11th
International
Conference on ITS
Telecommunications

ITST 2011

IEEE

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COMMUNICATIONS
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Technical
Program

August 22-25, 2011
St. Petersburg, Russia

ITST NEW2AN RUSMART
conferences

NEW2AN • • • RUsmart

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WELCOME NOTES

It gives me great pleasure to offer my warmest congratulations to the 11th ITST 2011 held in Saint-Petersburg. Hereby, I would like to express my sincere thanks to General Chairs Dr. Alexey Vinel and Dr. Marion Berbineau for their great efforts to organize this conference.

It is a distinct honour for me in my life to have promoted such significant international conference series for ITS Telecommunications together with many friends in the international ITS society.

ITST series started in Yokosuka in Japan in October 2000 and, since then, 10 times conferences were held in Yokosuka, Seoul, Singapore, Brest, Chengdu, Sophia-Antipolis, Phuket, Lille and Kyoto and the 11th conference is being held in Saint-Petersburg successfully. Through these conferences, enthusiastic ITS people have been building up a global human network in ITS society.

I believe that the ITST 2011 is fruitful conference and ITST series will be inherited by the people with strong will aiming at future ecological and safety transportations. I hope that all participants will be able to fully enjoy the conference in beautiful traditional city of Saint-Petersburg.

Dr. Masayuki Fujise
General Co-chair of ITST 2008, Phuket

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GREETINGS FROM THE CHAIRS

I am happy that 11th ITST 2011 conference in the area of information and telecommunication technologies for transport 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 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. It is my sincere hope that you will enjoy our technical and social program and this visit will remain in your memory.

Prof. Rafael M. Yusupov
Corresponding Member of
Russian Academy of Sciences
Director of St.-Petersburg Institute
for Informatics and Automation (SPIIRAS)

GREETINGS FROM THE CHAIRS

On behalf of the International transport academy and from myself I would like to welcome participants of XI International conference on telecommunications in intelligent transport systems.

Every year the conference becomes more and more demanded platform for discussion of actual questions of information and telecommunication support of transport activity. The conference makes possible to demonstrate modern innovative decisions of leading world developers and software and the equipment anufacturers for intelligent transport systems.

During three days government body, noncommercial associations, business community, the international organizations, the research and design centers and institutes representatives from more than 40 countries of the world will act at the conference. A constructive discussion of problems of the newest transport technologies adoption will allow to develop the consolidated position focused on formation of effective intelligent transport systems.

I wish the participants of the conference fruitful work, new business contacts and successes.

Prof. Alexander A. Kondratiev
President of the International transport academy
Rector of North-West State Technical University

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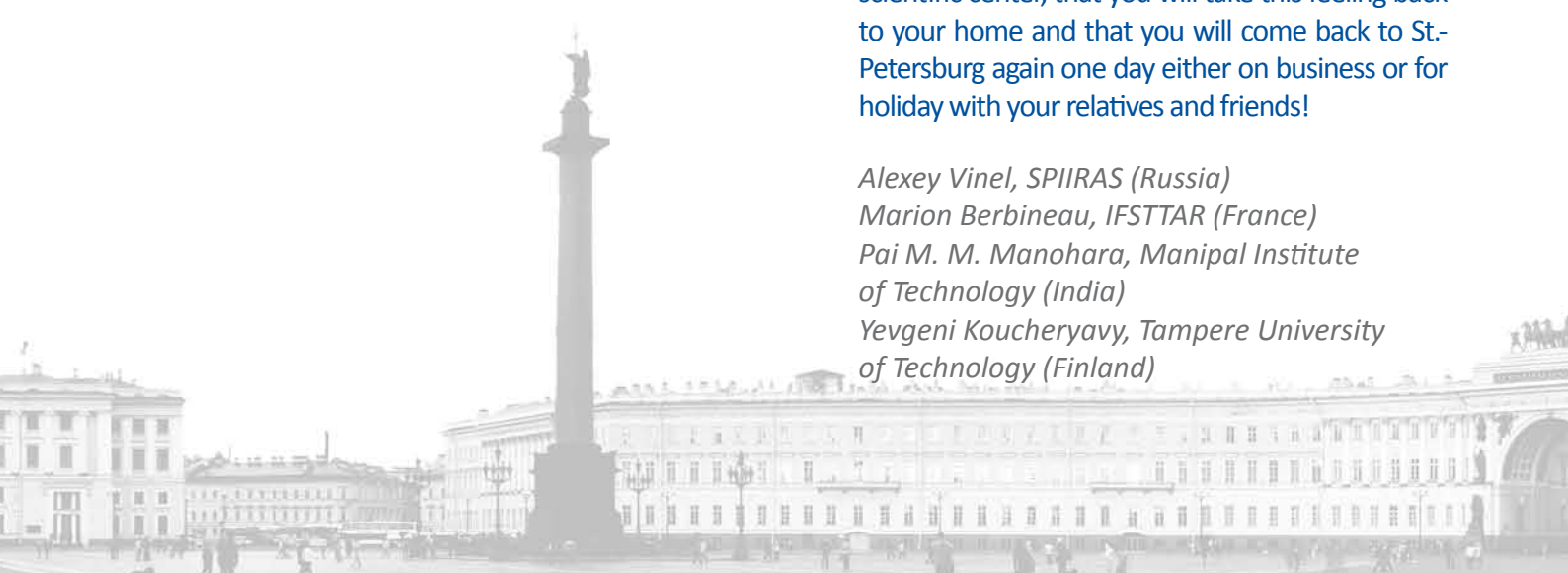
GREETINGS FROM THE CHAIRS

Dear friends!

Nowadays traveling is an integral part of our daily life. All of us spend hours in airplanes, trains, ferries and cars every day. ITST is an international forum where industrial and research communities are meeting each other to discuss how to make our transportation safe, efficient and green.

11th ITST continues good traditions of previous editions and brings the conference to a new level. This year the event is organized by Saint-Petersburg Institute for Informatics and Automation, Russian Academy of Sciences – SPIIRAS (Russia), Tampere University of Technology – TUT (Finland) and French institute of science and technology for transport, development and networks – IFSTTAR (France). The event is technically co-sponsored by IEEE Communications Society, is co-organized by the Technical Sub-Committee on Vehicular Networks and Telematics (VNAT) and is co-located with the 11th Next Generation Teletraffic and Wired/Wireless Advanced Networking conference (NEW2AN).

We wish to thank many people who contributed to the organization of this large-scale event: in particular Natalia Avdeenko and Ekaterina Livshits (Monomax Meetings & Incentives) for their excellent local organization efforts and the conference's social program preparation.

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!

Alexey Vinel, SPIIRAS (Russia)
Marion Berbineau, IFSTTAR (France)
Pai M. M. Manohara, Manipal Institute of Technology (India)
Yevgeni Koucheryavy, Tampere University of Technology (Finland)

Dear colleagues!

The technical program of ITST-2011 includes 7 keynote talks from the internationally recognized speakers, 3 invited lectures, 5 specialized workshops, panel discussion, 3 tutorials and the main conference track (23 technical sessions). Conference proceedings include around 140 papers of about 460 authors from more than 40 countries. The highest number of authors if the accepted papers represent France, Taiwan, Italy, Germany, P.R. China, Japan, Russia, India, Sweden and USA.

The papers have been selected from more than 200 submissions with the help of 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.

We wish a long life to this noticeable scientific event and hope to meet all of you again at ITST 2012!
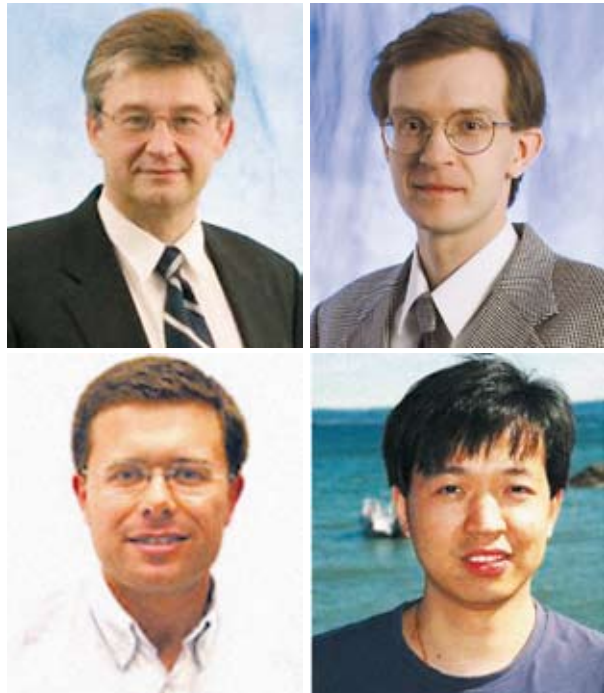
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Joel Rodrigues, University of Beira Interior (Portugal)
Yan Zhang, Simula Research Lab / University of Oslo (Norway)

GREETINGS FROM THE CHAIRS

GREETINGS FROM THE NEW2AN/ RUSMART CHAIRS

We welcome you to the 11th NEW2AN (Next Generation Teletraffic and Wired/Wireless Advanced Networking) and 4th ruSMART (Are You Smart) conferences held in St. Petersburg, Russia, during August 22-25, 2011.

Originally the NEW2AN conference was launched by ITC (International Teletraffic Congress) in St. Petersburg in June 1993 as an ITC-Sponsored Regional International Teletraffic Seminar. The first implementation was entitled «Traffic Management and Routing in SDH Networks» and held by R&D LONIIS. In 2002 the event received its current name, NEW2AN. In 2008 NEW2AN received a new counterpart in Smart Spaces, ruSMART, hence boosting interaction between researchers, practitioners and engineers from different areas of ICT. NEW2AN/ruSMART are established conferences with a unique cross-discipline mix of telecommunications science in Russia NEW2AN/ruSMART always featured by outstanding keynotes from universities and companies from Europe, USA and Russia. This year NEW2AN/ruSMART are co-located with the 11th International Conference on Intelligent Transportation Systems (ITS) Telecommunications, an international forum on recent advances in information and communication technologies for safe, efficient and green transport.

The 11th NEW2AN technical program addresses various aspects of next-generation network architectures. New and innovative developments for enhanced signaling protocols, QoS mechanisms, cross-layer optimization, traffic characterization are also addressed within the program. In particular, issues of QoE in wireless and IP-based multiservice networks are dealt with, as well as economical aspects of future networks. It is also worth mentioning the emphasis on wireless networks, including, but not limited to, cellular networks, wireless local area networks, personal area networks, mobile ad hoc networks, and sensor networks.

GREETINGS FROM THE NEW2AN/ RUSMART CHAIRS

The 4th Conference on Smart Spaces ruSMART 2011 provided a forum for academic and industrial researchers to discuss new ideas and trends in the emerging area of Smart Spaces that create new opportunities for fully-customized applications and services for users. The conference brought together leading experts from top affiliations around the world. This year there was active participation by industrial world-leader companies and particularly strong interest from attendees representing Russian R&D centers, which have a good reputation for high-quality research and business in innovative service creation and applications development.

This year the Technical Program of NEW2AN/ ruSMART/ITST benefited from joint keynote speakers from European, Russian and USA universities, companies and authorities. We wish to thank Technical Program Committee members of the both conferences and associated reviewers for their hard work and important contribution to the conference.

This year the conferences were organized in cooperation with ITST-2011, FRUCT Program, ITC (International Teletraffic Congress), IEEE, Tampere University of Technology, Popov Society, and supported by NOKIA and Nokia Siemens Networks. The support of these organizations is gratefully acknowledged.

We believe that the 11th NEW2AN and 4th ruSMART conferences provided an interesting and up-to-date scientific program. We hope that participants enjoyed the technical and social conference program, the Russian hospitality and the beautiful city of St. Petersburg.

Sergey Balandin, FRUCT Oy, Finland
Yevgeni Koucheryavy, Tampere University
of Technology, Finland
Honglin Hu, Shanghai Institute of Microsystem
and Information Technology, China

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IEEE Liaison

Dmitry Tkachenko, IEEE Russia Northwest BT/CE/COM Chapter (Russia)

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СПб|ГУТ)))

Making Cars Talk: Enabling the Connected Car

Abstract: Ford Motor Company has received global recognition as a leader in in-car connectivity with SYNC. Capitalizing on the consumer's need to remain connected everywhere and having access to their important contacts, media and information, Ford has created an in-car experience through a strategy Ford calls "Built-in, Brought-in, Beamed-in." Wireless connectivity is at the heart of this in-car experience and Jim Buczkowski will discuss the evolution of SYNC, the challenges of creating an exceptional in-car experience and the future role wireless connectivity will play in delivering great automotive products.

Bio: Jim Buczkowski is a Henry Ford Technical Fellow and Director Electrical and Electronics Systems Research & Advanced Engineering at Ford Motor Company. He is responsible for Research and Design of electrical and electronic systems including Infotainment, Telematics, Driver Information and Active Safety systems for Ford Vehicles Globally. He has 32 years with Ford Motor Company including experience in Electronics Design, Electronics Manufacturing (including manufacturing assignments in the U.S and in Spain), Product Development Quality and Manufacturing and Supply Chain Information Technology. He holds a Bachelor's degree in Computer Engineering and a Master's degree in Electrical Engineering, both from the University of Michigan.

KEYNOTE SPEAKERS

Mr. Jim Buczkowski

A Henry Ford Technical Fellow and Director Electrical and Electronics Systems Research & Advanced Engineering, Ford Motor Company

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KEYNOTE SPEAKERS

Dr. T. Russell Hsing

*Emerging Technologies and Services
Research Department
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with Dr. Piotr Szczechowiak

*Telcordia Poland Sp.z.o.o.
61-614 Poznan, Poland*

Vehicular Networks and Telematics Applications: Next ICT industry for the knowledge-based economy

Abstract: With the advance of wireless communications, each automotive vehicle will become a unique communication node in the global networks for the near future. This vehicular networks in turn will support interactions within the automobile, with the surrounding environment, over conventional communications infrastructure (V2I) and directly with nearby vehicles (V2V). Many potential applications that could be supported include safety, security, health and status of the automobile, user services, passenger entertainment, and more efficient use of the transportation and telecommunications infrastructure. We will address how such a vast service and network system can be scaled, supported, made reliable and economical. Important issues are the maturity of the technology, the value of the services performed, the business models and rationale for creating such networks in the first place, and the complex regulatory regime and standards that must be established.

