Room A+B+C)

13:35 – 14:15 Keynote talk by Dr. Leonid Perlovsky (Harvard University, USA) (Room A+B+C)

14:15 – 14:45 Coffee Break

14:45-16:50 Scheduling + Network Interworking track

Chair: Prof. Luigi Paura, University of Naples Federico II, IT

Integration of Ad-Hoc Networks with Infrastructured Systems for Multicast Services Provisioning
Silverio Carlo Spinella (University Mediterranea of Reggio Calabria, IT); Giuseppe Araniti (University "Mediterranea" of Reggio Calabria, IT); Antonio Iera (University "Mediterranea" of Reggio Calabria, IT); Antonella Molinaro (University "Mediterranea" of Reggio Calabria, IT)

Closed-form scheduling policies for delay-sensitive traffic over fading channels
Enzo Baccarelli (University of Rome ""La Sapienza"", IT); Nicola Cordeschi (''Sapienza" University of Rome, IT); Mauro Biagi (Sapienza University of Rome, IT); Tatiana Patriarca (University of Rome, Sapienza, IT); Valentina Polli (University of Rome, Sapienza, IT)

QoS Aware Distributed Matching Algorithm for Link Scheduling in Wireless Networks
Ali Ghiasian (Isfahan University of Technology, IR); Hossein Saidi (Isfahan University of Technology, IR)

Dynamic Gateway Selection for Cross-Domain Routing with the XLayer Communications Substrate
Marco Mattos Carvalho (Florida Institute for Human and Machine Cognition, US); Carlos Perez (Florida Institute for Human and Machine Cognition, US); Adrian Granados (Florida Institute for Human and Machine Cognition, US)

Secure Aggregation in Hybrid Mesh/Sensor Networks
Roberto Riggio (Create-Net, IT); Sabrina Sicari (Universita' degli Studi dell'Insubria, IT)

19:30 Bus excursion

International Workshop on Ubiquitous Multimedia Systems and Applications, UMSA 2009

Chairs: Marco Roccetti (University of Bologna, IT) and Claudio Palazzi (University of Padua, IT)

Monday, October 12, 2009

Room 7

8:45 – 9:15 Opening (Room A+B+C)

9:15 – 10:00 Keynote Talk by Dr. V. Niemi (Nokia Research Center, Switzerland) (Room A+B+C)

10:00 – 10:30 Coffee Break

10:30-12:30 Session I

Homura and Net-Homura: The Creation and Web-based Deployment of Cross-Platform 3D Games
Christopher Carter (Liverpool John Moores University, UK); Abdennour El Rhalibi (Liverpool John Moores University, UK); Madjid Merabti (Liverpool John Moores University, UK); Marc Price (BBC Research, UK)

FROV: a distributed broadcast protocol for VANET Experimental results
Alessandro Amoroso (University of Bologna, IT); Luca Gandolfi (University of Bologna, IT); Simone Grassilli (University of Bologna, IT); Marco Roccetti (University of Bologna, IT)

On the Making of an Ubiquitous and Altruistic Application for Medical First Responses
Alessandro Amoroso (University of Bologna, IT); Marco Roccetti (University of Bologna, IT)

Multimodal control via heterogeneous devices
Andrey Ronzhin (SPIIRAS, RU); Victor Budkov (SPIIRAS, RU); Alexey Karpov (SPIIRAS, RU); Milos Zelezny (University of West Bohemia in Pilsen, CZ)

Towards user-centric configuration and deployment of multimedia services: A semantic framework
Jorge R. Gomez-Montalvo (LAAS-CNRS, Université de Toulouse, FR); Ernesto Exposito (LAAS-CNRS, Université de Toulouse, FR), Myriam Lamolle (IUT de Montreuil, Université Paris VIII, FR)

12:30 – 13:30 Lunch

13:30 – 14:15 Keynote talk by Dr. Alexander Sayenko (Nokia Siemens Networks, Finland) (Room A+B+C)

14:15 – 14:45 Coffee Break

14:45-18:15 Session II

Information Flow Security for Service Compositions
Sabina Rossi (Università Ca' Foscari di Venezia, IT); Damiano Macedonio (Università Ca' Foscari di Venezia, IT)

A Smart Access Point Solution for Heterogeneous Flows
Claudio Palazzi (University of Padova, IT); Nicola Stievano (University of Padova, IT); Marco Roccetti (University of Bologna, IT)

Room 7

Multiplayer Games over Wireless Ad hoc Networks: Energy and Delay Analysis
Arnaud Kaiser (University of Paris 13, FR), Nadjib Achir (University of Paris 13, FR); Khaled Boussetta (University of Paris 13, FR)

DroidGlove: An Android-Based Application for Wrist Rehabilitation
Dario Deponti (University of Milano, IT); Dario Maggiorini (University of Milano, IT); Claudio Palazzi (University of Padova, IT)

Hacking Nintendo Wii to paint virtual graffiti
Paola Salomoni (University of Bologna, IT); Ludovico Muratori (University of Bologna, IT); Silvia Mirri (University of Bologna, IT); Francesco Pozzi (University of Bologna, IT);

Mobile Vision Robot Using the SIFT Algorithm for Object Recognition
Jin-Suk Kang (Chungbuk National University, KR); Jeon Joongnam (Chungbuk National University, KR); Jongan Park (Chosun University, KR); Yougeun An (Chosun University, KR)

On Developing Smart Applications for VANETs: Where are we now? Some Insights on Technical Issues and Open Problems
Gustavo Marfia (University of Bologna, IT); Giovanni Pau (University of California Los Angeles, US); Marco Roccetti (University of Bologna, IT)

Virtual business networks with Cloud Computing and Virtual Machines
Giuseppe Minutoli (University of Messina, IT); Maria Fazio (University of Messina, IT); Maurizio Paone (University of Messina, IT); Antonio Puliafito (University of Messina, IT)

19:30 Welcome Reception at Pulkovskaya Park Inn

International Workshop on Management of Emerging Networks and Services, MENS 2009

Chair: Jianguo Ding (Norwegian University of Science and Technology Norway, NO)

Monday, October 12, 2009

Room 5

9:00-10:00 Session I

Management Challenges for Emerging Networks and Services
Jianguo Ding (Norwegian University of Science and Technology, NO); Ilangko Balasingham (Norwegian University of Science and Technology, NO); Pascal Bouvry (University of Luxembourg, LU)

A Study of Token Traversal Strategies on Tree-Based Backbones for Mobile Ad Hoc - Delay Tolerant Networks
Apivadee Piyatumrong (University of Luxembourg, LU); Pascal Bouvry (University of Luxembourg, LU); Frédéric Guinand (Le Havre University, FR); Kittichai Lavangnananda (King Mongkut's University of Technology Thonburi, TH)

10:00 – 10:30 Coffee Break

10:30-12:30 Session II

Open Framework Middleware for Intelligent WSN Topology Adaption in Smart Buildings
Rob Brennan (Trinity College Dublin, IE); Wei Tai (Trinity College Dublin, IE); Declan O'Sullivan (Trinity College Dublin, IE); Muhammad Sohaib Aslam (Cork Institute of Technology, IE); Susan Rea (Cork Institute of Technology, IE); Dirk Pesch (Cork Institute of Technology, IE)

A Self-Configuration Management Model for Clustering-based MANETs
Yang Yang (Beijing University of Posts and Telecommunications, CN); Jian Chen (Zhongxing Telecom Equipment Company, CN); Leiling Duan (Zhongxing Telecom Equipment Company, CN), Luoming Meng (Beijing University of Posts and Telecommunications, CN); Zhipeng Gao (Beijing University of Posts and Telecommunications, CN); Xuesong Qiu (Beijing University of Posts and Telecommunications, CN)

Private ENUM based Number Portability Administrative System Evaluation
Jan Rudinsky (Czech Technical University in Prague, CZ)

12:30 – 13:30 Lunch

13:30-14:15 Session III

OOTN -An Ontology Proposal for Optical Transport Networks Maxwell
E. Monteiro (Federal University of Espirito Santo - UFES, BR); Anilton Garcia (UFES - Espírito Santo, BR); Marcelo Segatto (Federal University of Espírito Santo, BR); Pedro Barcelos (Federal University of Espirito Santo - UFES, BR); Ricardo Simoes (Federal University of Espirito Santo - UFES, BR)

