

# FINAL TECHNICAL PROGRAMME FOR ruSMART 2011 AND NEW2AN 2011

**MONDAY, August 22, 2011**

**Pulkovskaya Park Inn, Room 4**

**09:00 - 9:30 ruSMART opening and welcome**

**9:30 - 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, 2011**

<b>Pulkovskaya Park Inn, Room A+B+C. Joint session for ITST, ruSMART and NEW2AN</b>	
<b>8:45 – 9:00 ITST 2011 opening and welcome</b>	
<b>9:00 – 9:15 Invited Talk</b>	
<b>Mr. Albert Efimov (Skolkovo Foundation, Russia) “Information and Computer Technology Cluster of Skolkovo Foundation”</b>	
<b>9:15 – 10:00 Invited talk</b>	
<b>Dr. Russell Hsing (Telcordia US) and Dr. Piotr Szczechowiak (Telcordia Poland) “Vehicular Networks and Telematics Applications: Next ICT industry for the knowledge-based economy”</b>	
<b>10:00 – 10:30 Coffee Break</b>	
<b>NEW2AN 2011, room D</b>	<b>ruSMART 2011, room 4</b>
<b>10:30 - 13:00</b> <b>Session 1: Wireless PHY and power control</b>	<b>10:30 - 12:45</b> <b>Session 4: Smart Spaces Solutions</b>
<i>Better Performance of Mobile Devices in Time-Frequency Dispersive Channels Using Well-Localized Bases</i> Dmitry Petrov (University of Jyväskylä, Finland); Timo Hämäläinen (University of Jyväskylä, Finland)	<i>Management of the Products on Display Shelves using Advanced Electronic Tags Equipped with Ad Hoc Network Communication Capability</i> Kazumasa Takami (Soka University, Japan); Daisuke Kasamatsu (Soka University, Japan)
<i>Analysis of Energy-Efficient Distributed Slotted Aloha using a Physical Radio Model</i> Haidi Yue (RWTH Aachen, Germany); Henrik Bohnenkamp (RWTH Aachen University, Germany); Malte Kampschulte (RWTH Aachen University, Germany); Joost Pieter Katoen (RWTH Aachen, Germany)	<i>Customized check-in procedures</i> Dmitry Namiot (Moscow State University, Russia); Manfred Sneps-Sneppe (AbavaNet, Russia)
<i>A Joint Power and Rate Adaptation Scheme in Multicarrier DS/CDMA Communications over Rayleigh Fading Channels</i> Ye Hoon Lee (Seoul National University of Technology, Korea); Nam-Soo Kim (Chongju University, Korea)	<i>Architecture and Comparison of Two Different User-centric NFC-enabled Event Ticketing Approaches</i> 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)
	<i>Mobile Electronic Memos</i>

**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)

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

## WEDNESDAY, August 24, 2011

Pulkovskaya Park Inn, Room A+B+C

### 8:45 - 9:15 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)”

### 9:00 - 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 Euroam 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 its 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 – 23:00 Social event ITST/NEW2AN. Buses leave Pulkovskaya Park Inn at 19:00 towards city center for guided tour around St. Petersburg city center.**

## THURSDAY, August 25, 2011

Pulkovskaya Park Inn, Room A+B+C. Joint session for ITST and NEW2AN

8:45 – 9:30 Invited talk

Dr. Hendrik Berndt (Net!Works European Platform), tba

9:30 – 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), tba

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*

Michał Kucharzak (Wrocław University of Technology, Poland); Krzysztof Walkowiak (Wrocław University of Technology, Poland)

**14:00 – 15:00 Lunch ITST/NEW2AN**

**15:00 – 18:00, 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**