During the past decade, the Information and Communications Technology (ICT) industry has a tremendous business success in IC, PC and cellular phones design/manufacturing. Now the urgent question is: What is the next promising industry in the ICT area, which could keep the growth momentum going during this knowledge-based economic era? Based on experiences and understanding in ICT industry, this talk will propose that "Vehicular Networks and Telematics Applications" should be one of the candidates to pursue now. The potential challenges, solutions requirements and standards activities associated with this new potential industry will be discussed in this talk also.

Bio: Dr. T. Russell Hsing (thsing@telcordia.com) is a Fellow of the IEEE, the British Computer Society (BCS) and SPIE- The Internal Society for Optical Engineering. He is an Executive Director to manage and lead the Emerging Technologies and Services Research Department at Telcordia Technologies (formerly Bellcore) in New Jersey. He is responsible for the R&D initiatives on: (1) vehicular networks and telematics applications, (2) diagnostics and prognostics for auto industry, (3) video-based physical security applications, and (4) business process and system dynamics modeling. He is now also supervising Directors of Telcordia Applied Research Center in Taiwan (TARC-TW) and Poland (TARC-PL) which are fully owned subsidiaries by Telcordia Technologies. Prior to joining Bellcore in 1986, he accumulated a wealth of research & development and product management & development experiences through affiliations with Burroughs, Xerox, GTE Labs, Telco Systems Fiber Optics Corporation, and TASC. Since 1995, Dr. Hsing has pioneered the technology transfer and the commercialization of Telecom technologies for Telcordia and Bellcore in the Asia/Pacific region through a joint venture and business alliances with strategically positioned and well financed local companies. He has accumulated 30+ years in the wireless communication and information & communications technologies (ICT) industry. He has received a B.Sc. (1970) from the National Chiao Tung University in Taiwan, and then M.Sc. (1974), Ph.D (1977) in Electrical Engineering from the University of Rhode Island in US. He is now an adjunct professor at the Arizona State University in US and also a visiting professor at the Peking University in China. He is also a Scientific Advisory Board for the Institute of Networks Coding at the Chinese University in Hong Kong. His research interests have covered the areas of communication signal processing and VLSI implementations, video coding and image transmission, wireless sensors networking and access technologies, and automotive telematics technologies and applications. He has four patents granted and and published extensively. He is now a co-editor (with Professor Vincent K. N. Lau) for a book series of the Information & Communications Technologies (ICT) for John Wiley & Sons, Inc., Publication. He has been a member (term 2006-2008) and then the chair (term 2010-2011) of the Fellow Evaluation Committee , and also a member of the Award Committee for the IEEE Communications Society. He is the founding chair of the Vehicular Networks and Telematics Applications (VNTA) Sub-Technical Committee for the IEEE Communications Society.

KEYNOTE SPEAKERS

Dr. Fan Bai
General Motors Global R&D
Presented by Dr. Alexey Ushakov

Vehicular Ad hoc Network and Its Challenges

Bio: Dr. Fan Bai (General Motors Global R&D) is a Senior Researcher in the Electrical & Control Integration Lab., Research & Development and Planning, General Motors Corporation, since Sep., 2005. Before joining General Motors research lab, he received the B.S. degree in automation engineering from Tsinghua University, Beijing, China, in 1999, and the M.S.E.E. and Ph.D. degrees in electrical engineering, from University of Southern California, Los Angeles, in 2005.

His current research is focused on the discovery of fundamental principles and the analysis and design of protocols/systems for next-generation Vehicular Ad hoc Networks(VANET), for safety, telematics and infotainment applications. Dr. Bai has published about 40 book chapters, conference and journal papers, including Mobicom, INFOCOM, MobiHoc, SECON, ICC, Globecom, WCNC, JSAC, IEEE Wireless Communication Magazine, IEEE Communication Magazine and Elsevier AdHoc Networks Journal. In 2006, he received Charles L. McCuen Special Achievement Award from General Motors Corporation "in recognition of extraordinary accomplishment in area of vehicle-to-vehicle communications for drive assistance & safety." He is a He serves as Technical Program Co-Chairs for IEEE WiVec 2007 and IEEE MoVeNet 2008. He is an associate editor of IEEE Transaction on Vehicular Technology and serves as guest editors for IEEE Wireless Communication Magazine, IEEE Vehicular Technology Magazine and Elsevier AdHoc Networks Journal. He is also serving as a Ph.D. supervisory committee member at Carnegie Mellon University and University of Illinois – Urban Champaign.

Dr. Werner Mohr
Chairman of Net!Works
Head of Research Alliances
Nokia Siemens Networks

Dr. Hendrik Berndt
Vice President & Chief Science Officer
DOCOMO Euro-Labs

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ICT research cooperation without Borders

Intelligent Mobility - Key Technologies to make EC White Paper on Transport come true

Assist. Prof. Wolfgang Steinicke
EURNEX Secretary General

KEYNOTE SPEAKERS

Prof. Riku Jäntti

*Head of the Department
of Communications
and Networking (Comnet)
at Aalto University, Finland*

Cognitive radio - an opportunity and challenge for intelligent transportation systems

Abstract: The need for radio spectrum is growing due to the wide spread deployment of the mobile internet and emerging new machine-to-machine communication applications including various intelligent transportation systems (ITS). Simple spectrum measurements indicate that large portion of the spectrum is currently unoccupied and thus free for secondary usage for the cognitive radio. These bands that on first glance appear free include among other things maritime and aeronautical radar bands, aeronautical DME bands as well as weather radar bands. Hence, many of the candidate bands for cognitive radio seem to be critical for ITS. In this talk, we discuss under which conditions secondary access to a band is possible. We start by defining spectrum availability and opportunity and then discuss the availability of various candidate bands for secondary use from the primary system protection point of view. One of the key problems in the secondary access is the control of aggregated interference from multiple secondary users. We discuss how this interference could be controlled.

Bio: Prof. Riku Jäntti received my doctoral degree in automation and systems technology in 2001 from TKK. After dissertation he becomes faculty member at the University of Vaasa where he worked as professor (pro term) of telecommunications for five years. His job there was to establish the Master's program in Telecommunications Engieering. In 2006, he received five year term as a professor of radio communications at the TKK (nowadays Aalto University). Currently he is the head of the Department of Communications and Networking. He is a senior member of IEEE, associate editor of IEEE Transactions on Vehicular Technology, and vice chair of the IEEE Vehicular Technology Finland Section. In addition, he is a member of Finnish Automation Society.

TUTORIALS

Jérôme Härri
(prepared with Marco Fiore)

Vehicular Networking: History, State of the Art and Interdisciplinary Aspects

Instructors

Jérôme Härri is an Assistant Professor at the Mobile Communication Group at EURECOM, France, and conducting research in wireless vehicular networks. He received a M.Sc. degree and a Dr. ès sc. degree in telecommunication from the Swiss Institute Technology (EPFL), Lausanne, Switzerland. Previously, he led a Traffic Telematics Junior Research Group at the Institute of Telematics of the Karlsruhe Institute of Technology (KIT), Germany. His research interests are related to the characterization of the mutual relationship between vehicular mobility and inter-vehicular communication or ITS applications.

Jérôme has been Co-Chair of the special session on traffic telematics at IEEE PIMRC'09 and has served as Demo Chair and TPC Co-chair of the IEEE Conference on Wireless Vehicular Communications (WiVeC) 2008 and 2010 respectively. He was also involved in the EU FP7 project iTETRIS with aspects related to mobility and connectivity-based ITS infrastructure deployment. He is now involved in the French FOT project SCOREF and the smart grid project VELCRI with aspects related to the identification and management of vehicular mobility contexts. He is actively participating to standardization activities of the ETSI TC ITS in a specialist task force on ITS multi-channel operations, and of the CAR 2 CAR Communication Consortium.

Jérôme is the author of the chapter on "Vehicular Mobility Modeling for VANET" in the book "VANET: Vehicular Applications and Inter-Networking Technologies", (Eds. H. Hartenstein and K. Laberteaux) published by Wiley in 2010.

Marco Fiore is an Assistant Professor at INSA Lyon, conducting his research activities within the INRIA SWING team. He received M.Sc. degrees in Computer Science from University of Illinois at Chicago, US, and from Politecnico di Torino, Italy, and a PhD in Telecommunication from the latter institution. He has been a visiting researcher at Rice University, US, and at Universitat Politecnica de Catalunya, Spain. His research interests include the characterization of user mobility in urban environments, the management of data in vehicular environments, the evaluation of vehicle-to-vehicle and vehicle-to- infrastructure communication. Dr. Fiore has published papers on vehicular networking at top-tier conferences, such as Infocom, MobiHoc and MobiSys, and in major journals, such as Trans. on Mobile Computing. He is steadily serving as a technical program committee member for conferences and workshops on vehicular networking, and he is the author of the chapter on "Vehicular Mobility Models" in the book "Vehicular Networks from Theory to Practice", published by Chapman & Hall in 2009.

TUTORIALS

Synchronization Techniques for Wired and Wireless Networks

Axel Sikora

Insructor

Axel Sikora is a Professor of University of Applied Sciences Offenburg, Germany (since September 2011). He holds a diploma of Electrical Engineering and a diploma of Business Administration, both from Aachen Technical University. He has done a Ph.D. in Electrical Engineering at the Fraunhofer Institute of Microelectronics Circuits and Systems, Duisburg, with a thesis on SOI-technologies. After various positions in the telecommunications and semiconductor industry, he became a professor at the Baden-Wuerttemberg Cooperative State University Loerrach, where he is head of the IT department and runs a B.Eng. program and a joint Master-Online program with Albert-Ludwigs-University in Freiburg. In 2002, he founded the Steinbeis-Transfer Centre for Embedded Design and Networking (stzedn), which is active as a design center, offering training, consulting, project and product implementations, as well as standard communication protocol suites, including the generic and extremely flexible emBetter TCP/IP-protocol stack. Its major activities are in the field of wireless and wired connectivity of embedded systems. Scientific research and development projects are processed in the Steinbeis Innovation Centre Embedded Design and Networking (sizedn), where algorithms and protocols for efficient, energy-aware, autonomous, and value-added networks are developed, simulated and implemented. Dr. Sikora is author, co-author, editor and co-editor of several textbooks and numerous papers in the field of embedded design and wireless and wired networking. He has held a tutorial on network synchronization already at Wireless Congress 2008 in Munich.

TUTORIALS

Michele Fiorini
(prepared with Flavio Testi)

The maritime navigation from the Titanic to nowadays e-Navigation

Instructors

Michele Fiorini (PhD, CEng, MIET, SMIEEE) is principal engineer at SELEX - Sistemi Integrati, a Finmeccanica company, in Rome, Italy. His working interests are mainly concerned with command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR), homeland protection and vessel traffic services (VTS). His current work is technical head for the "Zautomatyzowanego Systemu Radarowego Nadzoru (ZSRN) polskich obszarów morskich / Automatic National System of Radar Control (ZSRN) for Maritime Areas of Poland". Work which has taken him often to Gdańsk, Poland, in the past few months. Educated at PhD level, he is a UK chartered engineer (CEng) and member of the architecture technical working group (WG5) e-Navigation committee at the International Association of marine aids to navigation and

Lighthouse Authorities (IALA), Paris. He served in London on different committees and boards of the IEE and IET from 2003 to 2009 including Council and Qualification Board where he was the first non-UK member elected ever. He author and co-author of about 70 papers and project documents and served in the technical committee of many international conference on communications, surveillance and transport systems. He has been session chairman at the IEEE RadarCon2008 and is the chairman of the IET Italy Network.

Flavio Testi is Electrical Engineer with a Industrial Management specialization. He followed many technical, management and marketing courses at Polytechnic and SDA Bocconi University - Milan, ISTUD - Novara, Stratex – Montreaux (CH). His experience started with Factory Automation applications, Computer Numerical Controls for machine tools, Computer Integrated Manufacturing, Robotics. He reached managing positions in international companies: Elsag Elettronica San Giorgio, Digital Equipment, Atlas Kopco, Baan Company, Siemens Nixdorf, Bull HN Information System, Marconi Communications. Actually, he is partner of Alfaproject.net for high level consultancy on company processes, value chain and RfiD applications. Author or co-author of 4 technical books and 150 published articles on magazines in Italy, Germany, England, Poland, Russia. IET Member (MIET).

The speakers have held a lecture on e-Navigation in the maritime domain for the 2010 IET Italy Chairman Address at the Museo della Tecnica Elettrica of the University of Pavia, Italy.