An Unknown Input Sliding Observer for Anomaly Detection in TCP/IP Network
Sandy Rahme (Laas-cnrs, FR); Yann Labit (Laas-cnrs, FR); Frederic Gouaisbaut (Laas-cnrs, FR)

14:15 – 14:45 Coffee Break

Room 5

14:45-16:30 Session IV

A Graphical User Interface for Policy Composition in CIM-SPL
Pedro Gonçalves (Universidade de Aveiro, PT); Carlos Figueira (UNiversidade de Aveiro, PT); Ricardo Azevedo (Portugal Telecom Inovaçao, PT); Rui L Aguiar (University of Aveiro, PT); José Luis Oliveira (U. Aveiro / I.T. Aveiro, PT)

A Revised Taxonomy of Mobility-Related Requirements
Sundar Gopalakrishnan (Norwegian University of Science and Technology (NTNU), NO); Guttorm Sindre (Norwegian University of Science and Technology , NO)

A Statistical-Feature-Based Approach to Internet Traffic Classification Using Machine Learning
Shijun Huang (Shanghai Jiao Tong University, CN); Kai Chen (Shanghai Jiao Tong University, CN); Chao Liu (Shanghai Jiao Tong University, CN); Alei Liang (Shanghai Jiao Tong University, CN); Haibing Guan (Shanghai Jiao Tong University, CN)

19:30 Welcome Reception at Pulkovskaya Park Inn

International Workshop on Sensing and Acting in Ubiquitous Environments, SEACUBE 2009

Chairs: Dominik Lieckfeldt (Univesity of Rostock, DE), Jiaxi You (University of Rostock, DE), Christiane Plociennik (Univesity of Rostock, DE), Christoph Burghardt (University of Rostock, DE)

Monday, October 12, 2009

Room 4

8:45 – 9:15 Opening (Room A+B+C)

9:15 – 10:00 Keynote Talk by Dr. V. Niemi (Nokia Research Center, Switzerland) (Room A+B+C)

10:00 – 10:30 Coffee Break

10:30-12:30 Session 1

Coping with variability of location sensing in largescale ubicomp environments
Petr Aksenov (Hasselt University, BE); Kris Luyten (Hasselt University,BE); Karin Coninx (Hasselt University, BE)

Evolution of Context-aware User Profiles
Jan Thomsen (Condat AG, DE); Yves Vanrompay (Katholieke Universiteit Leuven, BE); Yolande Berbers (Katholieke Universiteit Leuven, BE)

SBCL-Improved Centroid Estimation
Ralf Behnke (University of Rostock, DE); Jakob Salzmann (University of Rostock, DE); Dirk Timmermann (University of Rostock, DE)

Making Task Modeling Suitable for Smart Environments
Maik Wurdel (University of Rostock, DE); Christoph Burghardt (University of Rostock, DE); Peter Forbrig (University of Rostock, DE)

12:30 – 13:30 Lunch

13:30 – 14:15 Keynote talk by Dr. Alexander Sayenko (Nokia Siemens Networks, Finland) (Room A+B+C)

14:15 – 14:45 Coffee Break

14:45-17:30 Session 2

Visualizations of Human Activities in Sensor-enabled Ubiquitous Environments
Brian J d'Auriol (Kyung Hee University, Global Campus, KR)

sDLS - Distributed Least Squares Localization for Large Wireless Sensor Networks
Ralf Behnke (University of Rostock, DE); Jakob Salzmann (University of Rostock, DE); Dominik Lieckfeldt (University of Rostock, DE); Dirk Timmermann (University of Rostock, DE)

Speech activity and speaker novelty detection methods for meeting processing
Masahide Sugiyama (The University of Aizu, JP); Andrey Ronzhin (SPIIRAS, RU); Maria Prischepa (SPIIRAS, RU); Victor Budkov (SPIIRAS, RU); Konstantin Markov (The University of Aizu, JP); Alexey A. Karpov (St. Petersburg Institute for Informatics and Automation of RAS, RU)

Aequorin: Design of a System for Reduction of the User's Stress in One Day
Satoru Tokuhisa (Keio University, JP)

19:30 Welcome Reception at Pulkovskaya Park Inn

Workshop on cognitive wireless communications and networking, CWCN 2009

Chairs: Victor C. M. Leung (The University of British Columbia, CA); Kevin (Qixiang) Pang (General Dynamics Canada, CA); F. Richard Yu (Carleton University, CA); Ekram Hossain (University of Manitoba, CA); Dusit Niyato (Nanyang Technological University, SG); Alireza Attar (The University of British Columbia, CA)

Monday, October 12, 2009

Room 8

8:45 – 9:15 Opening (Room A+B+C)

9:15 – 10:00 Keynote Talk by Dr. V. Niemi (Nokia Research Center, Switzerland) (Room A+B+C)

10:00 – 10:30 Coffee Break

10:30-12:30 Session 1: Spectrum Sensing and Access for Cognitive Radio

Session Chair: Tim Harrold (University of Bristol, UK)

A Survey of Cognitive Radio Access to TV White Spaces
Maziar Nekovee (BT Innovate and Design and Centre for Computational Science, University College London)

Application of Smoothed Estimators in Spectrum Sensing Technique Based on Distribution Analysis
Bassem Zayen (Eurecom, FR); Aawatif Hayar (Eurecom, FR) Hamza Debbabi (Ecole Sup´erieure des Communications de Tunis, TN) and (Hichem Besbes Ecole Sup´erieure des Communications de Tunis, TN)

ROPCORN: Routing Protocol for Cognitive Radio Ad Hoc Networks
Ahmet Cagatay Talay (Istanbul Technical University, TR); Deniz Altilar (Istanbul Technical University, TR)

Evaluation of Required Sensing Time for Multimedia Transmission Over Cognitive Ultra Wideband Network
Norazizah Mohd Aripin (Universiti Teknologi Malaysia, MY); Rozeha A. Rashid (UTM, MY) Norsheila Fisal (UTM, MY) and Sh. Kamilah Syed Yusof (UTM, MY)

Analysis of Spectrum Utilization in Suburb Environment - Evaluation of Potentials for Cognitive Radio
Vaclav Valenta (Brno University of Technology, CZ); Z. Fedra (Brno University of Technology, CZ); Roman Marsalek (Brno University of Technology, CZ); Genevicve B. Baudoin (ESIEE, FR); Martine Villegas (ESYCOM ESIEE-Paris, FR)

Subchannel Allocation for Dynamic Spectrum Access in Underlay OFDMA System
Venkatkumar Venkatasubramanian (Nokia Siemens Networks, DE); Thomas Haustein (Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut, DE)

12:30 – 13:30 Lunch

13:30 – 14:15 Keynote talk by Dr. Alexander Sayenko (Nokia Siemens Networks, Finland) (Room A+B+C)

14:15 – 14:45 Coffee Break

Room 8

14:45-17:05 Session 2: Architectures, Standards, Protocols and Testbeds

Session Chair: Stanislav Filin (NICT, JP)

Spectrum Sharing and Cognitive Radio: Opportunities for Efficiency Enhancement
Tim Harrold (University of Bristol, UK); Lingfeng (Stephen) Wang (University of Bristol, UK); Mark Beach (University of Bristol, UK); Gbenga Salami (University of Surrey, UK); Allahyar Yarmohammad (University of Surrey, UK); Oliver D Holland (King's College London, UK)

IEEE 1900.4 WG on Architecture and Enablers for Optimized Radio & Spectrum Resource Usage: Overview of IEEE 1900.4 Standard and P1900.4.1 and P1900.4a Draft Standards
Stanislav Filin (NICT, JP); Hiroshi Harada (National Institute of Information & Communications Technology (NICT), JP); Homare Murakami (National Institute of Information and Communications Technology, JP); Kentaro Ishizu (National Institute of Information and Communications Technology, JP); Goh Miyamoto (National Institute of Information and Communications Technology, JP)

TCP-Aware Cross-Layer Design in Cognitive Radio Networks
Changqing Luo (Carleton U., CA); F. Richard Yu (Carleton University, CA); Hong Ji (Beijing University of Posts and Telecommunications, CN); Victor CM Leung (The University of British Columbia, CA)

