

2010 International Congress on Ultra Modern Telecommunications and Control Systems and Workshops (ICUMT)

Proceedings of ICUMT-T, ICUMT-CS and associated workshops

Engineering the joint future

October 18 – 20, 2010 Moscow, Russia

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Monday, October 18

Plenary session ICUMT (including all workshops), room Shantan, floor 1

8:45 – 9:00 Opening

9:00 – 09:30 Keynote Prof. Mario Gerla (UCLA, USA): Vehicular Communications: from urban sensing to traffic control and games

9:30 – 10:15 Industrial Panel Session 'The ICT Future by the year 2015'.

Panelists:

Marie-Paule Odini, HP CMS CTO (France)

Hong-Yon Lach, Director of Scientific Coordination, Applications Research Domain, Alcatel-Lucent Bell Labs (France)

Ken Lee, Director of Product Marketing, Service Delivery Products (OCSD), Oracle Communications Global Business Unit (USA)

Mikko Terho, VP and Nokia Fellow (Finland)

Werner Mohr, Head of Research Alliances, Nokia Siemens Networks (Germany)

Roberto Saracco, Director of Long Term Research and of Telecom Italia, Future Center, Telecom Italia (Italy)

Moderator:

Boris Moltchanov, Telecom Italia (Italy)

10:15 – 10:45 Keynote Alexey Shalaginov (Huawei): Challenges and strategies of telecommunication industry - how to approach

10:45 – 11:00 Coffee break

11:00 – 19:00 Workshops: OPNTDS (room 1850, floor 18), FOAN (room 1450, floor 14), ASNC (room 1950, floor 19), SoS (room 1650, floor 16), WMCNT (room 1550, floor 15), APTP+MS (room Tolstoy 3, floor 20)

Plenary session (continuation), room Shantan, floor 1

11:00 – 11:45 Keynote Dr. Alexander Sayenko (NSN): State of the art and future trends of the multi-carrier solutions

11:45 – 12:30 Keynote Dr. Mikhail Kader (Cisco): Securing the Public & Private Cloud

12:30 – 13:30 Lunch

13:30 – 15:30 Technical sessions

15:30 – 16:00 Coffee break

16:00 – 19:30 Technical sessions

20:00 – 23:00 Banquet

Tuesday, October 19

Plenary session, room Pushkin 1+2+3, floor 20

9:00 – 9:45 Keynote Prof. Antonio Bicchi (University of Pisa, Italy): Towards a Society of Robots Behaviors, Misbehaviors, Consensus and Security

9:45 – 10:30 Keynote Prof. Juha Ronning (University of Oulu, Finland): Human-Machine Interface

10:30 – 11:00 Coffee break

11:00 – 19:00 Workshops: WMCNT 2010 (room 1550, floor 15); RNDM 2010 (room Tolstoy 3, floor 20)

11:00 – 13:00 Technical sessions

13:00 – 14:00 Lunch

14:00 – 15:30 Technical sessions

15:30 – 16:00 Coffee break

16:00 – 18:00 Technical sessions

20:00 – 23:00 Bus Tour

Wednesday, October 20

09:00 – 12:30 Technical sessions (rooms Pushkin 1, Pushkin 2, floor 20)

09:30 – 18:45 Workshop RNDM 2010 (room Pushkin 3, floor 20)