TUTORIALS

Panel Discussion "ERA-Glonass: Technological Framework and Applications"

Panel Moderator:

Prof. Alexander Smirnov, SPIIRAS (Russia)

Panel Speakers:

Lutz P. Richter, VP Product Strategy / Intellectual Property, Peiker Acustic GmbH (Germany) "LDR-UMTS/GSM GLONASS/GPS Nad Core Element of an e-Call/Era Terminal"

Konstantin A. Khait, Head of Automotive R&D, Luxoft Technology Strategy Center (Russia) "Next step of in-vehicle devices integration: new approaches to connectivity"

Keynote Panel Speaker:

*Dr. Yaroslav Domaratsky, Director of automotive electronics department,
Navigation Information Systems, Joint Stock Company (Russia)
"ERA-GLONASS System Requirements, Technological Framework and client devices"*

Abstract: In the presentation we will discuss "ERA-GLONASS" system requirements and main differences between "ERA-GLONASS" and eCall systems. Then we will review back-end software architecture and technological framework. In addition, we will review "ERA-GLONASS" terminal requirements and statistical data for comments received from automotive electronics companies and vehicle OEM's. Finally we will go through 2011 year plans in back end system and terminal development areas.
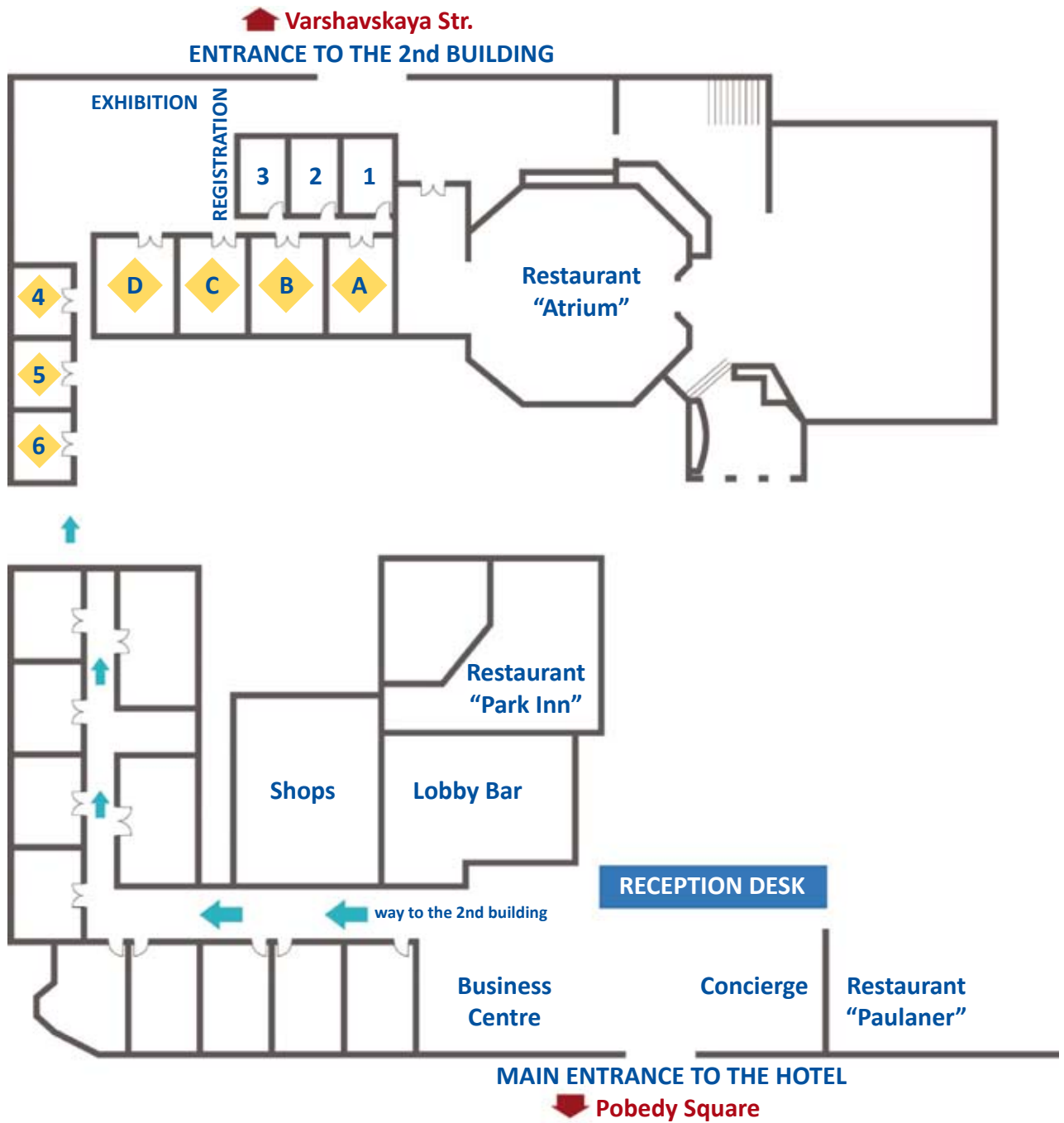
Keynote speaker bio: Yaroslav Domaratsky works for JSC NIS starting April 2010. From 2001 till 2010 Yaroslav was acting as Distinguished Member of Technical staff in Motorola SW development center in St. Petersburg. In 2008-2010 Yaroslav was Automotive and Navigation SW development manager in Motorola Mobile Devices Companion Products. From 2001 till 2008 Yaroslav was working as the Chief technical specialist in Automotive and Telematics SW development department, Motorola Global Software Group being responsible for department technical strategy, technical coordination between various projects and individual projects execution in the area of embedded SW development for internal Motorola needs and for external customers including Toyota, Volvo, Ford, Daimler Chrysler, BMW, and Jaguar Land Rover. Yaroslav holds PhD degree and has more than 20 scientific and technical publications.

PROGRAM AT GLANCE

TUESDAY, August 23

	A	B	C	D	Room 4
8:45	Conference opening				
9:00	Mr. Albert Efimov "Information and Computer Technology Cluster of Skolkovo Foundation"				
9:15	Keynote by Dr. Russell Hsing and Dr. Piotr Szczechowiak "Vehicular Networks and Telematics Applications: Next ICT industry for the knowledge-based economy"				
10:15	COFFEE BREAK				
10:30	Keynote by Dr. Werner Mohr				
11:30	Keynote by Dr. Wolfgang Steinicke "Intelligent Mobility - Key Technologies to make EC White Paper on Transport come true"			NEW2AN Session 1, 2	ruSMART Session 4
12:30	Mr. Yuri Chizhkov "Intelligent Transport Systems (ITS) and Safety of Automobile Transpor				
13:00	LUNCH				
14:00	VANET I	Routing	Channel modeling	NEW2AN Session 3	Miscellaneous I
16:00	COFFEE BREAK				
16:20	VANET II	ITS I	PHY I	NEW2AN Session 4	Human Factors
18:30	BUS TRANSFER FOR THE WELCOME RECEPTION				

WEDNESDAY, August 24

	A	B	C	D	Room 4	Room 5	Room 6
8:45	Dr. Thierry Goger "Strengthening research activities within transport and urban development area: a challenge for the European COoperation in the field of Scientific and Technical Research (COST)"						
9:15	Keynote by Prof. Riku Jäntti "Cognitive radio - an opportunity and challenge for intelligent transportation systems"						
10:00	COFFEE BREAK						
10:30	Greening urban mobility	CAM	SCVN	NEW2AN Session 5,6	RABAN, Invited Talk	TRxITS	Security
11:30					RABAN		
12:30	LUNCH						
13:30	VANET III	Smart Phone Vehicular Communications	Mobility I	NEW2AN Session 7	Tutorial lecture by Prof. Axel Sikora "Synchronization Techniques for Wired and Wireless Networks"	TRxITS	Security
14:45	COFFEE BREAK						
15:15	VANET IV	VRUP	2nd mini-workshop on GNSS applications for ITS	NEW2AN Session 8, 9	RABAN	TRxITS	Security
19:00	BUS CITY TOUR						

THURSDAY, August 25

	A	B	C	D	Room 4	Room 5
8:45	Keynote by Dr. Hendrik Berndt					
9:30	Tutorial lecture by Michele Fiorini, Flavio Testi "The maritime navigation from the Titanic to nowadays e-Navigation"					TRxITS
10:15	Keynote by Dr. Fan Bai (presented by Dr. Alexey Ushakov) "Vehicular Ad hoc Network and Its Challenges"					
10:30	Break					
10:45	Keynote by Mr. Jim Buczkowski "Making Cars Talk: Enabling the Connected Car"					
11:40	COFFEE BREAK					
12:00	Panel Discusssion: ERA-Glonass: Technological Framework and Applications			NEW2AN Session 10, 11	Image processing	
14:00	LUNCH					
15:00	VANETs V	Electric vehicles	PHY II	NEW2AN Session 12, 13, 14	Miscellaneous II	Tutorial by Jérôme Härri, Marco Fiore "Vehicular Networking: History, State of the Art and Interdisciplinary Aspects
16:15	Road Traffic	ITS II	PHY III	NEW2AN Closing Remarks	Mobility II	Tutorial by Jérôme Härri, Marco Fiore "Vehicular Networking: History, State of the Art and Interdisciplinary Aspects"
18:00	CONFERENCE DINNER					

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VENUE

The ITST-2011 Conference Venue is Park Inn Pulkovskaya hotel (1, Pobedy Square, St. Petersburg). All sessions take place in the 2nd Building of the hotel (main entrance is from Varshavskaya Street).

Varshavskaya Str.
ENTRANCE TO THE 2nd BUILDING

EXHIBITION

REGISTRATION

3 2 1

D C B A

4

5

6

Restaurant "Atrium"

Restaurant "Park Inn"

Shops

Lobby Bar

RECEPTION DESK

way to the 2nd building

Business Centre

Concierge

Restaurant "Paulaner"

MAIN ENTRANCE TO THE HOTEL
Pobedy Square

ITST 2011

ITST 2011 AND WORKSHOPS TECHNICAL PROGRAM

TUESDAY, August 23

Rooms A, B, C

08:45 - 09:00   Conference opening

Welcome note from ITST-2011 Committee and IEEE Russia Northwest   BT/CE/COM Chapter.

09:00 - 09:15   Mr. Albert Efimov "Information and Computer Technology Cluster of Skolkovo Foundation"

09:15 - 10:15   Keynote by Dr. Russell Hsing and Dr. Piotr Szczechowiak "Vehicular Networks and Telematics Applications: Next ICT industry for the knowledge-based economy"

10:15 - 10:30   Coffee break

10:30 - 11:30   Keynote by Dr. Werner Mohr

11:30 - 12:30   Keynote by Dr. Wolfgang Steinicke "Intelligent Mobility - Key Technologies to make EC White Paper on Transport come true"

12:30 - 13:00   Mr. Yuri Chizhkov "Intelligent Transport Systems (ITS) and Safety of Automobile Transport"

13:00 - 14:00   Lunch

Room A

14:00 - 16:00   VANET I

Chairs: Yunxin (Jeff) Li (NICTA & University of Sydney, Australia), Arunkumar Thangavelu (Vellore Institute of Technology, India)

An Embedded VDTN Testbed for the Evaluation of Vehicular Safety Systems

Maicke Paula (Institute of Telecommunications, University of Beira Interior, Fiat Automobile, Brazil); Joel J. P. C. Rodrigues (Instituto de Telecomunicações, University of Beira Interior, Portugal); João Dias (Instituto de Telecomunicações, University of Beira Interior, Portugal); João Isento (Instituto de Telecomunicações, University of Beira Interior, Portugal); Lei Shu (Osaka University, Japan)

Replica Voting based Architectures for Reliable Data Dissemination in Vehicular Networks

Kaliappa Ravindran (City University of New York, USA)

Dissemination Protocols to Support Cooperative Adaptive Cruise Control (CACC) Merging

Wouter Klein Wolterink (University of Twente, The Netherlands); Geert Heijenk (University of Twente, The Netherlands); Georgios Karagiannis (University of Twente, The Netherlands)

Approximation of the IEEE 802.11p Standard Using Commercial Off-The-Shelf IEEE 802.11a Hardware

Wim Vandenberghe (Ghent University – IBBT, Belgium); Ingrid Moerman (Ghent University – IBBT, Belgium); Piet Demeester (Ghent University, Belgium)

Room B

14:00 - 16:00   Routing

Chair: Valeriy Naumov (University of Oulu, Finland)

Traffic Monitoring and Routing in VANETs - A Cluster Based Approach

Devisetty venkata Manoj (Manipal Institute of Technology, India); Manohara Pai (Manipal Institute of Technology, Manipal University, India); Radhika Pai (Manipal Institute of Technology, India); Joseph Mouzna (Esigelec-Irseem, France)

Routing Packets to Distant Locations in VANETs

Khaleel W Mershad (American University of Beirut, Lebanon); Hassan A. Artail (American University of Beirut, Lebanon); Haidar Safa (American University of Beirut, Lebanon)

Evaluation of Ad-hoc routing protocols in Vehicular Ad-hoc Network using OPNET

Xiaozhou Fang (Beijing University of Posts and Telecommunications, P.R. China); Kok Keong Chai (Queen Mary, University of London, United Kingdom); Yasir Alfadhl (Queen Mary University of London, United Kingdom); Yan Sun (Queen Mary, University of London, United Kingdom)

Performance evaluation of a Tree-Based Routing and Address Autoconfiguration for Vehicle-to-Internet Communications

Marco Gramaglia (IMDEA Networks, Spain); Carlos J. Bernardos (Universidad Carlos III de Madrid, Spain); Maria Calderon (Universidad Carlos III de Madrid, Spain); Antonio De La Oliva (Universidad Carlos III de Madrid, Spain)

Room 4

14:00 - 16:00   Miscellaneous I

Chair: Lan Li (Hitachi (CN) Research & Development Corporation, P.R. China)

Data Association Techniques for Advanced Driver Assistance Systems using Embedded Soft-core Processors

Jehangir Khan (IFSTTAR, LEOST, France); Charles Tatkeu (IFSTTAR, LEOST & Univ Lille Nord de France, France); Pascal Deloof (IFSTTAR, LEOST, France); Smail Niar (Université de Valenciennes et du Hainaut-Cambr, France)

Shortest Paths and Probabilities on Time-Dependent Graphs - Applications to Transport Networks

Sebastien Felix (I3S-Mascotte CNRS-INRIA-UNS and Orange Labs, France); Jerome Galtier (France Telecom R&D, France)

iParking: a Parking Management Framework

Jatuporn Chinrungrueng (Nectec, Thailand); Songphon Dumnin (Nectec, Thailand); Ronachai Pongthornseri (Nectec, Thailand)

Velocity Decision Algorithm for Platooning based on Converging Sequence and Converging Possibility

Taisei Tokuda (Keio University, Japan); Masaki Suzuki (Keio University, Japan); Shohei Kanda (Keio University, Japan); Hiroshi Shigeno (Keio University, Japan)

Room C

14:00 – 16:00 Channel modeling

Chair: Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France)

A Validated 5.9 GHz Non-Line-Of-Sight Path-Loss and Fading Model for Inter-Vehicle Communication

Thomas Mangel (BMW Group Research and Technology, Germany); Oliver Klemp (BMW Group Research and Technology, Germany); Hannes Hartenstein (Karlsruhe Institute of Technology, Germany)