Cooperative Robust Sequential Detection Algorithms for Spectrum Sensing in Cognitive Radio
Arunkumar Jayaprakasam (Indian Institute of Science, IN); Vinod Sharma (Indian Institute of Science, IN)

Hybrid Approach to Cognitive Radio Test Bed
Ramachandra Budihal (Wipro Technologies, IN); Jamadagni (Indian Institute of Science, IN)

Workshop ends: Thank you note from the Workshop Chair

19:30 Welcome Reception at Pulkovskaya Park Inn

The International Workshop on Communication Technologies for Vehicles, Nets4Cars 2009

Chairs: Fei Liu (University of Twente, NL); Tsutomu Tsuboi (Renesas Technology Corp., JP); Alexey Vinel (SPIIRAS, RU)

Tuesday, October 13, 2009

Room 4

9:00-9:15 WELCOME NOTE (Fei Liu, Tsutomu Tsuboi, Alexey Vinel)

9:15-9:45 PLENARY TALK

In-Vehicle Wireless Communication System and Next Generation ITS Application
Tsutomu Tsuboi (Renesas Technology Corp., JP)

9:45-10:15 Coffee break

10:15-12:35 Session I
Chair: Geert Heijenk (University of Twente, NL)

On Congestion-Aware Broadcasting in V2X Networks
Fatma Hrizi (EURECOM, FR); Fethi Filali (EURECOM, FR)

Epidemic Information Diffusion in Realistic Vehicular Network Mobility Scenarios
Claudia Barberis (Politecnico di Torino, IT); Giovanni Malnati (Politecnico di Torino, IT)

Expediency of Penetration Ratio and Evaluation of Mean Throughput for Safety and Commercial Applications in VANETs
Bhakthavathsalam Ramaswamy (Indian Institute of Science, IN)

12:35-13:20 Lunch

13:20-14:15 PLENARY TALK

Performance Evaluation of Vehicle-to-Vehicle Communication for Traffic Safety Applications
Alexey Vinel (SPIIRAS, RU)

14:15-14:45 Coffee break

14:45-16:45 Session II
Chair: Alexey Vinel (SPIIRAS, RU)

Performance Evaluation of Inter-vehicle Communication in a Unidirectional Dynamic Traffic Flow with Shockwave
Wei Lu (University of Science and Technology of China, CN); Yuanlv Bao (University of Science and Technology of China, CN); Xiaoyan Sun (University of Science and Technology of China, CN); Zhe Wang (University of Science and Technology of China, CN)

Cell design for Next DSRC applications
Tsutomu Tsuboi (Renesas Technology Corp., JP)

Room 4

CRaSCH: A Cooperative Scheme for Service Channel Reservation in 802.11p/WAVE Vehicular Ad Hoc Networks
Claudia Campolo (University "Mediterranea" of Reggio Calabria, IT); Alessandro Cortese (Universita degli studi "Mediterranea" di Reggio Calabria, IT); Antonella Molinaro (University "Mediterranea" of Reggio Calabria, IT)

19:30 Bus excursion

Wednesday, October 14, 2009

Room 4

9:00-9:45 INVITED TALK

Ford SYNC: Embracing Cloud-Based Infotainment
Oleg Gusikhin (Ford, USA)

9:45-10:15 Coffee break

10:15-12:35 Session III
Chair: Fei Liu (University of Twente, NL)

High-speed infrastructure cellular network for vehicular users
Thanh-Hoa Phan (Ritsumeikan University, JP)

Hybrid Emulating Architecture for Vehicular Networks
David Gutierrez-Perez (Rey Juan Carlos University of Madrid, ES); Eduardo del Arco-Fernandez-Cano (Rey Juan Carlos University of Madrid, ES); Mark Wilby (Rey Juan Carlos University of Madrid, ES); Julio Ramiro (University King Juan Carlos, ES); Juan Jose Vinagre (Rey Juan Carlos University of Madrid, ES); Antonio Caamano (Rey Juan Carlos University of Madrid, ES); F. Javier Ramos (Rey Juan Carlos University, SPAIN, ES)

Localization Algorithms for Distributed Platform among Vehicles
Takeshi Tsuchiya (Waseda University, JP)

12:35-13:30 Lunch

13:30-14:15 INVITED TALK

Assessment of Traffic Impact on Future Cooperative Driving Systems: Challenges and Considerations
Fei Liu (University of Twente, NL); Rattaphol Pueboobpaphan (University of Twente, NL); Bart van Arem (University of Twente/TNO research, NL)

14:15-15:30 Session IV
Chair: Oleg Gusikhin (Ford, US)

Accurate Positioning Using Short-Range Communications
Yasser Morgan (University of Regina, CA)

UWB Radio Propagation for Intra Vehicle Communications
Tsutomu Tsuboi (Renesas Technology Corp., JP)

A Multi-Broadcast Communication System for High Dynamic Vehicular Ad-hoc Networks
Andreas Lehner (German Aerospace Center, DLR, DE); Cristina Rico Garcia (German Aerospace Center (DLR), DE); Thomas Strang (German Aerospace Center (DLR), DE)

Room 4

15:30-16:00 Coffee break

16:00-16:15 CLOSING NOTE AND BEST PAPER AWARD (Fei Liu, Tsutomu Tsuboi, Alexey Vinel)

19:30 Fare-the-well Party at Pulkovskaya Park Inn

The International Workshop on Wireless and Optical Networks, WI-OPT 2009

Chairs: Georgios Papadimitriou (Aristotle University of Thessaloniki, GR); Petros Nicopolitidis (Aristotle University of Thessaloniki, GR); Christos Verikoukis (Telecommunications Technological Centre of Catalonia, ES); Enrique Ariezaga (Tecnalia-telecom, ES)

Tuesday, October 13, 2009

Room 5

9:00 – 9:45 Keynote Talk by Prof. Silvia Giordano (University of Applied Science (SUPSI) Ticino, Switzerland) (Room A+B+C)

9:45 – 10:00 Coffee Break

10.00-12.00 1st session, full papers

A Novel Heuristic Algorithm for Multiuser Detection in Synchronous CDMA Wireless Sensor Networks
Sergio Gil (Tecnalia-Robotiker, ES); Javier Del Ser (TECNALIA-Telecom, ES); Ignacio (Iñaki) Olabarrieta (Tecnalia-Robotiker, ES)

H.264/SVC Rate-Resiliency Tradeoff in Faulty Communications through 802.16e Railway Networks
Iraide Unanue (TECNALIA-Telecom, ES); Javier Del Ser (TECNALIA-Telecom, ES); Pedro Sánchez (IKUSI - Ángel Iglesias, ES); Jon Casasempere (TECNALIA-Telecom, ES)

Second-Order Statistics of Amplify-and-Forward Multi-Hop Wireless Networks: A Framework for Computing the End-to-End SNR Auto-Correlation Function over Log-Normal Shadowing Channels
Marco Di Renzo (The University of Edinburgh - Institute for Digital Communications (IDCOM), UK); Laura Imbriglio (University of L'Aquila (Italy), IT); Fabio Graziosi (University of l'Aquila, IT); Fortunato Santucci (University of l'Aquila, IT)

Enabling technologies for future all-optical packet switched networks
Andrea Blanco Redondo (ROBOTIKER - Tecnalia, ES); Pablo Beltrán Pellicer (Telnet Redes Inteligentes, ES); Joseba Zubía Zaballa (University of the Basque Country, ES)

12:35 – 13:20 Lunch

13:30 – 14:15 2nd session, short papers

UMAC - A Universal MAC Architecture for Heterogeneous Home Networks
Hans-Peter Loeb (Infineon Technologies AG, DE); Christian Liß (University of Paderborn, DE); Ulrich Rückert (Heinz Nixdorf Institute and Dep. of Electrical Engineering, University of Paderborn, DE); Christian Sauer (Cadence Design Systems, DE)

Handoff Functions for a Distributed Queuing Collision Avoidance Medium Access Control Protocol for Wireless LANs
Jesus Alonso-Zarate (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), ES); Elli Kartsakli (Universidad Politecnica de Catalunya, ES); Angelos Antonopoulos (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), ES); Luis Alonso (Universidad Politecnica de Catalunya, ES); Christos Verikoukis (Telecommunications Technological Centre of Catalonia, ES)