Monday, October 18, 13:30 – 15:30

	Technical Session title and Contents
Room Pushkin 1: ICUMT-T Main Track	<p>Special Session RABAN Chair: Sergey Andreev (Tampere University of Technology, Finland)</p> <p><u>A Novel Combined CSI Feedback Mechanism to Support Multi-User MIMO Beamforming Schemes in TDD-OFDMA Systems</u> Gregory Morozov (Intel Corp., Russia); Alexei Davydov (Intel Corp., Russia); Apostolos Papathanassiou (Intel Corporation, USA)</p> <p><u>Analysis of IEEE 802.16m and 3GPP LTE Release 10 Technologies by Russian Evaluation Group for IMT-Advanced</u> Alexander Maltsev (Intel A/O, Russia); Alexey Khoryaev (Intel Corporation, Russia); Roman Maslennikov (The University of Nizhny Novgorod, Russia); Mikhail Shilov (Intel, Russia)</p> <p><u>Algorithm Selection and Hardware Implementation for Channel Equalization in MB-OFDM Based UWB Communications for Indoor WPAN Applications</u> Arkosnato Neogy (Indian Institute of Technology, Kharagpur, India); Tuhin Chakraborty (IIT Kharagpur, India); Saswat Chakrabarti (Indian Institute Of Technology, Kharagpur, India)</p> <p><u>Basic Client Relay Model for Wireless Cellular Networks</u> Sergey Andreev (Tampere University of Technology, Finland); Olga Galinina (Speech Technology Center, Saint Petersburg, Russia); Andrey Turlikov (Saint-Petersburg State University of Aerospace Instrumentation, Russia)</p>
Room Pushkin 2: ICUMT-T Main Track	<p>Wireless Networks I Chair: Jens Elsner (Karlsruhe Institute of Technology (KIT), Germany)</p> <p><u>Evaluation of Publish-Subscribe Based Communication over WiMAX Network</u> Borislava Gajic (RWTH Aachen University, Germany); Janne Riihijärvi (RWTH Aachen University,</p>

	<p>Germany); Petri Mähönen (RWTH Aachen University, Germany)</p> <p><u>An Evaluation of Compression Schemes for Wireless Networks</u> Kirsten Dolfus (U Bern, Switzerland); Torsten Ingo Braun (University of Bern, Switzerland)</p> <p><u>The Need for a System Design Methodology to Address Challenges in Wireless Access in Vehicular Ad Hoc Networks</u> Chrysostomos Chrysostomou (Frederick University Cyprus, Cyprus); Lambros Lambrinos (Cyprus University of Technology, Cyprus); Costas Tziouvas (Cyprus University of Technology, Cyprus)</p> <p><u>An Innovative Low Complexity PAPR Reduction TR-based Technique for DVB-T2 System</u> Mohamad Mroue (SUPELEC, France); Amor Nafkha (SUPELEC, France); Jacques Palicot (IETR/Supélec, France)</p>
Room Pushkin 3: ICUMT-T Main Track	<p>OFDM Chair: Nafkha Amor (Supelec, France)</p> <p><u>Analysis of Space-Frequency Coded OFDM with I/Q Imbalance</u> Udesh Oruthota (Aalto University, Finland); Olav Tirkkonen (Aalto University, Finland); Natalia Ermolova (Aalto University, Finland)</p> <p><u>Efficient WH-OFTDM signals processing</u> Dmitry Petrov (Moscow state university, physical faculty, Russia)</p> <p><u>Blind Estimation of The Time-Frequency Activity Rate of OFDMA Signals</u> Mohamed Rabie Oularbi (TELECOM Bretagne, France); Francois-Xavier Socheleau (TELECOM Bretagne, France); Abdeldjalil Aïssa-EI-Bey (TELECOM Bretagne, France); Sebastien Houcke (Institut TELECOM ; TELECOM Bretagne, France)</p> <p><u>MPSK Symbol Error Rate Minimization for OFDM Systems Coupled with Deterministic PAPR Reduction</u></p>

	<p>Technique Armin Morattab (K.N.Toosi University of Technology, Iran); Mehrdad Ardebilipour (Khajeh Nasir university, Iran); Behrad Mahboobi (Tehran Univ, Iran)</p>
Room Tolstoy 1: ICUMT-CS Main Track	<p>Information Processing I Chair: XXX</p> <p>Statistically Linearized Least-Squares Temporal Differences Matthieu Geist (Supelec, France); Olivier Pietquin (Supélec, France)</p> <p>Eligibility Traces through Colored Noises Matthieu Geist (Supelec, France); Olivier Pietquin (Supélec, France)</p> <p>Automatic 3D Modeling of the Urban Landscape Isaac Esteban (University of Amsterdam, The Netherlands); Judith Dijk (TNO, The Netherlands); Frans Groen (University of Amsterdam, The Netherlands)</p> <p>Real-Time Communication for IEC 61499 in Switched Ethernet Networks Andreas Schimmel (Vienna University of Technology, Austria); Alois Zoitl (Vienna University of Technology, Austria)</p>