Radio Wave Propagation in Curved Rectangular Tunnels at 5.8 GHz for Metro Applications

Emilie Masson (IFSTTAR, LEOST & Univ Lille Nord de France, France); Yann Cocheril (IFSTTAR, France); Pierre Combeau (XLIM University of Poitiers, France); Lilian Aveneau (University of Poitiers, France); Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France); Rodolphe Vauzelle (IRCOM SIC University of Poitiers, France); Etienne Fayt (ALSTOM-TIS, France)

On the Simulation of Weibull Fading for V2X Communications

Iulia Ivan (IETR & Renault sas, France); Philippe Besnier (IETR, France); Xavier Bunlon (Renault sas, France); Lois Le Danvic (Renault, France); M'hamed Drissi UEB (INSA of Rennes, France)

Second order statistics of selection macro-diversity system operating over Gamma shadowed Ricean fading channels

Stefan Panic (University of Niљ, Yugoslavia (defunct)); Dragana Krstic (University of Niљ, Serbia); Mihajlo Stefanovic (University of Nis, Serbia); Sinisa Minic (Teachers College in Prizren - Leposavic, Serbia)

16:00 - 16:20   Coffee break

Room 4

16:20 - 18:20   Human Factors

Chair: Jatuporn Chinrungrueng (Nectec, Thailand)

Study on Psychosomatic Features of Driver's Distraction Based on Pattern Recognition

Masahiro Miyaji (Aichi Prefectural University, Japan); Haruki Kawanaka (Aichi Prefectural University, Japan); Koji Oguri (Aichi Prefectural University, Japan)

EWMA Based Classification of Driver State

Valeriy Naumov (University of Oulu, Finland)

Social-based Traffic Information Extraction and Classification

Napong Wanichayapong (National Electronics and Computer Technology Center, Thailand); Wasawat Pruthipunyaskul (National Science and Technology Development Agency, Thailand); Wasan Pattara-atikom (National Electronic and Computer Technology Center (NECTEC), Thailand); Pimwadee Chaovalit (National Science and Technology Development Agency, Thailand)

Room A

16:20 - 18:20   VANET II

Chairs: Soumaya Cherkaoui (Université de Sherbrooke, Canada), Alexey Vinel (Saint-Petersburg Institute for Informatics and Automation, Russia)

Is 95% Probability of Packet Reception safe?

Natalya An (Karlsruhe Institute of Technology (KIT), Germany); Tristan Gaugel (Karlsruhe Institute of Technology (KIT), Germany); Hannes Hartenstein (Karlsruhe Institute of Technology, Germany)

Efficient Dynamic Scheduling Scheme between Vehicles and Roadside Units based on IEEE 802.11p/WAVE Communication Standard

Teng Jiang (Beijing University of Posts and Telecommunications, P.R. China); Yasir Alfadhl (Queen Mary University of London, United Kingdom); Kok Chai (Queen Mary, University of London, United Kingdom)

Roadside and Moving WAVE Providers: Effectiveness and Potential of Hybrid Solutions in Urban Scenarios

Claudia Campolo (University "Mediterranea" of Reggio Calabria, Italy); Hector Agustin Cozzetti (Istituto Superiore Mario Boella, Italy); Antonella Molinaro (University "Mediterranea" of Reggio Calabria, Italy); Riccardo M. Scopigno (Istituto Superiore Mario Boella, Italy)

Performance Analysis of Broadcast Protocols in VANETs with Poisson Vehicle Distribution

Stefano Busanelli (University of Parma, Italy); Gianluigi Ferrari (University of Parma, Italy); Roberto Gruppini (University of Parma, Italy)

Room B

16:20 - 18:20   ITS I

Chair: Juan C. Burguillo (University of Vigo & University of Vigo, Spain)

Estimation of Fuel Flow for Telematics-Enabled Adaptive Fuel and Time Efficient Vehicle Routing

Ilya Kolmanovsky (University of Michigan, USA); Kevin McDonough (University of Michigan, USA); Oleg Gusikhin (Ford, USA)

Intelligent Transportation Systems based on Internet-Connected Vehicles: Fundamental Research Areas and Challenges

George Dimitrakopoulos (Harokopion University of Athens, Greece)

Virtual Police Agents for ITS Traffic Routing

Arturo Gomez (University of Paris 13 & Institut Galilee, France); Gladys Diaz (University of Paris 13 & L2TI, Institut Galilee, France); Khaled Boussetta (University of Paris 13, France)

Dynamic Traffic Information Sharing for Public Development and Application of ITS

Wei Du (Southwest Jaotong University, P.R. China); Wei Chen (Southwest Jaotong University, P.R. China)

Room C

16:20 - 18:20   PHY I

Chair: Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France)

An Improved Adaptive Modulation Scheme for Closed-Loop MIMO Transmission in Tunnel Environments

Imade Fatani (Université Lille Nord de France, UVHC, IEMN DOAE & UVHC, Valenciennes, France); Yann Cocheril (IFSTTAR, France); François-Xavier Coudoux (University of Valenciennes, France); Marie Zwingelstein-Colin (University of Valenciennes, France); Mohamed Gharbi (Iemn/Doae Umr Cnrs, France); Crépin Nsiala Nzéza (Institut National de REcherche sur le Transport et leur Sécurité, France); Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France)

A Study on Combining Location Oriented PN code Allocation with Successive Interference Cancellation for IVC

Satoshi Ogata (Tokyo University of Science, Japan); Kohei Ohno (Tokyo University of Science, Japan); Makoto Itami (Tokyo University of Science, Japan)

Optimal Duration Five Bit Orthogonal Chaotic Vector Shift Keying Communication: A Case Study

Timothy Wren (University of Sussex & MathTech Consultants Limited, United Kingdom); Tai Yang (Reader in Computer and Control Engineering, United Kingdom)

Adaptive Resource Allocation for OFDMA Systems under Peak Power Constraint

Yunxin (Jeff) Li (NICTA & University of Sydney, Australia); Hugh Durrant-Whyte (University of Sydney, Australia); Rob Evans (The University of Melbourne, Australia)

18:30 - 23:00   Welcome reception / Ship tour

Buses leave Pulkovskaya Park Inn (2nd Building entrance) at 18:30 towards city center where participants will board a ship for 2-3 hours tour sailing through St.-Petersburg city center. Food and drinks will be served. Return transportation will also be provided.

WEDNESDAY, August 24

Rooms A, B, C

08:45 - 09:15 Dr. Thierry Goger "Strengthening research activities within transport and urban development area: a challenge for the European COoperation in the field of Scientific and Technical Research (COST)"

09:15 - 10:00 Keynote by Prof. Riku Jäntti "Cognitive radio - an opportunity and challenge for intelligent transportation systems"

10:00 - 10:30 Coffee break

Room 6

10:30 - 12:30 Security
Chair: Yevgeni Koucheryavy (Tampere University of Technology, Finland)

Symmetric Key Distribution for C2X (Car-to-X(Car/Infrastructure)) Communication Systems
Eriko Ando (Hitachi Ltd., Japan); Yuki Horita (Hitachi Ltd., Japan); Kunihiko Miyazaki (Hitachi Ltd., Japan)

Navigation without GPS: Fake Location for Mobile Phone Tracking
Wichian Premchaiswadi (Siam University, Thailand); Walisa Romsaiyud (Siam University, Thailand); Nucharee Premchaiswadi (Dhurakijpundit University, Thailand)

Securing Smartphone Based ITS
Vasileios Manolopoulos (KTH Royal Institute of Technology, Sweden); Panagiotis (Panos) Papadimitratos (KTH, Sweden); Sha Tao (Royal Institute of Technology (KTH), Sweden); Ana Rusu (Royal Institute of Technology (KTH) Stockholm, Sweden)

PCPD: a Framework on Probability and Severity of IEEE 802.11 MAC Layer Misbehavior
Arash Modaresi (Amirkabir University of Technology, Iran); Mozhgan Mohebbi (Amirkabir University of Technology, Iran); Mehdi Dehghan (Amirkabir University of Technology, Iran)

Room A

10:30 - 12:30 Greening urban mobility
Chairs: Periklis Chatzimisios (Alexander TEI of Thessaloniki, Greece), Theodoros I. Kosmanis (Alexander Technological Educational Institute of Thessaloniki, Greece), Evangelos Mitsakis (Centre for Research and Technology Hellas, Hellenic Institute of Transport & Research Associate, Greece), Axel Sikora (University of Applied Sciences Offenburg, Germany)

Link-based Emission Model for Eco Routing
Jianchu Kang (Beihang University, P.R. China); Tao Ma (Beihang University, P.R. China); Fajin Ma (Beihang University, P.R. China); Jian Huang (Beihang University, P.R. China)

Effects and Potentials of LEZ in Europe - Do they really work?
Dietrich Leihs (Kapsch TrafficCom AG, Austria)

Power consumption analysis of constant bit rate data transmission over 3G mobile wireless networks
Le Wang (Aalto University, Finland); Anna Ukhanova (Technical University of Denmark, Denmark); Evgeny Belyaev (St. Petersburg Institute for Informatics and Automation of RAS, Russia)

Room 4

10:30 - 11:30 RABAN Workshop, Invited Talk
Chair: Sergey Andreev (Tampere University of Technology, Finland)

Analysis of Multiple Antenna Transmission for HSUPA
Roman Maslennikov (The University of Nizhny Novgorod, Russia); Alexey Trushanin (Lobachevsky State University of Nizhny Novgorod, Russia); Mikhail Shkerin (Lobachevsky State University of Nizhny Novgorod, Russia); Michael Shashanov (Lobachevsky State University of Nizhny Novgorod, Russia); Przemysław J Czerepiński (Nokia Siemens Networks, Poland)

Room C

10:30 - 12:30 SCVN (Seamless Connectivity in Vehicular Networks)
Chairs: Thomas Little (Boston University, USA), Alessandro Neri (University of ROMA TRE, Italy), Anna Maria Vegni (University of ROMA TRE, Italy)

Performance Evaluation of IEEE 802.11p for Vehicular Traffic Congestion Control
Aparajitha Murali (University Visvesvaraya College of Engineering, Bangalore University, India); Bhanupriya K (University Visvesvaraya College of Engineering, Bangalore University, India); Smitha Shekar B (University Visvesvaraya College of Engineering, Bangalore University, India); Narendra Kumar (University Visvesvaraya College of Engineering, India)

Comparative Investigation of Single-hop and Multi-hop Broadcast Strategies for Information Dissemination in VANETs

Stefano Busanelli (University of Parma, Italy); Gianluigi Ferrari (University of Parma, Italy); Vito Andrea Giorgio (University of Parma, Italy); Nicola Iotti (Guglielmo srl, Italy)

Clustered Vehicular Networks: Decentralized Detection "on the Move"

Stefano Busanelli (University of Parma, Italy); Marco Martalò (University of Parma, Italy); Gianluigi Ferrari (University of Parma, Italy)

A Fountain Codes-based Data Dissemination Technique in Vehicular Ad-hoc Networks

Veronica Palma (University of ROMA TRE, Italy); Elena Mammi (Fondazione Ugo Bordoni, Italy); Anna Maria Vegni (University of ROMA TRE, Italy); Alessandro Neri (University of ROMA TRE, Italy)

A V2X-based approach for reduction of delay propagation in Vehicular Ad-Hoc Networks

Ahmad Mostafa (University of Cincinnati, USA); Anna Maria Vegni (University of ROMA TRE, Italy); Rekha Singoria (University of Cincinnati, USA); Talmai B Oliveira (University of Cincinnati, USA); Thomas Little (Boston University, USA); Dharma P Agrawal (University of Cincinnati, USA)

Room B

10:30 - 12:30 CAM (Context Aware Middleware for Ubiquitous Computing Environments)

Chairs: Kaliappa Ravindran (City University of New York, USA), Hamed Vahdat-Nejad (University of Isfahan, Iran), Kamran Zamanifar (University of Isfahan, Iran)

Hybrid Interactions in Pervasive Computing Settings

Forough al Sadat Sahafipour (Islamic Azad University of Arak, Iran); Reza Javidan (Shiraz University of Technology, Iran); Hamed Vahdat-Nejad (University of Isfahan, Iran); Mehdi Kadivar (Department of Science, Mathematics Group, Iran)

Adaptive Context Oriented Component-based Application Middleware (COCA-middleware)

Basel Magableh (Trinity College of Dublin, Ireland)

Situational Context for Replica Voting based Data Collection in Hostile Environments

Kaliappa Ravindran (City University of New York, USA); Mohammad Rabby (City University of New York, USA)

Towards a Dynamic Adaption of Capacity in Mobile Telephony Networks using Context Information

Sebastian Göndör (Deutsche Telekom Laboratories, Germany); Abdulbaki Uzun (Deutsche Telekom Laboratories, Germany); Axel Küpper (TU Berlin, Germany)

Room 5

10:30 - 12:30 TRxITS Workshop

Chairs: Chi-Sheng Lin (National Central University, Taiwan), Jia-Chin Lin (National Central University, Taiwan), Divitha Seetharamdoo (IFSTTAR, LEOST & Univ Lille Nord de France, France), Alexey Vinel (Saint-Petersburg Institute for Informatics and Automation, Russia)

A Reduced-Complexity Multi-user MIMO Precoding Scheme with Sorted-QR Decomposition and Block-based Power Allocation

Chih-Hsiang Lin (National Central University, Taiwan); Pei-Yun Tsai (National Central University, Taiwan)

Modified CMA Method and Implementation for Time-Varying OFDM Channel Estimation

Dah-Chung Chang (National Central University, Taiwan); Chia-Mu Wu (NCU, Taiwan); Chi-Sheng Lin (National Central University, Taiwan)

Distributed Algorithm of Subgradient Optimization for Localization Based on Received Signal Strength in Wireless Network

Pei-Yun Tsai (National Central University, Taiwan); Ching-Hsien Wang (National Central University, Taiwan)

A Modified Decision Directed Channel Tracking of 802.11p OFDM System

Kao Peng Chou (National Central University, Taiwan)