Effective SNR Mapping Algorithms for Link Prediction Model in 802.16e
Fernando Lopez Aguilar (Telefónica I+D, ES)

Room 5

All-Optical Network Transport Layer For Immersive Communications
Pablo Beltrán Pellicer (Telnet Redes Inteligentes, ES); Andrea Blanco Redondo (ROBOTIKER - Tecnalia, ES); Amador Pozo Espinosa (Telnet Redes Inteligentes, ES); Francisco Cortés (Telnet Redes Inteligentes, ES)

14:15 – 14:45 Coffee Break

14:45 – 16:15 3rd session, short papers

Jitter Based Comparisons for Routing Protocols in Mobile Ad hoc Networks
Vahid Nazari Talooki (University of Porto, PT); Jonathan Rodriguez (Instituto de Telecomunicações, PT)

DSVCA: A Novel Distributed Clustering Algorithm for Wireless Sensor Networks based on Statistical Data Correlation
Laura Imbriglio (University of L'Aquila (Italy), IT); Fabio Graziosi (University of l'Aquila, IT)

Situation Awareness Mechanisms for Cognitive Networks
Ioannis Chochliouros (Hellenic Telecommunications Organization S.A., GR)

Load Balancing in Limited Intra-Cell Interference (LICI) Networks Based on Maximum Graph-Flow Algorithms
Panagiotis Tsiakas (Technological Educational Institute of Athens, GR); Avner Dor (DesignArt Networks, IL); Konstantinos Voudouris (Technological Educational Institute of Athens, GR); Marios Hadjinicolaou (Brunel University, UK)

19:30 Bus Excursion

Optical Networking Technologies and Data Security, OPNTDS 2009

Chair: S.K.Sudheer (VIT University Vellore, Tamil Nadu, IN)

Tuesday, October 13, 2009

Room 6

9:00 – 9:45 Keynote Talk by Prof. Silvia Giordano (University of Applied Science (SUPSI) Ticino, Switzerland) (Room A+B+C)

9:45 – 10:15 Coffee Break

10:15 – 10:30 WELCOME NOTE
Chair: S.K.Sudheer (VIT University, Vellore, Tamil Nadu, IN)

10:30 – 12:35 Technical presentations

INVITED TALK

Physical Layer Impairments in Multicast Optical Networks
Talabathullah Srinivas (Indian Institute of Science, Bangalore, IN)

Design and Simulation of Optical Frequency Domain Reflectometer for Short Distance Fault Detection in Optical Fibres' and Integrated Optical Devices Using Ptolemy-II
Rishvanth Prabakar (Vellore Institute of Technology, IN); Shekhar Rai (Vellore Institute Of Technology, IN); Shreya Kumar (Vellore Institute of Technology University, IN); Sudheer Sreedhara Krishna (Photonics and Microwave Division,School of Electrical Sciences,VIT University, IN); Raina J p (Dean of School of Electrical Science, IN)

Heuristic algorithms for finding reliable lightpath under multiple failures
Shengli Yuan (University of Houston - Downtown, US); William Waller (University of Houston - Downtown, US); Ermelinda Delavina (University of Houston - Downtown, US)

Laser Ablated Nanostructured Tin Oxide Thin Films For Optoelectronic Device Applications
V P Mahadevan Pillai (University of Kerala, IN)

A Novel Automatic PMD Compensation Scheme Based on DSP in Optical Fiber Communication Systems
Jinnan Zhang, Xueguang Yuan, Rongguo Zhang, Xinyuan Zhao,YangAn Zhang, Minglun Zhang, Yongqing Huang, Xiaoguang Zhang (Beijing University of Posts and Telecommunications, CN)

Laser Ablated Nanostructured Zinc Sulphide Thin Films For Optoelectronics Device Applications
V P Mahadevan Pillai (University of Kerala, IN)

Implementation of a low cost short-haul Optical Wireless link
Arnab Bhattacharya (Universität Karlsruhe (TH), DE); Sudheer Sreedhara Krishna (Photonics and Microwave Division,School of Electrical Sciences,VIT University, IN); Balaji Srinivasan (Indian Institute Of Technology Madras, IN); Shubhadip Dasgupta (Tata Consultancy Services, IN)

Distinctive Features of a Control of a Pockels Cell Based Q-Switch used in Nd:YAG FPSS Lasers
Konstantin Melnikov (JAWON Medical Co., KR); Sergey Biruchinsky (St.-Pb. University of IT, Mechanics and Optics, RU)

Room 6

12:35 – 13:20 Lunch

13:20 – 13:35 Keynote talk by Prof. Yuri Ryzhikov (Saint-Petersburg Institute for Informatics and Automation, Russian Academy of Sciences, Russia) (Room A+B+C)

13:35 – 14:15 Keynote talk by Dr. Leonid Perlovsky (Harvard University, USA) (Room A+B+C)

14:15 – 14:45 Coffee Break

14:45 – 18:45 Technical presentations

INVITED TALK

Wavelenth/Time Codes for Fiber Optic CDMA Networks
E.S.Sivaleela (Indian Institute of Science, Bangalore, IN)

Metro Optical Ethernet Technologies with modified OAM&P feature
T. Sundararajan (SSNCE, Anna university, IN)

Effect of Ring Parameters on Wavelength Characteristics of Erbium Fiber Lasers
Rajesh Joseph (SFO Technologies, IN); Sreeja M (International School of Photonics, IN); Samuel Varghese (SFO Technologies, NeST Group, Kochi, India, IN); K R Suresh K Nair (NeST Group, IN)

Lidar measurements on aerosol charecteristics at the tropical stationsTrivandrum (8.330 N, 770 E) and Gadanki (13.50 N, 79.20 E)
Radhakrishnan R (University of Kerala, IN)

Low Cost Optical Gyroscope Design
Alakshendra Tripathi (VIT University, IN); Nitesh Kumar (B-Tech, IN); Amit Poddar (Vellore Institute Of Technology, IN); Nilanjan Guha (VIT University, Vellore, Tamil Nadu, India, IN)

Accurate LIDAR Beam Formation through Optical waveguide True Time Delays
Ganesh Shanbhag (Indian Institute of Science, Bangalore., IN)

Design of Terabyte Optical Wide Area LAN with Optimization of a Network Component-Optical Splitter
Ganesh Shanbhag (Indian Institute of Science, Bangalore., IN)

Transition from G(E)PON to NGPON
Edvin Skaljo (BH Telecom Sarajevo, BA); Mujo Hodzic (BH Telecom, BA); Ismet Bektas (BH Telecom, BA)

19:30 Bus Excursion

Wednesday, October 14, 2009

Room 6

9:00 – 9:45 Keynote Talk by Prof. J.P.G. Sterbenz (The University of Kansas, USA and Lancaster University, UK) (Room A+B+C)

9:45 – 10:15 Coffee Break

10:15 – 12:35 Technical presentations.