Monday, October 18, 16:00 – 19:00

	Technical Session title and Contents
Room Pushkin 1: ICUMT-T Main Track	<p>Special Session RABAN (Continuation) Chair: Sergey Andreev (Tampere University of Technology, Finland)</p> <p>Joint Network-Channel Distributed Coding for the Multiple Access Full-Duplex Relay Channel</p>

	<p>Atoosa Hatefi (Ecole Supélec, France); Raphael Visoz (Orange Labs, France); Antoine O. Berthet (Supélec, France)</p> <p><u>OoS Aware Power Allocation in Multi-Hop Multi-Relay Network</u> Behrad Mahboobi (Tehran Univ, Iran); MohammadAli Mohammadi (K.N.Toosi University of Technology, Iran); Mehrdad Ardebilipour (Khajeh Nasir university, Iran); Armin Morattab (K.N.Toosi University of Technology, Iran)</p> <p><u>On Interference-Aware Cooperation Policies for Wireless Ad Hoc Networks</u> Cristiano Tapparello (University of Padova, Italy); Stefano Tomasin (University of Padova, Italy); Michele Rossi (University of Padova, Italy)</p> <p><u>On the Transmission Capacity of Wireless Multi-Channel Ad Hoc Networks with local FDMA scheduling</u> Jens P. Elsner (Karlsruhe Institute of Technology (KIT), Germany); Ralph Tanbourgi (Karlsruhe Institute of Technology (KIT), Germany); Friedrich K. Jondral (Karlsruhe Institute of Technology, Germany)</p> <p><u>Centralized Collaborative Compressed Sensing of Wideband Spectrum for Cognitive Radios</u> Hessam Moussavinik (Norwegian University of Science and Technology, Norway); Wael Guibène (Institut Eurécom, France); Aawatif Hayar(Eurecom, France)</p> <p><u>A Middleware Framework for Communication in Cognitive Radio Networks</u> Alexandru Popescu (Blekinge Institute of Technology, Sweden); David Erman (Blekinge Institute of Technology, Sweden); Markus Fiedler(Blekinge Institute of Technology, Sweden); Adrian Popescu (Blekinge Institute of Technology, Sweden); Demetres Kouvatso (University of Bradford, United Kingdom)</p>
Room Pushkin 2: ICUMT-T Main Track	<p>Special Session P2P-DVE Chair: Laura Ricci (University of Pisa, Italy)</p> <p><u>State Management in Distributed Virtual Environments: A Voronoi Based Approach</u></p>

	<p>Luca Genovali (IMT, Italy); Laura Ricci (University of Pisa, Italy)</p> <p><u>SCAFFOLD - Self Configuring Overlays Using Metadata Hypercubes</u> Deepak Gangadhar (IBM Software Lab, India)</p> <p><u>Performance analysis of optimization techniques in peer-to-peer video streaming systems with tree/forest topology</u> Paolo Giacomazzi (Politecnico di Milano, Italy); Alessandro Poli (Politecnico di Milano, Italy)</p> <p><u>Push-pull techniques in peer-to-peer video streaming systems with tree/forest topology</u> Paolo Giacomazzi (Politecnico di Milano, Italy); Alessandro Poli (Politecnico di Milano, Italy)</p> <p><u>Performance analysis of mesh-based peer-to-peer video streaming systems</u> Paolo Giacomazzi (Politecnico di Milano, Italy); Alessandro Poli (Politecnico di Milano, Italy)</p>
Room Pushkin 3: ICUMT-T Main Track	<p>Video Chair: Ehab Mahmoud Mohamed (Kyushu University, Japan)</p> <p><u>Low bit rate video coding based on three-dimensional discrete pseudo cosine transform</u> Eugeniy Belyaev (St. Petersburg Institute for Informatics and Automation of RAS, Russia)</p> <p><u>Effect of A Priori Information in Pixel Domain Wyner-Ziv Video Coding</u> Ralph Hänsel (University of Rostock, Germany); Erika Müller (University of Rostock, Germany)</p> <p><u>Low-complexity JPEG-based progressive video codec for wireless video transmission</u> Anna Ukhanova (Technical University of Denmark, Denmark); Soren Forchhammer (Technical University of Denmark, Denmark)</p> <p><u>Intelligent inpainting system for texture reconstruction in videos with text removal</u> Margarita N. Favorskaya (Siberian State Aerospace University, Russia); Alexander G. Zotin (Siberian</p>