Room 4

11:30 - 12:30 RABAN Workshop I

Chair: Roman Maslennikov (The University of Nizhny Novgorod, Russia)

Markov Models of Statistical Multiplexing of Telephone Dialogue with Packet Switching

Oleg Sheluhin (Moscow Technical University of Communication and Information, Russia); Aderemi A. Atayero (Covenant University, Nigeria); Monday Eyinagho (Covenant University, Nigeria)

Analysis of Robust Collision Resolution Algorithm with Successive Interference Cancellation and Bursty Arrivals

Sergey Andreev (Tampere University of Technology, Finland); Eugeny Pustovalov (Saint-Petersburg State University of Aerospace Instrumentation, Russia); Andrey Turlikov (Saint-Petersburg State University of Aerospace Instrumentation, Russia)

12:30 - 13:30   Lunch

Room 4

13:30 - 14:45 Tutorial lecture by Prof. Axel Sikora "Synchronization Techniques for Wired and Wireless Networks"

Room A

13:30 - 14:45   VANET III

Chair: Joel J. P. C. Rodrigues (Instituto de Telecomunicações, University of Beira Interior, Portugal)

Location-aware service discovery on IPv6 GeoNetworking for VANET

Satoru Noguchi (Nara Institute of Science and Technology, Japan); Manabu Tsukada (INRIA Paris - Rocquencourt, France); Thierry Ernst (INRIA, France); Atsuo Inomata (NARA Institute of Science and Technology, Japan); Kazutoshi Fujikawa (Nara Institute of Science and Technology, Japan)

Joint IP Networking and Radio Architecture for Vehicular Networks

Alexandru Petrescu (Commissariat à l'Énergie Atomique, France)

Experimental evaluation of an open source implementation of IPv6 GeoNetworking in VANETs

Thouraya Toukabri (INRIA, France); Manabu Tsukada (INRIA Paris - Rocquencourt, France); Thierry Ernst (INRIA, France); Lamjed Bettaieb (ESPRIT - Tunis, Tunisia)

Room B

13:30 - 14:45 Smart Phone Vehicular Communications

Chairs: Amal Elnahas (The German University in Egypt, Egypt), Ala' Khalifeh (German University in Cairo, USA), Sha Tao (Royal Institute of Technology (KTH), Sweden)

On the Feasibility of Utilizing Smartphones for Vehicular Ad Hoc Networking

Wim Vandenberghe (Ghent University – IBBT, Belgium); Ingrid Moerman (Ghent University - IBBT, Belgium); Piet Demeester (Ghent University, Belgium)

iDANS: A Platform for Disseminating Information on a VANET Consisting of Smartphone Nodes

Dan Sawada (Keio University & Graduate School of Media and Governance, Japan); Masaaki Sato (Keio University, Japan); Keisuke Uehara (KEIO University, Japan); Jun Murai (KEIO University, Japan)

Emergency Message Dissemination System for Smartphones During Natural Disasters

Xian Wu (University of Twente, The Netherlands); Maciej Mazurowski (University of Twente, Poland); Zhen Chen (University of Twente, P.R. China); Nirvana Meratnia (University of Twente, The Netherlands)

Room C

13:30 - 14:45   Mobility I

Chairs: Moltchanov Boris (Telecom Italia, Italy), Jouni Korhonen (Nokia Siemens Networks, Finland), Telemaco Melia (Alcatel-Lucent Bell Labs, France)

3GPP Evolved Packet Core support for distributed mobility anchors

Wolfgang Hahn (Nokia Siemens Networks, Germany)

A Layer-2 Approach for Mobility and Transport in the Mobile Backhaul

Nuutti Varis (Aalto University, Finland); Jukka M J Manner (Aalto University, Finland); Johanna Heinonen (NSN, Finland)

Wireless Backhauling in Intelligent Transportation Systems

Claudio Cicconetti (Intecs S.p.A., Italy); Francesco Galeassi (Intecs S.p.A., Italy); Raffaella Mambrini (Intecs S.p.A., Italy); Michele Rosellini (Intecs S.p.A., Italy); Alessandro Rossi (Intecs S.p.A., Italy)

Room 6

13:30 - 14:45   Security Workshop

Chairs: Narayan Debnath (Winona State University, USA), Nabil El KADHI (Ahlia University, Bahrain), Hazem Mostafa El-Gendy (Assistant Minister, Egypt)

Short-lived Key Management for Secure Communications in VANETs

Stefano Busanelli (University of Parma, Italy); Luca Veltri (University of Parma, Italy); Gianluigi Ferrari (University of Parma, Italy)

Securing Computer Networks Communication By Modifying Computer Network Communication Protocols

Wagdi Youssef (Sourah Council, Egypt)

Towards Speed Detection Camera System for a RADAR Alternative

Osman Ibrahim (CEO, Egypt); Ahmed ElShafee (Ahram Canadian University, Egypt); Hazem Mostafa El-Gendy (Assistant Minister, Egypt)

Room 5

13:30 - 14:45   TRxITS Workshop

Chairs: Chi-Sheng Lin (National Central University, Taiwan), Jia-Chin Lin (National Central University, Taiwan), Divitha Seetharamdoo (IFSTTAR, LEOST & Univ Lille Nord de France, France), Alexey Vinel (Saint-Petersburg Institute for Informatics and Automation, Russia)

Determination of antenna specification and positioning for efficient railway communication in tunnels of arbitrary cross section

Jorge Avella (IFSTTAR, LEOST & Université Lille Nord de France, France); Divitha Seetharamdoo (IFSTTAR, LEOST & Univ Lille Nord de France, France); Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France); Michel Ney (TELECOM Bretagne Institute, France); Francois Gallée (Télécom Bretagne, France)

Feasibility Analysis of UMTS Handover Logs for Traffic State Estimation

Kuen-Rong Lo (Telecommunication Labs of Chunghwa Telecom, Taiwan); Chih-Yi Chiang (Telecommunication Labs of Chunghwa Telecom, Taiwan); Ju-Yin Chuang (Telecommunication Labs of Chunghwa Telecom, Taiwan); Jian-Kai Chen (Telecommunication Labs of Chunghwa Telecom, Taiwan); Chia-Chen Hung (Telecommunication Labs of Chunghwa Telecom, Taiwan); Wei-Hui Chen (Telecommunication Labs of Chunghwa Telecom, Taiwan)

An Automatic Modulation Classification Technique Using High-Order Statistics for Multipath Fading Channels

Pokuan Shih (National Central University, Taiwan); Dah-Chung Chang (National Central University, Taiwan)

14:45 - 15:15   Coffee break

Room C

15:15 - 18:45   2nd workshop on GNSS applications for ITS

Chairs: Hansjörg Manz (Technische Universität Braunschweig, Germany), Juliette Marais (IFSTTAR-Leost, France), Michael Meyer zu Hoerste (German Aerospace Center (DLR), Germany), François Peyret (IFSTTAR: French Institute of Sciences and Technology for Transport, Development and Networks, France)

Non-Line-Of-Sight GNSS signal detection using an on-board 3D model of buildings

François Peyret (IFSTTAR: French Institute of Sciences and Technology for Transport, Development and Networks, France); David Bétaille (IFSTTAR, France); Florian Mougel (IFSTTAR, France)

GPS/GLONASS Receiver in Land Vehicle: Expectations and Reality

Nikolay Mikhaylov (Mstar Semiconductor & St. Petersburg State University of Aerospace Instrumentation, Russia); Sergey Pospelov (Mstar Semiconductor, Russia); Andrey Botchkovski (Mstar Semiconductor, Russia)

Performance Evaluation of GNSS Aided Predictive Multihomed NEMO Configurations

József Kovács (Computer and Automation Research Institute, Hungarian Academy of Sciences, Hungary); Laszlo Bokor (Budapest University of Technology and Economics, Hungary); Gabor Jeney (Budapest University of Technology and Economics & Network Security Audit Ltd., Hungary)

Combination of RSS localization and ToF ranging for increasing positioning accuracy indoors

Aleksandr Galov (Petrozavodsk State University & RTL-Service Ltd, Russia); Alexei P. Moschevikin (Petrozavodsk State University, Russia); Roman Voronov (Petrozavodsk State University, Russia)

A Theoretical Analysis of the Extended Kalman Filter for Data Fusion in Vehicular Positioning

Rafael Toledo-Moreo (University of Murcia, Spain); Dominique Gruyer (LIVIC-IFSTTAR, France); Alain Lambert (Université Paris-Sud XI, France)

An Effect of Applying Information Filtering to a Positioning System Using Address Information on Web and Spot Information in Cityscape

Tomotaka Nagaosa (Kanto Gakuin University, Japan); Arata Yuge (Kanto Gakuin University, Japan)

Hybrid Vehicle Positioning and Tracking Using Mobile Phones

Sha Tao (Royal Institute of Technology (KTH), Sweden); Vasileios Manolopoulos (KTH Royal Institute of Technology, Sweden); Saul Rodriguez (Royal Institute of Technology KTH, Sweden); Mohammed Ismail (KTH Royal Institute of Technology, Sweden); Ana Rusu (Royal Institute of Technology (KTH) Stockholm, Sweden)

Proposal of Position Estimation Algorithm using a Satellite and Shared Data of Receivers

Hironobu Onishi (Shizuoka University, Japan); Hiroyuki Hatano (Shizuoka University, Japan); Yoshihiko Kuwahara (Shizuoka University, Japan)

Room B

15:15 - 18:45 VRUP Workshop (Vuneralble Road Users Protection)

Chairs: Frederik Diederichs (University of Stuttgart IAT & Fraunhofer IAO, Germany), Axel Sikora (University of Applied Sciences Offenburg, Germany), Alexey Vinel (Saint-Petersburg Institute for Informatics and Automation, Russia)

From user wishes to system architecture: Safety for children going to and from school by bus

Anna Anund (Swedish National Road and Transport Research Institute, Sweden); Tania Dukic (Swedish National Road and Transport Research Institute, Sweden)

Protocol and System Design of a Cooperative Pedestrian Safety System

Axel Sikora (University of Applied Sciences Offenburg, Germany); Dirk Lill (Steinbeis Innovation Center Embedded Design and Networking, Germany); Manuel Schappacher (Steinbeis Innovation Center Embedded Design and Networking, Germany); Alexander Gutjahr (Steinbeis Innovation Center Embedded Design and Networking, Germany)

Enhancing the reproduction of road signs in automotive HMIs to protect children

Melanie Ganzhorn (University of Stuttgart & IAT, Germany); Frederik Diederichs (University of Stuttgart IAT & Fraunhofer IAO, Germany); Harald Widlroither (University of Stuttgart IAT, Germany)

Experimental Evaluation of ITST based School Bus Stop Notifications for Car Drivers

Frederik Diederichs (University of Stuttgart IAT & Fraunhofer IAO, Germany); Betina Weber (University of Stuttgart IAT, Germany); Melanie Ganzhorn (University of Stuttgart & IAT, Germany)

Cross-Network Information Dissemination in VANETs

Gianluigi Ferrari (University of Parma, Italy); Stefano Busanelli (University of Parma, Italy); Nicola Iotti (Guglielmo srl, Italy); Yossi Kaplan (Cellint Traffic Solutions Ltd, Israel)

Experiences from an application for safe transport to and from school A step toward SAFEWAY2SCHOOL

Åsa Viklund (Swedish Transport Administration, Sweden); Katarina Appeltofft (Swedish Transport Administration, Sweden)

Room A

15:15 - 18:45 VANET IV

Chair: Hassan A. Artail (American University of Beirut, Lebanon)

Intelligent Disaster Management System based on Cloud-enabled Vehicular Networks

Zubaida Alazawi (Swansea University, United Kingdom); Mohmmad B. Abdljabar (Al-Mustansiriya University, Iraq); Saleh Altowaijri (Swansea University, United Kingdom); Rashid Mehmood (Swansea University, United Kingdom)

Efficient and Unique Identifier for V2X Events Agreggation in the Local Dynamic Map

Hamid Menouar (QU Wireless Innovations Center, Qatar); Fethi Filali (QU Wireless Innovations Center, Qatar); Adnan Abu-Dayya (QUWIC, Qatar)

The Weather Hazard Warning in simTD: A Design for Road Weather Related Warnings in a Large Scale Car-to-X Field Operational Test

Attila Jaeger (Technische Universität Darmstadt, Germany); Sorin A. Huss (Technische Universität Darmstadt, Germany)

Impact of Packet Loss on CACC String Stability Performance

Chenxi Lei (University of Twente, The Netherlands); Emiel Martijn van Eenennaam (University of Twente, The Netherlands); Wouter Klein Wolterink (University of Twente, The Netherlands); Jeroen Ploeg (Netherlands Organisation for Applied Scientific Research TNO, The Netherlands); Georgios Karagiannis (University of Twente, The Netherlands); Geert Heijenk (University of Twente, The Netherlands)

Efficient Map Based Location Service for VANETs

Ashok Donthe (Manipal Institute of Technology, Manipal University, India); Manohara Pai (Manipal Institute of Technology, Manipal University, India); Joseph Mouzna (Esigelec-Irseem, France)

RFTraffic: Passive Traffic Awareness Based on Emitted RF Noise from the Vehicles

Yong Ding (Karlsruhe Institute of Technology, Germany); Behnam Banitalebi (Karlsruhe Institute of Technology, Germany); Takashi Miyaki (Karlsruhe Institute of Technology, Germany); Michael Beigl (KIT & TecO, Germany)

An Efficient Destination-Based Data Management Policy for Vehicular Networks

Mildred Caballeros Morales (Kyung He University, Korea); Choong Seon Hong (Kyung Hee University, Korea)

QoS for highly dynamic vehicular ad hoc network optimality

Prabhakar Rontala Subramaniam (University of KwaZulu-Natal, South Africa); Arunkumar Thangavelu (Vellore Institute of Technology, India); Chitra Venugopal (University of Kwazulu Natal, South Africa)

Room 4

15:15 - 18:45   RABAN Workshop II

Chair: Sergey Andreev (Tampere University of Technology, Finland)