INVITED TALK

Room 6

e-Payment: Challenges and Opportunities
Rajat Moona (IIT Kanpur, UP, IN)

Data Security-I

Perceptible Audio Watermarking for Digital Right Management Control
Malay Dutta (Accurate Institute of Technology, IN); Phalguni Gupta (Indian institue of technology Kanpur, IN); Vinay Pathak (Harcourt Butler Technological Institute, IN)

Images Encryption via Discrete Fractional Fourier Transform and Jigsaw Transform. Case Study: Fingerprints
Juan M. Vilardy (Universidad Popular del Cesar, CO); Cesar O. Torres (Uiversidad Popular del Cesar, CO); Lorenzo Mattos (Universidad Popular del Cesar, CO)

Biometric Based Unique Key Generation for Authentic Audio Watermarking
Malay Dutta (Accurate Institute of Technology, IN); Vinay Pathak (Harcourt Butler Technological Institute, IN); Phalguni Gupta (Indian institue of technology Kanpur, IN)

Enhancing WLAN Security with Sectored Antennas
Swaminathan Ramamurthy (VIT University, IN)

Quantum Cryptography System for Education
Natalia Andreeva (SpSU ITMO, RU); Arthur Gleim (SpSU ITMO, RU); Vladimir I. Egorov (SpSU ITMO, RU); Yuri Mazurenko (SpSU ITMO, RU); Vyacheslav Orlov (SpSU ITMO, RU); Sergey Chivilikhin (SpSU ITMO, RU)

12:35 – 13:30 Lunch

13:30 – 15:30 Technical presentations. Data Security-II

A Biometric Security Based Electronic Gadget Control Using Hand Gestures
Rajat Garg (VIT University, IN); Vineet Agrawal (VIT University, IN); Vikrant Gupta (VIT University, IN); Shriram Nadarajan (VIT University, IN)

Study of Gratings Recorded In Different Holographic Recording Media for Real-Time Holographic Fingerprint Sensor
V P Mahadevan Pillai (University of Kerala, IN)

Holographic Registration Plates with GPRS (HRPG) network for Sea-going vessels to augment the costal security
V P Mahadevan Pillai (University of Kerala, IN)

Intelligent Coding Scheme For Wireless Image Transmission Over Noisy Channels
Alakshendra Tripathi (VIT University, IN); Nilanjan Guha (VIT University, Vellore, Tamil Nadu, India, IN); Amit Poddar (Vellore Institute Of Technology, IN); Nitesh Kumar (B-Tech, IN)

Secure and Cost Effective Transaction Model for Financial Services
Nitin Munjal (Indian Institute of Technology Kanpur, IN); Rajat Moona (IIT Kanpur, IN)

15:30 – 16:00 Coffee Break

16:00 – 19:00 Technical presentations. Data Security-III

Encryption Technique using Hilbert Transform for Monochrome Images and Text
Avinash Kumar Jha (Vellore Institute of technology University, IN); Sudheer Sreedhara Krishna (Photonics and Microwave Division,School of Electrical Sciences,VIT University, IN); V P Mahadevan Pillai (University of Kerala, IN)

Room 6

Efficient Iris Recognition Method for Identification
Vikrant Gupta (VIT University, IN); Rajat Garg (VIT University, IN); Vineet Agrawal (VIT University, IN)

A Perturbative Resampling Approach to Image Steganalysis
Suresh V (Indian Institute of Science, IN); Shashidhara H V (Indian Institute of Science, IN); Veni Madhavan C.e. (Indian Institute of Science, Bangalore, IN)

A Drowsy Driver Detection and Security System
Rajat Garg (VIT University, IN); Vineet Agrawal (VIT University, IN); Vikrant Gupta (VIT University, IN)

THANK YOU NOTE

19:30 Fare-the-well Party at Pulkovskaya Park Inn

The Workshop on Reliable Networks Design and Modeling, RNDM 2009

Chair: Jacek Rak (Gdansk University of Technology, PL)

Wednesday, October 14, 2009

Room 5

8:45 – 9:00 Opening Session
Chair: Jacek Rak, Gdansk University of Technology (PL)

9:00 – 9:45 Keynote Talk

p-Cycles: A Review of Basics and Current State-of-the-art
Wayne D. Grover, Fellow of IEEE, University of Alberta and TRLabs (CA)

9:45 – 10:30 Coffee Break

10:30 – 12:35 Session 1: p-Cycles and Other Protection Structures
Chair: Wayne D. Grover, University of Alberta and TRLabs (CA)

A Global Approach to Fully Pre-cross Connected Protection Schemes Design using p-structures
Samir Sebbah and Brigitte Jaumard (Concordia University, CA)

UPSR-like p-Cycles: A New Approach to Dual Failure Protection
Aden Grue and Wayne D. Grover (University of Alberta, CA)

Directed p-Cycle Protection in Dynamic WDM Networks
Ammar Metnani (Universite de Montreal, CA) and Brigitte Jaumard (Concordia University, CA)

Availability-Constrained Dedicated Segment Protection in Circuit Switched Mesh Networks
Péter Babarczi, János Tapolcai (Budapest University of Technology and Economics, HU) and Pin-Han Ho (University of Waterloo, CA)

Demand-Wise Shared Protection Network Design with Dual-Failure Restorability
Brody Todd (University of Alberta, CA); John Doucette (University of Alberta, CA)

12:35 – 13:30 Lunch

13:30 – 15:30 Session 2: Design and Evaluation of Survivable Networks
Chair: Dimitri Staessens, Ghent University (BE)

Managing availability in wireless inter domain access (full paper)
Eirik L Folstad and Bjarne E. Helvik (Norwegian University of Science and Technology, NO)

Weighted Algebraic Connectivity Metric for Non-Uniform Traffic in Reliable Network Design
William Liu, Harsha Sirisena and Krzysztof Pawlikowski (University of Canterbury, NZ)

Framework for Vulnerability Management in Complex Networks
Cinara Ghedini and Carlos Ribeiro (Instituto Tecnológico de Aeronáutica, BR)

Room 5

Towards an ideal network: survivability issues in selected topologies
Tomasz Gierszewski and Wojciech Molisz (Gdansk University of Technology, PL)

15:30 – 16:00 Coffee Break

16:00 – 17:45 Session 3: Survivability of multilayer and MPLS-based networks

Chair: Brigitte Jaumard, University of Concordia (CA)

Computation of high availability connections in multidomain IP-over-WDM networks
Dimitri Staessens , Didier Colle, Mario Pickavet and Piet Demeester (Ghent University, BE)

Fast Reroute for Stateless Multicast
András Zahemszky and Somaya Arianfar (Ericsson Research Nomadiclab, FI)

Optimization of Survivable Networks with Simultaneous Unicast and Anycast Flows
Jakub Gladysz and Krzysztof Walkowiak (Wroclaw University of Technology, PL)

Self-Protection: A Novel Protection Scheme for All-Optical Packet Switching Networks
Fernando Solano Donado, Michal Pioro (Warsaw University of Technology, PL), Jose Luis Marzo and Ramon Fabregat (Univ. de Girona, ES)

Multipath at the Transport Layer: An End-to-End Resilience Mechanism
Justin P. Rohrer, Ramya Naidu (The University of Kansas, US) and James P. G. Sterbenz (University of Kansas & Lancaster University, US, UK)

19:30 Fare-the-well Party at Pulkovskaya Park Inn

International Workshop on Peer-To-Peer Networking, P2PNET 2009

Chairs: Beixing Deng (Tsinghua University, CN), Xuan Zhang (Tsinghua University, CN), Yongfeng Huang (Tsinghua University, CN), Yang Chen (University of Goettingen, DE), Cong Shi (Georgia Institute of Technology, US), Baolin Liu (Tsinghua University, CN)

Wednesday, October 14, 2009

Room 8

09:30 - 10:00 Session I

A Performance Comparison of Native IP Multicast and IP Multicast Tunneled through a Peer-to-Peer Overlay Network
Marc Brogle (University of Bern, CH); Dragan Milic (University of Bern, CH); Luca Besttosini (University of Bern, CH); Torsten Braun (University of Bern, CH)

Experimental Study on Neighbor Selection Policy for Phoenix Network Coordinate System
Gang Wang (Tsinghua University, CN); Shining Wu (Tsinghua University, CN); Guodong Wang (Tsinghua University, CN); Beixing Deng (Tsinghua University, CN); Xing Li (Tsinghua University, CN)

10:00 – 10:30 Coffee Break

10:30 - 12:00 Session II

An Efficient Solution for Max-min Fair Rate Allocation in P2P Simulation
Tuan Nguyen (University of Oslo, Norway); Frank Eliassen (University of Oslo, NO)

Coordinate-based Routing: Refining NodeIds in Structured Peer-to-Peer Systems
Fabian Hartmann (BrandMaker GmbH, DE); Bernhard Heep (Universität Karlsruhe (TH), DE)

Two-layer network coordinate system for Internet distance prediction
Chengbo Dong (Tsinghua University, CN); Guodong Wang (Tsinghua University, CN); Xuan Zhang (Tsinghua University, CN); Beixing Deng (Tsinghua University, CN); Jia Liu (Tsinghua University, CN); Xing Li (Tsinghua University, CN)