	<p>State Aerospace University, Russia); Mikhail V. Damov (Siberian State Aerospace University, Russia)</p> <p><u>Evaluation of Swarm Video Streaming</u></p> <p>David Erman (Blekinge Institute of Technology, Sweden); Yong Yao(Blekinge Institute of Technology, Sweden); Karel De Vogeleer (Blekinge Institute of Technology, Sweden); Adrian Popescu (Blekinge Institute of Technology, Sweden)</p>
<p>Room Tolstoy 1: ICUMT-CS Main Track</p>	<p>Particle Swarm Optimization Chair: XXX</p> <p><u>Gain-scheduling Adaptive Control of the STATCOM for Electrified Railway Systems Using PSO</u></p> <p>Ramin Zaeim (Islamic Azad University Science & Research branch, Iran); Asyieh Khoshkholgh (Azad University, Garmsar branch, Iran)</p> <p><u>Complex PDE Image Denoising Based on Particle Swarm Optimization</u></p> <p>Saeid Fazli (Zanjan University, Iran); Hamed Bouzari (Zanjan University, Iran); Hamed Moradi Pour (Zanjan University, Iran)</p> <p><u>Aircraft Evasive Maneuver Trajectory Optimization Based on QPSO</u></p> <p>Wang Xiao-ping (University of Engineering, P.R. China)</p> <p><u>Optimal Load Shedding to Prevent Voltage Instability Based on Multi-Objective Optimization Using Modal Analysis and PSO</u></p> <p>Saeid Jalilzadeh (Zanjan University, Iran)</p> <p><u>Application of IDPSO Approach for TNEP Problem Considering the Loss and Uncertainty in load growth</u></p> <p>Saeid Jalilzadeh (Zanjan University, Iran)</p> <p>Information Processing II Chair: XXX</p>

[Advanced Wavelet Based Steganography for Colored Images](#)

Saeid Fazli (Zanjan University, Iran); Sajad Gholamrezaei (Zanjan University, Iran); Amir Bazrafshan (Guilan University, Iran)

[Fiducial Facial Points Tracking Using Particle Filter and Geometric Features](#)

Saeid Fazli (Zanjan University, Iran); Reza Afrouzian (Zanjan University, Iran); Hadi Seyedarabi (University of Tabriz, Iran)

Tuesday, October 19, 11:00 – 13:00

	Technical Session title and Contents
Room Pushkin 1: ICUMT-T Main Track	<p>Channel Access Control Chair: Sergey Andreev (Tampere University of Technology, Finland)</p> <p><u>Decreasing Call Blocking Probability of Broadband TV Services by a Channel Access Control Scheme</u> Junyu Lai (University of Hamburg, Germany); Bernd E. Wolfinger (University of Hamburg, Germany); Stephan Heckmüller (University of Hamburg, Germany)</p> <p><u>A Configurable Medium Access Control Protocol for IEEE 802.15.4 Networks</u> Rodrigo Steiner (Federal University of Santa Catarina, Brazil); Tiago Mück (Federal University of Santa Catarina, Brazil); Antônio Augusto Fröhlich (Federal University of Santa Catarina, Brazil)</p> <p>Wireless Sensor Networks Chair: Sergey Andreev (Tampere University of Technology, Finland)</p> <p><u>Localization Security in Wireless Sensor Networks as a Non-cooperative Game</u> Nicola Gatti (Politecnico di Milano, Italy); Mattia Monga (Università degli Studi di Milano, Italy); Sabrina Sicari (Università degli Studi dell'Insubria, Italy)</p> <p><u>Optimization of Microcontroller Hardware Parameters for Wireless Sensor Network Node Power Consumption and Lifetime Improvement</u> Konstantin Mikhaylov (University of Oulu, Finland); Jouni Tervonen (University of Oulu, Finland)</p>
Room Pushkin 2: ICUMT-T Main Track	<p>Networking II Chair: Alexander Sayenko (NSN, Finland)</p> <p><u>My Own Communication Service Provider</u> Sivasothy Shanmugalingam (Institut Telecom SudParis, France); Paul Labrogère (Bell Labs, Alcatel-</p>