Detection of Abnormal Spikes in Network Traffic Using Multifractal Analysis

Oleg Sheluhin (Moscow Technical University of Communication and Information, Russia); Aderemi A. Atayero (Covenant University, Nigeria); Artem V. Garmashev (Moscow Technical University of Communications and Informatics, Russia)

Capacity Analysis and Antenna Selection Strategy for Multi-User Distributed Antenna System

Yuyao Zhao (Tsinghua University, P.R. China); Xin Su (Tsinghua University, P.R. China); Jie Zeng (Tsinghua University, P.R. China); Yuan You (Tsinghua University, P.R. China); Xibin Xu (Tsinghua University, P.R. China)

User Demand Prediction Algorithm Used in Mobile Device Driver for Cloud Storage

Alexander Mityakov (St. Petersburg Electrotechnical University LETI, Russia); Dmitry L Petrov (St. Petersburg Electrotechnical University, Russia); Maksim Kostenko (St. Petersburg Electrotechnical University LETI, Russia); Denis Butusov (St. Petersburg Electrotechnical University LETI, Russia)

Efficient Baseband Implementation on an SDR Platform

Wen Xu (Intel & Intel Mobile Communications, Germany); Mathias Richter (Universität der Bundeswehr München, Germany); Mirko Sauermann (Intel Mobile Communications, Germany); Fatih Capar (Intel Mobile Communications, Germany); Cyprian Grassmann (Infineon, Germany)

Space-Time Coding for MIMO Frequency Selective Channels

Pei Xiao (University of Surrey, United Kingdom)

Resource Allocation for Multiuser and Mobile Cellular Relay Networks

Seyyed Esmaeil Seyyed Alikhani (Khajeh Nasir Toosi University, Iran); Behrad Mahboobi (Tehran Univ, Iran); Mehrdad Ardebilipour (Khajeh Nasir university, Iran)

Design and Implementation of SRRC IP Generator

Jue Hsuan Hsiao (Oriental Institute of Technology, Taiwan); Yi Hua Chen (Oriental Institute of Technology, Taiwan); Chih Hung Tseng (Oriental Institute of Technology, Taiwan); Pang Fu Liu (Oriental Institute of Technology, Taiwan); Kun Feng Lin (Oriental Institute of Technology, Taiwan)

Room 6

15:15 - 18:45   Security Workshop

Chairs: Narayan Debnath (Winona State University, USA), Nabil El KADHI (Ahlia University, Bahrain), Hazem Mostafa El-Gendy (Assistant Minister, Egypt)

An ATL Transformation from Natural Language Requirements Models to Business Models of a MDA Project

Narayan Debnath (Winona State University, USA); Laura Felice (Universidad Nacional del Centro de la Pcia. de Buenos Aires, Argentina); Maria Leonardi (Universidad Nacional del Centro de la Provincia de Buenos Aires, Argentina); Maria Mauco (Universidad Nacional del Centro de la Pcia. de Buenos Aires, Argentina); German Montejano (Universidad Nacional de San Luis, Argentina); Daniel Riesco (Universidad Nacional de San Luis, Argentina)

A Method to evaluate QoS of Web Services required by a workflow

Narayan Debnath (Winona State University, USA); Paola Martellotto (Universidad Nacional de Rio Cuarto, Argentina); Daniel Riesco (Universidad Nacional de San Luis, Argentina); German Montejano (Universidad Nacional de San Luis, Argentina)

Implementation of NTRU PKCS using Array for polynomials upto degree 147

Debidas Ghosh (National Institute of Technology, Durgapur, West Bengal, India)

Applying Open Networks Communication Authentication

Hazem Mostafa El-Gendy (Assistant Minister, Egypt); Wagdi Youssef (Sourah Council, Egypt)

On the improvement of the IEEE 802.11 encapsulation protocols performance

Dmitry Yurkin (SUT, Russia); Naveen Chilamkurti (La Trobe University, Australia); Alexey Vinel (Saint-Petersburg Institute for Informatics and Automation, Russia)

Room 5

15:15 - 18:45   TRxITS workshop

Chairs: Chi-Sheng Lin (National Central University, Taiwan), Jia-Chin Lin (National Central University, Taiwan), Divitha Seetharamdoo (IFSTTAR, LEOST & Univ Lille Nord de France, France), Alexey Vinel (Saint-Petersburg Institute for Informatics and Automation, Russia)

Higher-Order Statistics Based Sequential Spectrum Sensing for Cognitive Radio

Hsing-yi Hsieh (National Central University, Taiwan); Han-Kui Chang (National Central University, Taiwan); Meng-lin Ku (National Central University, Taiwan)

MUSIC-Based Multiple CFOs Estimation Methods for CA-OFDM Systems

Chin-Yi Chang (National Central University, Taiwan); Yu-Ting Sun (National Central University, Taiwan); Meng-lin Ku (National Central University, Taiwan)

Trust Levels in Peer-to-Peer (P2P) Vehicular Network

Irshad Sumra (Universiti Technologi Petronas, Malaysia); Abdullah Alghamdi (King Saud University, Malaysia); Iftikhar Ahmad (Universiti Teknologi PETRONAS, Malaysia)

Development of a simulation plate-form for ACC radar application

Francois Gallée (Télécom Bretagne, France); Dominique Leroux (Telecom Bretagne, France); Alain Peden (Telecom Bretagne, France); Michel Ney (TELECOM Bretagne Institute, France); Dominique Gruyer (LIVIC-IFSTTAR, France)

19:00 - 22:00   Bus tour

Buses leave Pulkovskaya Park Inn (2nd Building entrance) at 19:00 towards city center for guided panoramic tour with picture stops.

THURSDAY, August 25

Rooms A, B, C

08:45 - 09:30   Keynote by Dr. Hendrik Berndt

09:30 - 10:15 Tutorial lecture by Michele Fiorini, Flavio Testi "The maritime navigation from the Titanic to nowadays e-Navigation"

Room 5

09:30 - 10:15   TRxITS Workshop and Discussions

Chairs: Chi-Sheng Lin (National Central University, Taiwan), Jia-Chin Lin (National Central University, Taiwan), Divitha Seetharamdoo (IFSTTAR, LEOST & Univ Lille Nord de France, France), Alexey Vinel (Saint-Petersburg Institute for Informatics and Automation, Russia)

Size reduction of Microstrip Patch Antenna using Defected Microstrip Structures

Geetam Singh Tomar (Machine Intelligence Research (MIR) Labs Gwalior & Malwa Institute of Tech & Mgt, Gwalior, India); Vivek Singh Kushwah (Amity School of Egineering & Technology, India)

Prototype Hardware Architecture for Vehicular Communications in Accordance with 802.11p

Nuno Almeida (Instituto de Telecomunicações, Portugal)

Improved Frequency Offset Estimation Technique in IEEE 802.11p Environments

Wen-Jeng Lin (National Chi Nan University, Taiwan); Jung-Shan Lin (National Chi Nan University, Taiwan); Yu-Ting Sun (National Central University, Taiwan)

Efficient Data Transmission Scheme for MTC Communications in LTE System

Shiann-Tsong Sheu (National Central University, Taiwan); Chun-Hsiang Chiu (National Central University, Taiwan); Shao-Jung Lu (National Central University, Taiwan); Hsien-Hao Lai (National Central University, Taiwan)

Rooms A, B, C

10:15 - 10:30   Keynote by Dr. Fan Bai (presented by Dr. Alexey Ushakov) "Vehicular Ad hoc Network and Its Challenges"

10:30 - 10:45   Break

Rooms A, B, C

10:45 - 11:40 Keynote by Mr. Jim Buczkowski "Making Cars Talk: Enabling the Connected Car"

11:40 - 12:00 Coffee Break

Rooms A, B, C

12:00 - 14:00   Panel Discusssion: ERA-Glonass: Technological Framework and Applications

Chair: Alexander Smirnov (SPIIRAS, Russia)
Panel Moderator Alexander Smirnov, SPIIRAS; Keynote "ERA-GLONASS System Requirements, Technological Framework and client devices" by Dr. Yaroslav Domaratsky, Director of automotive electronics department, Navigation Information Systems, Joint Stock Company (Russia); Panel speakers: "LDR-UMTS/GSM GLONASS/GPS Nad Core Element of an e-Call/Era Terminal" by Lutz P. Richter, VP Product Strategy / Intellectual Property, Peiker Acustic GmbH (Germany); "Next step of in-vehicle devices integration: new approaches to connectivity" by Konstantin A. Khait, Head of Automotive R&D, Luxoft Technology Strategy Center (Russia).

Room 4

12:00 - 14:00 Image processing

Chair: Evgeny Belyaev (St. Petersburg Institute for Informatics and Automation of RAS, Russia)

A novel adaptive support window based stereo matching algorithm for 3D reconstruction from 2D images

Iveel Jargalsaikhan (National Institute of Technology, Karnataka, India); Sumam David (National Institute of Technology Karnataka, India)

Development of High Accuracy Congestion Prediction Algorithm Using Series of Camera Detectors

Kittipong Hi-ri-o-tappa (Chulalongkorn University & National Science and Technology Development Agency, Thailand); Wasan Pattara-atikom (National Electronic and Computer Technology Center (NECTEC), Thailand); Suttipong Thajchayapong (Imperial College London, United Kingdom); Sorawit Narupiti (Chulalongkorn University, Thailand)

An Infrared Thermal Image Acquisition System for Intra-Vehicle Applications

Hanna Farhat (IETR-INSA Rennes, France); Eric Bazin (IETR-INSA Rennes, France); Sylvain Haese (IETR-INSA Rennes, France); Ghais El Zein (IETR-INSA Rennes, France)

Robust Hand Gesture Recognition System using Motion Templates

Shrikant Kulkarni (National Institute of Technology Karnataka Surathkal, India); Manoj Rao (National Institute of Technology Karnataka Surathkal, India); Sumam David (National Institute of Technology Karnataka, India); Venugopala Mdumbu (Texas Instuments, India); Y Senthil Kumar (Texas Instruments, India)

14:00 - 15:00 Lunch

Room 5

15:00 - 16:15 Tutorial by Jérôme Härri, Marco Fiore "Vehicular Networking: History, State of the Art and Interdisciplinary Aspects"

Room A

15:00 - 16:15 VANETs V

Chair: Wouter Klein Wolterink (University of Twente, The Netherlands)

Performance Implications of Fragmentation Mechanisms on Vehicular Delay-Tolerant Networks

João Dias (Instituto de Telecomunicações, University of Beira Interior, Portugal); João Isento (Instituto de Telecomunicações, University of Beira Interior, Portugal); Joel J. P. C. Rodrigues (Instituto de Telecomunicações, University of Beira Interior, Portugal); Paulo Pereira (INESC-ID & IST-TU Lisbon, Portugal); Jaime Lloret (Universidad Politécnica de Valencia, Spain)

WAVE System Architecture Design in Urban Area

Tsutomu Tsuboi (Hitachi Ltd., Japan)

Data replication in distributed database systems in VANET

Anton Lieskovsky (Univerzity of Zilina, Slovakia); Ján Janech (University of Žilina, Slovakia); Tomas Baca (University of Zilina, Slovakia)

Room C

15:00 - 16:15 PHY II

Chair: Iulia Ivan (IETR & Renault sas, France)

MIMO Systems for Turbo Coded Cooperation over Orthogonal and Non-Orthogonal Channels

Haifa Fares (ENST Bretagne, France); Sidi Ould mohamed (SUPCOM, Tunisia); Charlotte Langlais (Télécom Bretagne, France); Alexandre Graell i Amat (Chalmers University of Technology, Sweden); Marion Berbineau(IFSTTAR, LEOST & University Lille Nord de France, France)

Blind Detection of the Number of Transmitting Antennas for Spatially-Correlated MIMO Systems

Kais Hassan (UniversityLille Nord de France, France); Crépin Nsiala Nzéza (Institut National de REcherche sur le Transport et leur Sécurité, France); Roland Gautier (University of Brest, France); Emanuel Radoi (University of Brest & Lab-STICC UMR CNRS 3192, France); Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France); Iyad Dayoub (University Lille Nord de France, France)

Iterative Joint Channel Estimation and Data Detection for MIMO-CDMA Systems over Correlated Fading Channels

Ayman Assra (IFSTTAR, Finland); Walaa Hamouda (Concordia University, Canada); Iyad Dayoub (University Lille Nord de France, France); Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France)

Room 4

15:00 - 16:15   Miscellaneous II

Chairs: Olga Galinina (Tampere University of Technology & SPIIRAS, Saint Petersburg, Finland), Yevgeni Koucheryavy (Tampere University of Technology, Finland)

Multipath Rate Allocation Algorithm for Overlay Networks with Feedback From Overlay Nodes

Svetlana Boudko (Norsk Regnesentral, Norway); Wolfgang Leister (Norsk Regnesentral, Norway); Carsten Griwodz (Simula Research Laboratory, Norway); Pål Halvorsen (Simula Research Laboratory & Department of Informatics, University of Oslo, Norway)

Using Cooperation among Peers and Interest Mixing to Protect Privacy in Targeted Mobile Advertisement

Ahmed Fawaz (American University of Beirut, Lebanon); Ali Hojaij (American University of Beirut, Lebanon); Hadi Kobeissi (American University of Beirut, Lebanon); Hassan A. Artail (American University of Beirut, Lebanon)

Role of ITS in Supply Chain Management Automation

Alina Merzliak (Saint-Petersburg State University of Economics and Finance, Russia)

Room B

15:00 - 16:15   Electric vehicles

Chair: Tsutomu Tsuboi (Hitachi Ltd., Japan)

Mastering cooperation: electric vehicle and smart grid

Mikhail Simonov (ISMB & Politecnico di Milano, Italy)

Selected findings from a German lighthouse project on electric mobility

Jan Henrik Dornberg (FIR at RWTH Aachen University, Germany); Theo Lutz (FIR e. V. at RWTH Aachen, Germany)

A Charge Algorithm Proposal for Wirelessly Charged Networks

Andres Gomez (Universidad de Los Andes, Colombia); Yezid E. Donoso (Universidad de los Andes, Colombia)