12:35 – 13:30 Lunch

13:30 - 15:30 Session III

TMBF: Bloom Filter Algorithms of Time-Dependent Multi Bit-Strings for Incremental Set
Mingzhong Xiao (Beijing Normal University, CN); Xiangzhen Kong (Beijing Normal University, CN); Junfei Liu (Beijing Normal University, CN); Ju Ning (Chongqing University, CN)

Load-Sharing Overlay Network Design for Ubiquitous Video Surveillance Services
Chih-Sung Chen (Ming Chuan University, TW); Chia-Hui Wang (Ming-Chuan University, TW); Wu-Hsiao Hsu (Ming-Chuan University, TW); Haw-Yun Shin (National Taiwan University of Science and Technology, TW)

Performance Evaluation of Cooperative Peer Selection Methods for P2P Video-on-Demand
Masatoshi Kawarasaki (University of Tsukuba, JP); Kei Suzuki (University of Tsukuba, JP)

An Empirical Study on Embeddable Overlay Networks
Yao Li (Tsinghua University, CN); Beixing Deng (Tsinghua University, CN); Xuan Zhang (Tsinghua University, CN); Xing Li (Tsinghua University, CN); Rui Wang (Tsingohua University, CN)

Room 8

15:30 – 16:00 Coffee Break

16:00 - 17:00 Session IV

Toward New Peering Strategies For Push-Pull Based P2P Streaming Systems
Anis Ouali (Concordia University, CA); Brigitte Kerhervé (Université du Québec a Montréal, CA); Brigitte Jaumard (Concordia University, CA)

A Scalable based Multicast Model for P2P Conferencing Applications
Amad Mourad (University of Bejaia, Algeria); Haddad Zahir (Bejaia University, Algeria); Khenous Lachemi (Bejaia University, Algeria); K Kabyl (USTHB university, Algeria)

ROSA : A Step Torwards A Global Virtual Network
Loic Baud (Ecole nationale superieur des télécomunications, FR)

19:30 Fare-the-well Party at Pulkovskaya Park Inn

The Workshop on Mobile Computing and Networking Technologies, WMCNT 2009

Chairs: Georgios I. Tsiropoulos (National Technical University of Athens (NTUA), GR), Dimitrios G. Stratogiannis (National Technical University of Athens (NTUA), GR),
Athanasios D. Panagopoulos (National Technical University of Athens (NTUA), GR),
Eirini-Eleni I. Tsiropoulou (National Technical University of Athens (NTUA), GR),
Dionysios G. Fragkopoulos (London School of Economics and Political Science (LSE), UK)

Wednesday, October 14, 2009

Room 7

9:00 – 9:45 Keynote Talk by Prof. J.P.G. Sterbenz (The University of Kansas, USA and Lancaster University, UK) (Room A+B+C)

9:45 – 10:15 Coffee Break

10:15 - 12:35 Session 1
Link Quality and Access Techniques for Wireless Communications
Session Chair: tba

Channel Estimation For OFDM Systems with High Mobility Fading Channels
Mahmut Yalcin (Istanbul University, TR); Aydin Akan (Istanbul University, TR); Hakan Dogan (Istanbul University, TR)

Performance Evaluations of Channel Estimations in IEEE 802.11p Environments
Chi-Sheng Lin (National Central University, TW); Che-Kang Sun (National Central University, TW); Jia-Chin Lin (National Central University, TW); Bo-Chuan Chen (Automotive Research and Testing Center, TW)

Expanded Time-Frequency OFDM and Its Interference Suppression Techniques
Xiaoyan Xu (Peking University, CN); Yong Shang (Peking University, CN);
Haige Xiang (Peking University, CN)

A Cross-Layer Design Approach in Cooperative OFDM Systems: Application to Mobile Cell-Border Situation
Youssef Nasser (Institute of Electronics and Telecommunications of Rennes, FR); Abbass Marouni (IETR, FR); Maryline Hélard (INSA Rennes, FR); Haydar Mokdad (Lebanese University, LB)

The Riemann Sum Method for the Design of Sum-of-Cisoids Simulators for Rayleigh Fading Channels in Non-Isotropic Scattering Environments
Carlos A Gutierrez Diaz de Leon (University of Agder, NO); Matthias Pätzold (University of Agder, NO)

Elimination of RLAN Interference on Weather Radars by Channel Allocation in 5 GHz Band
Zoltán Horváth (Budepest University of Technology and Economics, HU); Dávid Varga (Budapest University of Technology and Economics, HU)

12:35 – 13:30 Lunch

13:30 - 15:30 Session 2
Resource Allocation and Wireless Broadcasting
Session Chair: tba

On the Broadcast Capacity of Wireless Multihop Interference Networks
Cagdas Atici (Ozyegin University, TR); Oguz Sunay (Ozyegin University, TR)

Room 7

Bandwidth allocation in Wireless Access Networks: Bankruptcy Game vs Cooperative Game
Stavroula Vassaki (National Technical University of Athens, GR); Athanasios D. Panagopoulos (National Technical University of Athens, GR); Philip Constantinou (National Technical University of Athens, GR)

Multicast Extensions to the Flow-Oriented Routing Protocol and Node Velocity-based Stable Path Routing Protocol for Mobile Ad hoc Networks
Natarajan Meghanathan (Jackson State University, US); DeMarcus Thomas (Mississippi Valley State University, US); Ebony Addison (Elizabeth City State University, US)

Robust MBSFN Transmission Using the Golden Code
Markus Gerald Konrad (University of Erlangen-Nuremberg, DE); Wolfgang Gerstacker (University of Erlangen-Nuernberg, DE); Wolfgang Koch (University of Erlangen, DE)

An Analytical Model of Proportional Bandwidth Adjustment for a Two-Tier Hierarchical NEMO System
Tsang-Ling Sheu (National Sun Yat-Sen University, Kaohsiung, Taiwan, TW); Bing-Chi Kuo (National Sun Yat-Sen University, TW)

On Suitability of PSD Method for Opportunity Detection in OFDM(A) Based Cognitive Radio Systems
Sultan Aldirmaz (Yildiz Technical University, TR); Asli Birol (Yildiz Technical University, TR); Ibrahim Demirdogen (University of South Florida, US); Huseyin Arslan (University of South Florida, US); Lutfiye Durak (Yildiz Technical University, TR)

Fairness Optimization of Thinning Call Admission Control in Wireless Networks
Georgios Tsiropoulos (Wireless and Satellite Communication Group, GR); Dimitrios Stratogiannis (Wireless and Sattelite Communications Group, GR); John D. Kanellopoulos (National Technical University of Athens, GR); Panayotis Cottis (National Technical University of Athens, GR)

15:30 – 16:00 Coffee Break

16:00 - 19:00 Session 3
QoS Provision and Security Issues for Wireless Networks
Session Chair: tba

A Modified Q-parameter Anti-collision Scheme for RFID Systems
Yinghua Cui (Peking University, CN); Yuping Zhao (Peking University, CN)

A Generalized Intrusion Detection & Prevention Mechanism for Securing MANETs
Adnan Nadeem (University of Surrey, UK); Michael P. Howarth (University of Surrey, UK)

A Novel Prevent Scan Technique for IEEE 802.11 Handoff Procedure
Ahmed Riadh Rebai (Texas A&M University, QA); Hussein Alnuweiri (Texas A&M University, Qatar, QA); Said Hanafi (Université de Valenciennes et du Hainaut-Cambrésis, FR)

Exploring User's Habits and Communities to Improve IP-Connectivity Management
Roberto R. F. Lopes (University of Sao Paulo, BR); Roberto S Yokoyama (University of Sao Paulo, BR); Bruno Yuji Lino Kimura (University of Sao Paulo, BR); Pravin Pawar (University of Twente, The Netherlands., NL); Bert-Jan van Beijnum (University of Twente, NL); Edson Moreira (University of Sao Paulo, BR)

EcnLD, ECN Loss Differentiation to optimize the performance of transport protocols on wireless networks
Wassim Ramadan (University of Franche-Comté, FR); Eugen Dedu (University of Franche-Comte, FR); Julien Bourgeois (University of Franche-Comte, FR)

Room 7

Price Bargaining Integration with Dynamic Call Admission Control in Wireless Multiservice Networks