Room 5

16:15 - 18:00   Tutorial by Jérôme Härri, Marco Fiore "Vehicular Networking: History, State of the Art and Interdisciplinary Aspects"

Room A

16:15 - 18:00   Road Traffic

Chair: Wasawat Pruthipunyaskul (National Science and Technology Development Agency, Thailand)

An Evaluation of Travel Time on Urban Road Network

Tongyu Zhu (Beihang university, P.R. China); Congcong Li (Beihang University, P.R. China); Sanli Ma (Beihang University, P.R. China); Dongdong Wu (Beihang University, P.R. China); Wang (Cennavi Technologies Co. Ltd, P.R. China)

Driving Route Based Visual Traffic Information System

Lan Li (Hitachi (CN) Research & Development Corporation, P.R. China); Bo Liu (Hitachi (China) Research & Development Corporation, P.R. China); Yoshinori Nakagawa (Hitachi Government & Public Corporation System Engineering, Ltd., Japan)

Research on Experienced Route for Driving Plan Services

Yuhe Zhang (Hitachi (CN) Research & Development Corporation, P.R. China); Man Li (Hitachi (CN) R&D Corporation, P.R. China); Wenjia Wang (Hitachi (China) R&D Corporation, P.R. China)

A Novel Model to Evaluate Urban Overall Traffic Condition

Xinxin Jiang (Beihang University, P.R. China); Congcong Li (Beihang University, P.R. China); Weifeng Lv (Beijing University of Aeronautics and Astronautics, P.R. China); Tongyu Zhu (Beihang university, P.R. China)

Reducing the Probability of Violating Red Light

Iman Abbaszadeh Fallah (Universiti Teknologi Malaysia, Malaysia); Hamed Esmaeeli (Universiti Teknologi Malaysia & UTM, Malaysia)

Room B

16:15 - 18:00   ITS II

Chairs: Moltchanov Boris (Telecom Italia, Italy), Alexey Vinel (Saint-Petersburg Institute for Informatics and Automation, Russia)

A Transport based Clearing System for Dynamic Carpooling Business Services

Gérald Arnould (Public Research Centre Henri Tudor, Luxemburg); Djamel Khadraoui (CRP Henri Tudor, Luxemburg); Marcelo Armendáriz (University of Vigo, Spain); Juan C. Burguillo (University of Vigo & University of Vigo, Spain); Ana Peleteiro (University of Vigo, Spain)

The maritime e-Navigation and the Titanic: are there any links?

Michele Fiorini (Selex-Sistemi Integrati & IET Italy, Italy)

A Novel Vehicular SMS System (VSS) Approach for Intelligent Transport System (ITS)

Irshad Sumra (Universiti Technologi Petronas, Malaysia); Halabi Hasbullah (Universiti Teknologi PETRONAS, Malaysia); Jamalul-lail Ab Manan (MIMOS Berhad, Malaysia)

A Systemic and Cooperative Approach towards an Integrated Infomobility System at Regional Scale

Dino Giuli (CNIT - University of Firenxe, Italy); Federica Paganelli (National Inter-University Consortium for Telecommunications & Research Unit of Firenze, c/o Dept. of Electromics and Telecommunications, Italy); Stefano Cuomo (National Inter-University Consortium for Telecommunications, Italy); Paolo Cianchi (Negentis, Italy)

Room C

16:15 - 18:00   PHY III

Chair: Tai Yang (Reader in Computer and Control Engineering, United Kingdom)

A High Performance Baseband Transceiver for In-Vehicle Power Line Communications

Chin-Lin Lo (National Tsing Hua University, Taiwan); Hsi-Pin Ma (National Tsing Hua University, Taiwan)

Performance analysis and complexity study of LDPC and Turbo Coding schemes for Inter Vehicle Communications

George C. Kiokes (Institute of Communication and Computer Systems & National Technical University of Athens, Greece); George Economakos (National Technical University of Athens, Greece); Angelos Amditis (Institute of Communication and Computer SYstems, Greece); Nikolaos Uzunoglu (National Technical University Athens, Greece)

Joint CFO and channel acquisition and tracking based on parametric channel modeling for OFDM systems in the presence of high mobility

Eric Simon (University of Lille, France); Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France); Martine Lienard (University of Lille, France)

Performance Analysis of PAPR Reduction in OFDM Using Zadoff-Chu Matrix Transform Technique

Javad Musevi Niya (University of Tabriz, Iran); Gaderi (azad university, Tabriz branch, Iran); Sharifi (University of Tabriz & Electrical and Computer Engineering, Iran)

Room 4

16:15 - 18:00   Mobility II

Chairs: Marina Aguado (University of the Basque Country, Spain), Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France)

Evaluating New Prototyping Framework based on Combining Embedded Sensors Data and ns2 Simulations

Nadeen Salameh (INSA of ROUEN, France)

Simulation of automotive cooperative system based on Software Defined Radio (SDR)

Mohamed Kassab (IFSTTAR, LEOST & Univ Lille Nord de France, France); Christophe Gransart (INRETS, France); Martine Wahl (IFSTTAR, LEOST & Univ Lille Nord de France, France); Marion Berbineau (IFSTTAR, LEOST & University Lille Nord de France, France)

An Auction Approach to Group Handover with Mobility Prediction in Heterogeneous Vehicular Networks

Guoxia Zhang (522 W 123RD ST, APT 2E, USA); Fuqiang Liu (Tongji University, P.R. China)

Handover in Vehicular Communication Networks

Chi-Sheng Lin (National Central University, Taiwan); Jia-Chin Lin (National Central University, Taiwan)

18:00 - 23:00   Dinner. Conference closing.

ruSMART 2011 AND NEW2AN 2011 TECHNICAL PROGRAM

MONDAY, August 22

Room 4

09:00 - 09:30   ruSMART opening and welcome

09:30 - 10:30   Invited talk

Dr. Sergey Boldyrev (Nokia, Finland) "Data & Computation Interoperability in Cloud Services - Seamless Computations"

10:30 - 11:00   Coffee break ruSMART

11:00 - 12:45   Session 1: Role of Context in Smart Spaces

ECSTRA - Distributed Context Reasoning Framework for Pervasive Computing Systems

Andrey Boytsov (Luleå Technical University, Sweden); Arkady Zaslavsky (Monash University, Australia)

A Framework for Context-aware Applications for Smart Spaces

Muhammad Mohsin Saleemi (Åbo Akademi University, Turku, Finland); Natalia Díaz (Åbo Akademi University, Finland); Johan Lilius (TUCS and Abo Akademi, Finland); Ivan Porres (Åbo Akademi, Finland)

Analysis of the Energy Conservation Aspects of a Mobile Context Broker

Saad Liaquat Kiani (University of the West of England, United Kingdom); Moltchanov Boris (Telecom Italia, Italy); Michael Knappmeyer (University of Applied Sciences Osnabrück, Germany); Nigel Baker (University of the West of England, United Kingdom)

Complex Activity Recognition using Context Driven Activity Theory in Home Environments

Saguna Saguna (Monash University, Australia); Arkady Zaslavsky (Lulea University of Technology, Sweden); Dipanjan Chakraborty (IBM Research, India)

12:45 - 13:45   Lunch ruSMART

13:45 - 15:30   Session 2: Smart Spaces Platforms and Smart-M3

Integration of Smart-M3 Applications: Blogging in Smart Conference

Dmitry G. Korzun (Petrozavodsk State University, Russia); Ivan Galov (PetrSU, Russia); Alexey Kashevnik

(SPIIRAS, Russia); Nikolay Shilov (SPIIRAS, Russia); Kirill Krinkin (Academic University of Russian Academy of Science, Russia); Yury Korolev (Saint Petersburg State Electrotechnical University, Russia)

Access Control at Triple Level: Specification and Enforcement of a Simple RDF Model to Support Concurrent Applications in Smart Environments

Alfredo D'Elia (University of Bologna, Italy); Daniele Manzaroli (University of Bologna, Italy); Jukka Honkola (Innorange Oy, Finland); Tullio Salmon Cinotti (University of Bologna, Italy)

Increasing Broker Performance in Smart-M3 Based Ridesharing System

Alexander Smirnov (SPIIRAS, Russia); Alexey Kashevnik (SPIIRAS, Russia); Nikolay Shilov (SPIIRAS, Russia); Harri Lauri Paloheimo (Nokia Research Center, Finland); Heikki Waris (Nokia Research Center, Finland); Sergey I. Balandin (FRUCT Oy, Finland)

Distributed Deadlock Handling for Resource Allocation in Smart Spaces

Rehan Abdul Aziz (Aalto University, Pakistan); Tomi Janhunen (Aalto University, Finland); Vesa Luukkala (Nokia, Finland)

15:30 - 16:00   Coffee break ruSMART

16:00 - 17:45   Session 3: Methods for Studying Smart Spaces

Inter-agent Cooperative Communication Method using TupleSpace for Guiding Users to Alternative Actions

Kazumasa Takami (Soka University, Japan)

Groups and Frequent Visitors Shaping the Space Dynamics

Karolina Baras (Universidade da Madeira, Portugal); Adriano Moreira (University of Minho, Portugal)

Multi-sensor data fusion within the belief functions framework - Application to Smart Home services

Bastien Pietropaoli (INRIA - Rennes, Bretagne Atlantique, France); Michele Dominici (INRIA, France); Frédéric Weis (INRIA, France)

Dynamic Bayesian Networks for Sequential Quality of Experience Modelling and Measurement

Karan Mitra (Monash University, Australia); Arkady Zaslavsky (Lulea University of Technology, Sweden); Christer Ahlund (Lulea University of Technology, Sweden)

TUESDAY, August 23

Rooms A, B, C. Joint session for ITST, ruSMART and NEW2AN

08:45 - 09:00   ITST 2011 opening and welcome

09:00 - 09:15   Invited Talk

Mr. Albert Efimov (Skolkovo Foundation, Russia) "Information and Computer Technology Cluster of Skolkovo Foundation"

09:15 - 10:00   Invited talk

Dr. Russell Hsing (Telcordia US) and Dr. Piotr Szczechowiak (Telcordia Poland) "Vehicular Networks and Telematics Applications: Next ICT industry for the knowledge-based economy"

10:00 – 10:30 Coffee Break

NEW2AN 2011, room D
10:30 - 13:00

Session 1: Wireless PHY and power control

Better Performance of Mobile Devices in Time-Frequency Dispersive Channels Using Well-Localized Bases

Dmitry Petrov (University of Jyväskylä, Finland); Timo Hämäläinen (University of Jyväskylä, Finland)

Analysis of Energy-Efficient Distributed Slotted Aloha using a Physical Radio Model

Haidi Yue (RWTH Aachen, Germany); Henrik Bohnenkamp (RWTH Aachen University, Germany); Malte Kampschulte (RWTH Aachen University, Germany); Joost Pieter Katoen (RWTH Aachen, Germany)

A Joint Power and Rate Adaptation Scheme in Multicarrier DS/CDMA Communications over Rayleigh Fading Channels

Ye Hoon Lee (Seoul National University of Technology, Korea); Nam-Soo Kim (Chongju University, Korea)

Session 2: Ad hoc networks

Worst-case traversal time modeling in Ethernet based In-car networks using Real Time Calculus

Kasper Revsbech (Aalborg University Denmark, Denmark); Henrik Schiøler (Aalborg University, Denmark); Tatiana Madsen (Aalborg University, Denmark); Jimmy J Nielsen (Aalborg University, Denmark)

Infrastructure-assisted probabilistic power control for VANETs

Dmitri Moltchanov (Tampere University of Technology, Finland); Jakub Jakubiak (Tampere University of Technology, Finland); Yevgeni Koucheryavy(Tampere University of Technology, Finland)

Node Mobility Modeling in Ad Hoc Networks Through a Birth and Death Process

Eduardo Hargreaves (Federal University of Rio de Janeiro, Brazil); Bruno Nunes (Federal University of Rio de Janeiro – UFRJ, Brazil); Carlos Alberto Vieira Campos (Federal University of State of Rio de Janeiro, Brazil); Luis Felipe M. de Moraes (Federal University of Rio de Janeiro (UFRJ), Brazil)

ruSMART 2011, room 4
10:30 - 12:45

Session 4: Smart Spaces Solutions

Management of the Products on Display Shelves using Advanced Electronic Tags Equipped with Ad Hoc Network Communication Capability

Kazumasa Takami (Soka University, Japan); Daisuke Kasamatsu (Soka University, Japan)

Customized check-in procedures

Dmitry Namiot (Moscow State University, Russia); Manfred Sneps-Sneppe (AbavaNet, Russia)

Architecture and Comparison of Two Different User-centric NFC-enabled Event Ticketing Approaches

Jonathan Ouoba (University of Bordeaux, France); Serge Chaumette (University of Bordeaux, France); Damien Dubernet (University of Bordeaux, France); Tuomo Tuikka (VTT, Finland); Erkki Siira (VTT, Finland)

Mobile Electronic Memos

Giovanni Bartolomeo (Universita di Roma "Tor Vergata", Italy); Stefano Salsano (University of Rome "Tor Vergata", Italy); Antonella Frisiello (Istituto Superiore Mario Boella, Italy)

13:00 – 14:00 Lunch ITST/NEW2AN/ruSMART

NEW2AN 2011, room D

14:00 – 16:00 Session 3: WSN

Lossy Data Aggregation with Network Coding in Stand-alone Wireless Sensor Networks

Tatiana Madsen (Aalborg University, Denmark)

An Asynchronous Scheduler to Minimize Energy Consumption in Wireless Sensor Networks

Luca Anchora (IMT of Lucca, Italy); Antonio Capone (University of Salento, Italy); Luigi Patrono (University of Salento, Italy)

Mobile Agents Model and Performance Analysis of a Wireless Sensor Network Target Tracking Application