Dimitrios Stratogiannis (Wireless and Sattelite Communications Group, GR); Georgios Tsiropoulos (Wireless and Satellite Communication Group, GR); John D. Kanellopoulos (National Technical University of Athens, GR); Panayotis Cottis (National Technical University of Athens, GR)

19:30 Fare-the-well Party at Pulkovskaya Park Inn

The International Workshop on Advances in Computer Networks, VLSI and Innovative Technologies, ANVIT 2009

Chair: Nitin Nitin (Jaypee University of Information Technology, IN), David Al-Dabass (Nottingham Trent University, UK), Hamid Arabnia (University of Georgia, US), Tapas Chakravarty (Tata Consultancy Services, IN), Durg Chauhan (Uttarakhand Technical University, IN), Rohit Sharma (Jaypee University of Information Technology, IN)

Wednesday, October 14, 2009

Room 9

9:00 – 9:45 Keynote Talk by Prof. J.P.G. Sterbenz (The University of Kansas, USA and Lancaster University, UK) (Room A+B+C)

9:45 – 10:15 Coffee Break

10:15 - 12:35 Computer Networks and VLSI

Performance Evaluation of Center Search Algorithms Used for Dynamic Rendezvous Point Relocation
Samer Sulaiman (TU Dresden, DE); Ralf J. Lehnert (Technische Universitaet Dresden (Dresden University of Technology, DE); Abdel Haidine (Dresden University of Technology, DE)

On the Architecture of Vehicle Tracking System Using Wireless Sensor Devices
Aravind Kota Gopalakrishna (Manipal Institute of Technology, Manipal University, IN); Tapas Chakravarty (Tata Consultancy Services, IN); Girish Chandra (Tata Consultancy Services, IN)

Parameteric Coding of Speech Signals
Vivek Kumar Sehgal (Jaypee University of Information Technology, IN); Shantanu Agarwal (Jaypee University of Information Technology, IN); Sahil Jain (Jaypee University of Information and technology, IN); Ujjawal Khandelwal (Jaypee University of Information Technology, IN); Karan Jain (Uttar Pradesh Technical University, IN)

Analysis of All to All Broadcast on Multi Mesh of Trees Using Genetic Algorithm
Nitin Rakesh (Jaypee University of Information Technology, IN); Nitin Nitin (Jaypee University of Information Technology, IN)

12:35 – 13:30 Lunch

13:30 - 15:30 Innovative Technologies

Hand Geometry Verification System: A Review
Amit Singh (Jaypee University of Information Technology, IN); Amrit Agrawal (Jaypee University of Information Technology, IN); Chandra Bhan Pal (Jaypee University of Information Technology, IN)

Multilevel Logic Transmission using Disparate Intensity Levels of White Light and Programmable Controllers
Rohit Sharma (Jaypee University of Information Technology, IN); Nitish Paliwal (Jaypee University of Information Technology, IN); Vigya Jindal (Jaypee university of information technology, IN); Anupam Chahar (Jaypee University of Information Technology, IN); Appoorv Narula (Jaypee University of Information Technology, IN)

Innovative and Secured User Authentication Methods for Novice Visually Impaired users
Gaurav Kumar Srivastava (Jaypee University of Information Technology, IN); Rajan Vaish (Contract Developer at Google, IN); Rahul Vaish (Lovely Professional University, IN)

Room 9

Vision based Hand Gesture Recognition Using Finite State Machines and Fuzzy Logic
Rohit Verma (Jaypee University Of Information Technology, IN); Ankit Dev (Jaypee Institute of Engineering and Technology, IN)

A Novel Wavelet Edge Detection Algorithm for Noisy Images
Rajesh Siddavatam (Jaypee University of Information Technology, IN); Gaurav Kumar Srivastava (Jaypee University of Information Technology, IN); Rohit Verma (Jaypee University Of Information Technology, IN); Ruchika Mahrishi (Jaypee University of Information Technology, IN)

15:30 – 16:00 Coffee Break

19:30 Fare-the-well Party at Pulkovskaya Park Inn

The Workshop on the Emergence of Delay-Tolerant Networks, E-DTN 2009

Chairs: Vassilis Tsaoussidis (Democritus University of Thrace, GR/MIT, US), Saverio Mascolo (Polytechnic of Bari, IT), Lefteris Mamatas (University College London, UK), Ioannis Psaras (University of Surrey, UK)

Wednesday, October 14, 2009

Room 12

09:00 – 09:15 Opening Remarks

09:15 – 10:15 Keynote Talk
Pan Hui (Deutsche Telekom Laboratories/TU Berlin, Germany) - **The Quest for a Killer App for Opportunistic and Delay Tolerant Networks**

10:15 – 10:45 Coffee break

10:45 – 12:15 Session 1: DTN Protocol Stack Proposals

IP over DTN: Large-Delay Asynchronous Packet Delivery in the Internet
Hideya Ochiai, Kenichi Shimotata, Hiroshi Esaki (The University of Tokyo, JP)

Effective buffer and storage management in DTN nodes
Stylianos Dimitriou, Vassilis Tsaoussidis (Democritus University of Thrace, GR)

Moving data in DTNs with HTTP and MIME: Making use of HTTP for delay- and disruption-tolerant networks with convergence layers
Lloyd Wood (Independent, UK), Peter Holliday (University of New South Wales, AU), Daniel Floreani (Cisco, AU), Ioannis Psaras (University of Surrey, UK)

12:35 – 13:30 Lunch

13:30 – 15:30 Session 2: DTN Test-beds and Performance Evaluation

DTNperf_2: a Performance Evaluation tool for Delay/Disruption Tolerant Networking
Carlo Caini, Piero Cornice, Rosario Firrincieli, Marko Livini (University of Bologna, IT)

A DTN Testbed Architecture (Demo paper)
Efthymios Koutsogiannis, Sotiris Diamantopoulos, Vassilis Tsaoussidis (Democritus University of Thrace, GR)

Optimizing Movement of Mobile Robot Considering Motor Characteristics in Disruption Tolerant Sensor Networks
Shuntaro Matsubara, Ryohei Suzuki, Masayuki Iwai, Kaoru Sezaki (University of Tokyo, JP)

15:30 – 16:00 Coffee Break

16:00 – 17:00 Session 3: Human Mobility and Social Nets

SOCIAL-DTN: Why Social Networking Services is more fruitful to Mobile Delay-Tolerant Networks? (Demo paper)
Anh-Minh Nguyen (Institut TELECOM, SudParis, FR)

Delay tolerant networks and spatially detailed human mobility
Matthew Stabeler, Davide Cellai, Paddy Nixon, Simon Dobson (University College Dublin, IE)

Room 12

17:00 - 17:30 Session 4: The Bundle Protocol

Sharing the dream; the consensual networking hallucination offered by the Bundle Protocol
Lloyd Wood (Independent, UK), Peter Holliday (University of New South Wales, AU), Daniel Floreani (Cisco, AU), Wesley Eddy (Verizon/NASA, US)