Edison Pignaton de Freitas (Halmstad University, Sweden); Bernhard Bösch (Halmstad University, Sweden); Rodrigo Allgayer (Federal University of Rio Grande do Sul, Brazil); Leonardo Steinfeld (Universidad de la República, Uruguay); Flavio Rech Wagner (Federal University of Rio Grande do Sul, Brazil);Luigi Carro (Universidade Federal do Rio Grande, Brazil); Carlos E. Pereira (Federal University of RGS - UFRGS, Brazil); Tony I Larsson (Halmstad University, Sweden)

Ubiquitous Sensor Networks Traffic Models for Telemetry Applications

Andrey Koucheryavy (Giprosviaz, Russia); Andrey Prokopiev (Ubitel, Russia)

16:00 - 16:20 Coffee break NEW2AN

16:20 - 18:20 Session 4: Special topics

Evaluation of RTSJ-based Distributed Control System

Ivan Müller (Federal University of Rio Grande do Sul (UFRGS), Brazil); André Cavalcante (Federal University of Rio Grande do Sul, Brazil); Edison Pignaton de Freitas (Halmstad University, Sweden); Rodrigo Allgayer (Federal University of Rio Grande do Sul, Brazil); Carlos E. Pereira (Federal University of RGS - UFRGS, Brazil); Tony I Larsson (Halmstad University, Sweden)

Test scenarios for EMS operation in hybrid PON system

Kyu-Ouk Lee (ETRI, Korea)

A Characterization of Mobility Management in User-centric Networks

Andrea Giordanna O Nascimento (Lusófona University, Portugal); Rute C. Sofia (SITI, Universidade Lusófona, Portugal); Tiago Silvestre Condeixa (Instituto de Telecomunicações, Portugal); Susana Sargento (Instituto de Telecomunicações, Universidade de Aveiro, Portugal)

Network attack detection at flow level

Aleksey Galtsev (Samara State Aerospace University, Russia); Andrei Sukhov (Samara State Aerospace University, Russia)

An Intelligent Routing Protocol for Delay Tolerant Networks using Genetic Algorithm

Saeid Akhavan Bitaghsir (Sharif University of Technology, Iran); Faramarz Hendessi (Sharif University of Technology, Iran)

18:30 – 23:00 Social event ITST/NEW2AN/ruSMART. Buses leave Pulkovskaya Park Inn (2nd Building entrance) at 18:30 towards city center where participants will board a ship for 2-3 hours tour sailing through St. Petersburg city center. Food and drinks will be served. Return transportation will also be provided.

WEDNESDAY, August 24

Rooms A, B, C

08:45 - 09:15 Invited talk ITST/NEW2AN

Dr. Thierry Goger (COST Transport and Urban Development Domain, Brussels, Belgium) "Strengthening research activities within transport and urban development area: a challenge for the European COoperation in the field of Scientific and Technical Research (COST)"

09:00 - 10:00 Invited talk ITST/NEW2AN

Prof. Riku Jäntti (Aalto University, Finland) "Cognitive radio - an opportunity and challenge for intelligent transportation systems"

10:00 – 10:30 Coffee break

NEW2AN 2011, room D

10:30 – 12:30 Session 5: Simulation + fundamental analysis I

Analysis of the distribution of the statistic of a test for discriminating long-memory processes

Maria-Estrella Sousa-Vieira (University of Vigo, Spain)

Approximating Performance Measures of a Triple Play Loss Network Model

Irina A. Gudkova (Peoples' Friendship University of Russia, Russia); Konstantin Samouylov (Peoples' Friendship University of Russia, Russia)

An Analytical Model for Streaming over TCP

Jinyao Yan (ETH Zurich, Switzerland); Wolfgang Mühlbauer (ETH Zurich, Switzerland); Bernhard Plattner (ETH Zurich, Switzerland)

Session 6: Traffic modeling and measurement

Characterising University WLANs within Eduroam Context

Marangaze Joaquim Munhepe Mulhanga (University of Minho, Portugal); Solange Rito Lima (University of Minho, Portugal); Paulo Carvalho (University of Minho, Portugal)

Internet traffic source based on Hidden Markov Model

Joanna Domanska (IITiS PAN Polish Academy of Sciences, Poland); Adam Domanski (Silesian University of Technology, Poland); Tadeusz Czachorski (Institute of Theoretical and Applied Informatics of Polish Academy of Sciences, Poland)

12:30 - 13:30   Lunch ITST/NEW2AN/workshops

13:30 - 14:45 Session 7: Simulation + fundamental analysis II

New synchronization method for the parallel simulations of wireless networks

Sławomir Nowak (Institute of Theoretical and Applied Informatics, Poland); Mateusz Nowak (Institute of Theoretical and Applied Informatics, Poland); Paweł Foremski (Institute of Theoretical and Applied Informatics, Poland)

Steady State Analysis of Three Node Client Relay System with Limited-Size Queues

Olga Galinina (Tampere University of Technology, Finland); Sergey Andreev (Tampere University of Technology, Finland); Alexey Anisimov (State University of Aerospace Instrumentation, Russia); Alexandra Lokhanova (Speech Technology Center, Russia)

Discrete Markov Chain Model for Analyzing Probability Measures of P2P Streaming Network

Yuliya Gaidamaka (Peoples' Friendship University of Russia, Russia)

14:45 - 15:15   Coffee break ITST/NEW2AN

15:15 - 16:30 Session 8: Network performance and QoS

A Mathematical Framework for the Multidimensional QoS in Cognitive Radio Networks

Jerzy Martyna (Jagiellonian University, Institute of Computer Science, Poland)

Hybrid Inter-Domain QoS Routing with Crankback Mechanisms

Ahmed Frikha (INRIA/IRISA - University of Rennes 1, France); Samer Lahoud (IRISA, University of Rennes 1, France); Bernard Cousin (IRISA, University of Rennes 1, France)

The approach of network performance and network productivity parameters on QoS estimation and it impairment. Service Benchmarking

Denis Andreev (Telecommunication Technopark of testing, ZNIIS, Moscow, Russia)

16:30 - 17:45 Session 9: Cooperative

A Cooperative Network Monitoring Overlay

Vasco Castro (University of Minho, Portugal); Paulo Carvalho (University of Minho, Portugal); Solange Rito Lima (University of Minho, Portugal)

Decision of Transmit Relay and Power for Double Opportunistic Transmit Cooperative Relaying Systems in Rayleigh Fading Channels

Nam-Soo Kim (Chongju University, Korea); Ye Hoon Lee (Seoul National University of Technology, Korea)

19:00 - 22:00 Social event ITST/NEW2AN. Buses leave Pulkovskaya Park Inn (2тв Building entrance) at 19:00 towards city center for guided panoramic tour with picture stops around St. Petersburg.

THURSDAY, August 25

Rooms A, B, C. Joint session for ITST and NEW2AN

08:45 - 09:30   Invited talk
Dr. Hendrik Berndt (Net!Works European Platform)

09:30 - 10:15   Tutorial lecture
Michele Fiorini and Flavio Testi (SELEX, Italy) "The maritime navigation from the Titanic to nowadays e-Navigation"

10:15 - 10:45   Keynote
Dr. Fan Bai (General Motors R&D, USA) "Vehicular Ad hoc Network and Its Challenges". Presented by Dr. Alexey Ushakov

10:45 - 11:40 Keynote
Mr. Jim Buczkowski (Ford USA) "Making Cars Talk: Enabling the Connected Car"

11:40 - 12:00 Coffee Break

12:00 - 14:00 NEW2AN, room D

Session 10: P2P

GROUP: A Gossip Based Building Community Protocol

Ranieri Baraglia (ISTI-CNR, Italy); Patrizio Dazzi (ISTI, CNR, Pisa, Italy); Matteo Mordacchini (IIT, CNR, Pisa, Italy); Laura Ricci (University of Pisa, Italy);Luca Alessi (Dipartimento di Informatica, Italy)

A study on upload capacity utilization with minimum delay in peer-to-peer streaming

Geun-Hyung Kim (Dong Eui University, Korea)

Session 11: Overlay networks and content

Content localization for non-overlay CAN networks

Piotr Pecka (Institute of Theoretical and Applied Informatics, Poland); Mateusz Nowak (Institute of Theoretical and Applied Informatics, Poland); Sławomir Nowak (Institute of Theoretical and Applied Informatics, Poland)

On Modelling of Fair Throughput Allocation in Overlay Multicast Networks

Michal Kucharzak (Wroclaw University of Technology, Poland); Krzysztof Walkowiak (Wroclaw University of Technology, Poland)

14:00 - 15:00 Lunch ITST/NEW2AN

15:00 - 18:00 NEW2AN, room D

Session 12: Applications and services

Improving IPTV on-demand Transmission Scheme Over WiMax

Gerges Mansour (St. Petersburg State University of Telecommunications, Russia)

Event-Driven Content Management System for Smart Meeting Room

Victor Budkov (SPIIRAS, Russia); Alexander Ronzhin (SPIIRAS, Russia); Sergey Glazkov (SPIIRAS, Russia); Andrey Ronzhin (SPIIRAS, Russia)

A Semantic Model for Enhancing Network Services Management and Auditing

Carlos Rodrigues (Universidade do Minho, Portugal); Solange Rito Lima (University of Minho, Portugal); Luis

M. Álvarez-Sabucedo (University of Vigo, Spain); Paulo Carvalho (University of Minho, Portugal)

Behavior of Network Applications during Seamless 3G/WLAN Handover

Nick V. Amelichev (Saint Petersburg Electrotechnical University "LETI" (ETU), Russia); Mikhail Krinkin (Saint Petersburg Electrotechnical University, Russia); Kirill Krinkin (Academic University of Russian Academy of Science, Russia)

Session 13: API and software

Building Programming Abstractions for Wireless Sensor Networks Using Watershed Segmentation

Mohammad Hammoudeh (Manchester Metropolitan University, United Kingdom); Tariq Alsbou'i (Manchester Metropolitan University, United Kingdom)

Complexity analysis of adaptive binary arithmetic coding software implementations

Evgeny Belyaev (Tampere University of Technology, Finland); Anton Veselov (Saint-Petersburg State University of Aerospace Instrumentation, Russia); Andrey Turlikov (Saint-Petersburg State University of Aerospace Instrumentation, Russia)

Session 14: Video

Video Multicasting in an Autonomic Future Internet with Essentially-Perfect Throughput and QoS Guarantees

Ted H. Szymanski (Mcmaster University, Canada)

Splitting and Merging for Bandwidth Exploitation in SVC-based Streaming Networks

Tsang-Ling Sheu (National Sun Yat-Sen University, Kaohsiung, Taiwan); Yi-Chuen Hsieh (National Sun Yat-Sen University, Taiwan)

16:30   Closing Remarks

18:00 - 21:00 Dinner ITST/NEW2AN

SOCIAL PROGRAM

Welcome reception

TUESDAY, August 23

18:30 – Bus transfer from the hotel Park Inn Pulkovskaya (2nd building) to the University Embankment.

19:30 – Welcome reception on board the ship.

21:30 – Departure bus transfer to the hotel Park Inn Pulkovskaya.

Conference dinner

THURSDAY, August 25

18:00 – Dinner at the restaurant Atrium (Park Inn Pulkovskaya, 2nd building)

Participants' and Accompanying Persons' Social Program

ITST-2011 Social program includes one free panoramic city tour for all participants and three tours for extra charge. You are welcome to explore the world famous Hermitage museum as well as to enjoy the magnificent palaces and parks of St Petersburg's suburbs! The tours are guided by professional English-speaking guides. Please, contact the ITST Registration desk staff if you wish to attend some tour.

Date and Time	Tour
August 23 10-15	STATE HERMITAGE
August 24 9-18	TSARSKOE SELO AND PAVLOVSK (with lunch)
August 24 19-22	CITY TOUR
August 25 10-18	PETERHOF PALACE AND PARK (with lunch)

The tours start from Park Inn Pulkovskaya hotel (2nd building).

11th International Conference on ITS Telecommunications

ITST2011

St. Petersburg, Russia
August 22-25, 2011

TUESDAY, August 23

STATE HERMITAGE

The collection of one of the largest museums in the world includes over 3 millions works of art (paintings, graphic works, sculptures, archaeological finds and etc.). The Hermitage possesses a very rich collection of jewellery – from the rarest ancient examples to works of the XX century. The Hermitage has been included in the Guinness Book as the largest gallery in the world. It is considered that a person needs several days, weeks, months to see everything which is exhibited in the Hermitage, and that is really true. With more than 400 exhibit halls, the Hermitage cannot possibly be seen in a single day. But during this tour you'll be able to see the highlights and main collections.

10:00 – 15:00

TSARSKOE SELO & PAVLOVSK (with lunch)

During this tour you'll visit the Catherine Palace (with famous Amber room) situated in the remarkable suburb of Saint Petersburg. Then you'll have lunch in the park restaurant and after that you'll continue the tour by visiting Pavlovsk Palace. The Palace Ensemble Tsarskoe Selo is a brilliant of world's significant architecture and ornamental gardening art of XIII-XIX centuries. It is a masterpiece of Russian baroque created by the architect Rastrelli.

The Amber room in the Catherine Palace, recognized as the eighth marvel of the world, produces an indelible impression on everybody who sees it. The main collections of Pavlovsk Palace have been formed during the the trip of its owners (emperor Paul I and his family) over Europe. They visited workshops of famous artists and purchased paintings, furniture, bronze articles, china, antique sculptures. The landscape park is considered to be one of the largest in Europe.

9:00 – 18:00

CITY TOUR

The bus tour around the famous landmarks of Saint Petersburg is a nice opportunity to get the historic information about the city as well as to feast your eyes on its beauty and make memorable photos during the picture stops.

19:00 – 22:00

45

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THURSDAY, August 25

PETERHOF – GREAT PALACE, COLLECTORS MUSEUM, FOUNTAINS PARK (with lunch)

Peterhof Palace and Park complex with its unique array of fountains is considered to be one of the most beautiful in the world. Peterhof is often called the Capital of Russian fountains or the Russian Versailles. The first title is explained by the numerous fountains of the Peterhof park, the Grand Cascade going downhill from the Palace is one of the world's largest fountain ensembles. The other one derives from the comparison with French palace which gave the inspiration for Peter the Great to build the imperial residence in one of his suburbs.

10:00 – 18:00

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