17:00 - 18:00 Panel Discussion

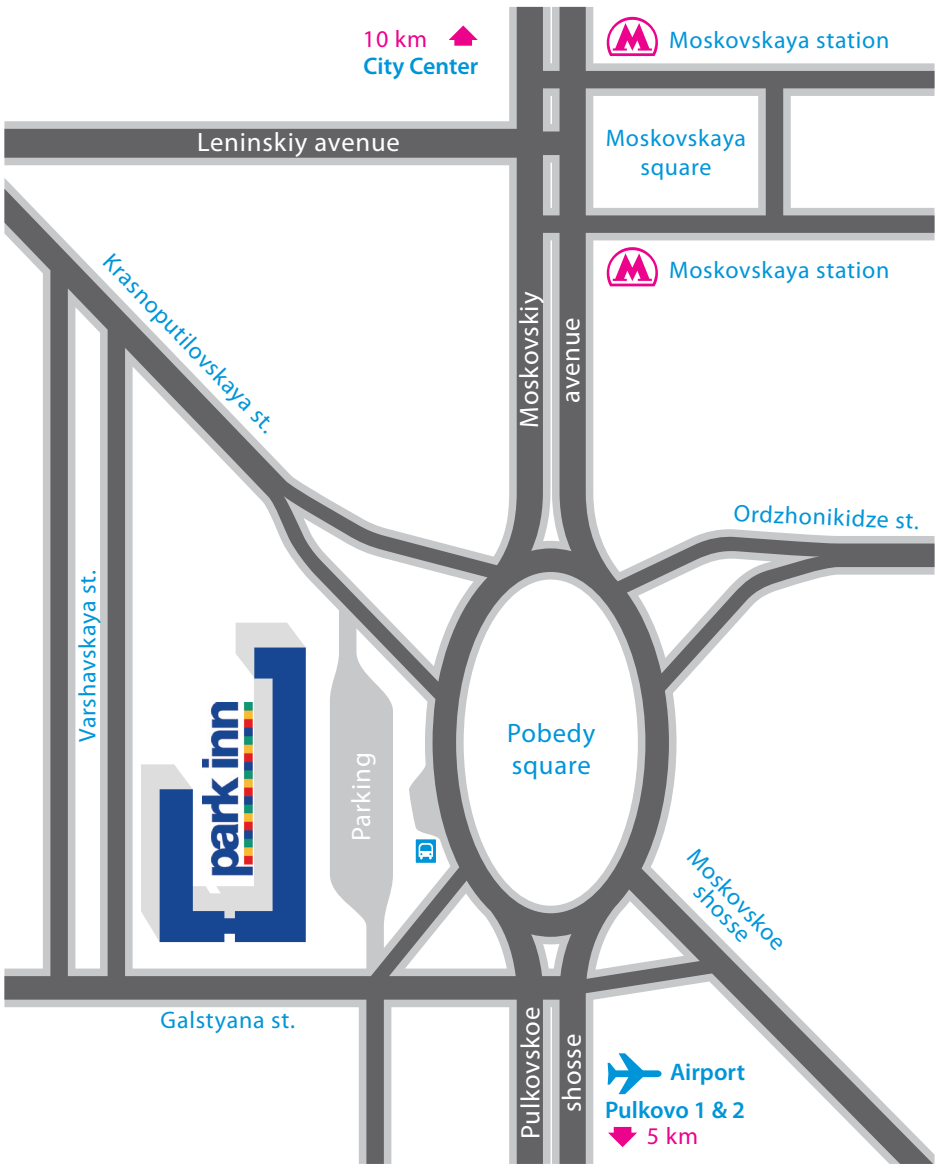
Panelists:

- Pan Hui, Deutsche Telekom Laboratories/TU Berlin, Germany
- Pablo Vidales, Deutsche Telekom Laboratories/TU Berlin, Germany
- Rosario Firrincieli, University of Bologna, Italy

19:30 Fare-the-well Party at Pulkovskaya Park Inn

ICUMT 2009 Venue

Located in one of the most beautiful areas of St. Petersburg, Park Inn Pulkovskaya Hotel is one of the most famous and comfortable hotels of the city; it is ideal for business and leisure travelers. The hotel is near the "Moskovskaya" Metro Station that makes it easy to get to the heart of the city with all its attractions (Hermitage, St. Peter and Paul Fortress, "Mariinsky" Theatre and others). It is also within easy reach the imperial residences of Pushkin, Pavlovsk and Peterhof.



Contacts
Pobedy sq. 1
196240 Saint-Petersburg
Tel.: +7 (812) 740 39 00

The hotel consists of two blocks. The Conference will take place at the 2nd Block.

Social Events

The registration fee covers attendance of the following events:

- Welcome Reception on October 12 and/or Fare-the-well Party on October 14*
- One city tour (October 13, 19:30)

* according to the registration fee type

Welcome Receptions

Both welcome receptions will be at the restaurant Atrium (2nd Block of the Park Inn Pulkovskaya hotel) at 19:30. Participants will enjoy tasty food, cold beverages and warm atmosphere. The specially invited by the Organizers bands are going to perform the exciting music show.

City Tour

During the sightseeing tour the participants will get acquainted with the past and present of St. Petersburg, will enjoy its beautiful architectural ensembles and monuments – the Winter Palace, St. Peter and Paul Fortress, St. Isaac's Cathedral, the monument to Peter the Great that is called the Bronze Horseman, etc.
You will have the opportunity to take pictures at the stops.

Weather

Saint Petersburg lies in the temperate continental climatic zone. Autumn starts with reasonably warm days in mid-September, but by mid-October it is often quite chilly. The average September temperature is 11.8ºC, and the average October temperature is 4.9ºC. In November it might start to snow, but sometimes it does not snow until mid-December.
It is recommended to walk with umbrella.

Public Transportation

The network of public transportation in St. Petersburg is quite extensive. The metro is a very reliable and cost-effective way of medium and long-distance transportation. It is also good for journeys within the downtown area. For the shorter trips you are more likely to use trams, buses and trolleybuses, or taxi.

Buses, Trolleybuses

The bus and trolleybus networks of St. Petersburg are extensive.
Signs with the letter «A» mark bus stops.
Signs with the letter «T» mark trolleybus stops
1 ticket = 18 RUR.

Health & Insurance

In theory, most foreigners are entitled to free emergency care in Russian hospitals, and some countries have reciprocal agreements with Russia for free healthcare for their citizens.
There are a large number of private clinics in Petersburg, many of them with English-speaking staff and many with their own ambulances.
The emergency services number for Russia is 112.

Crime & The Police

As in all large cities, petty crime can be a problem and tourists are often the target - for the obvious reasons that they stand out in a crowd and are more likely to be carrying large amounts of cash or valuables. Pickpockets of various species are the main threat, and they tend to be most prevalent on public transport, especially on the metro in the center, and round tourist traps. To avoid being a victim, follow the obvious precautions: do not carry more cash than necessary and try not to display large sums in public places, keep large sums in a money belt or inner pocket, keep credit cards separately, and don't carry valuables in a backpack or easily opened bag.
If you are robbed while in St Petersburg, then for insurance purposes you will need to obtain a police report (the same goes if you lose anything valuable). It will be easiest to find the small police stations located in most metro stations and large hotels.

Metro

The stations open at about 5:45 am and close between midnight and 0:30 am.
You can transfer from one line to the other until 0:15 am.
St. Petersburg's metro has five lines, which are numbered and assigned specific colors. You can find English language metro maps in most printed city guides.
You pay by tokens, which can be purchased at special counters or booths located at every station. 1 token = 20 RUR.
The ICUMT Venue closest metro station is "Moskovskaya". It is 5-7 minutes walking distance.

CONSULATES

Australia
1, Italyanskaya str. 315-1100

Austria
43, Furshtatskaya str. 275-0502

Bulgaria
27, Ryleyeva str. 275-7537

China
134, Griboedov's canal emb. 714-7670

Czech Republic
5, Tverskaya str. 271-4612

Denmark
13, Bolshaya alley. 703-3900

Estonia
14, B.Monetnaya str. 327-0817

Finland
4, Preobrazhenskaya sq. 331-7600

France
15, Moyka river emb. 332-2270

Germany
39, Furshtatskaya str. 320-2400

Great Britain
5, Proletarskoy Diktatury str. 320-3200

Greece
17, Chernyshevskogo pr. 334-3586

Hungary
15, Marata str. 312-6458

Iceland
24, Telmana str. 326-8580

India
35, Ryleyeva str. 272-1988

Indonesia
15, Kamennoostrovskiy pr. 237-0883

Italy
10, Teatralnaya sq. 312-3217

Japan
29, Moyka river emb. 314-1434

Korea
32, Nekrasova str. 448-1909

Latvia
11, 10th (Tenth) line, Vasilievsky island. 327-3454

Lithuania
37, Ryleyeva str. 327-3167

Netherlands
11, Moyka river emb. 334-0200

Norway
25, Nevskiy pr. 336-6420

Poland
12, 5th Sovetskaya str. 336-3140

Romania
4, Gorokhovaya str. 312-6141

Spain
4, Grafskiy per. 325-8470

Sweden
1/3 Malaya Konushennaya str. 329-1430

Switzerland
17, Chernyshevskogo pr. 327-0817

Thailand
9, Bolshoy pr, Vasilievsky island. 325-6271

Turkey
6, Malaya Morskaya str. 312-1048

United States of America
15, Furshtatskaya str. 331-2600

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