	<p>Lucent, France); Noel Crespi (Institut Telecom SudParis, France)</p> <p><u>MCP-RWA: A Novel Algorithm for OoT-guaranteed Online Provisioning in Photonic Networks</u> Davide Adami (CNIT Pisa Research Unit, Dept. of Information Engineering, University of Pisa, Italy); Stefano Giordano (University of Pisa, Italy); Michele Pagano (University of Pisa, Italy); Luiz Gustavo Zuliani (University of Pisa, Italy)</p> <p><u>Adaptive End-to-End QoS Mechanism for Mobile Internet</u> Moo Wan Kim (Tokyo University of Information Sciences, Japan)</p> <p><u>Page Flip Contents Caching Method Using User Request on Digital Media Server</u> Byungsoo Lim (Samsung Electronics, Korea); Joonoo Kim (Samsung Electronics, Korea)</p>
Room Pushkin 3: ICUMT-T Main Track	<p>Networking I Chair: Yevgeni Koucheryavy (Tampere University of Technology, Finland)</p> <p><u>Packet size and DTN transport service: Evaluation on a DTN Testbed</u> Nikolaos Bezirgiannidis (Democritus University of Thrace, Greece); Vassilis Tsaoussidis (Democritus University of Thrace, Greece)</p> <p><u>Cross-talk effects on the Regenerator Allocation optimization</u> Eva Marin/Tordera (Technical University of Catalonia UPC, Spain); Xavier Masip-Bruin (Universitat Politècnica de Catalunya, Spain); Marcelo Yannuzzi (Technical University of Catalonia (UPC), Spain); René Serral-Gracià (Technical University of Catalonia (UPC), Spain); Sergio Sánchez-López (Technical University of Catalonia, Spain)</p> <p><u>Distributed Linked Data Structures for Efficient Access to Information within Routers</u> Pier Luca Montessoro (University of Udine, Italy)</p> <p><u>Local Repair Mechanism for Reliable Multicast in Integrated Communication and Broadcast Networks</u></p>

	<p>with Scalability Hideya Yoshiuchi (Hitachi (China) Research and Development Corporation, Japan); Jiping Lv (Hitachi (China) Research & Development Corporation, P.R. China); Satoshi Yoshizawa (Hitachi (China) Research and Development Corporation, Japan); Zhisheng Niu (Tsinghua University, P.R. China)</p>
Room Tolstoy 1: ICUMT-CS Main Track	<p>Autonomous Systems I Chair: Antonio Bicchi (University of Pisa, Italy)</p> <p>Multimodal Human-Robot Interaction Victor Budkov (SPIIRAS, Russia); Maria Prischepa (SPIIRAS, Russia); Andrey Ronzhin (SPIIRAS, Russia); Alexey A. Karpov (St. Petersburg Institute for Informatics and Automation of RAS, Russia)</p> <p>Design and Implementation of Multi-sensor Based Autonomous Minesweeping Robot Reza Abbaspour (University of Vaasa, Finland)</p> <p>Low Cost Implementation Of Pseudo Arm By Poly-Finger Tactual Interface Ashesh Vasalya (Vellore Institute Of Technology, India); Pavan Harsha Sata Venkata (Vellore Institute of Technology, India); Sushrith Piduru Reddy (Vellore Institute of Technology, India); Rishvanth K. P. (Vellore Institute of Technology, India); Shekhar Rai (Vellore Institute Of Technology, India)</p> <p>NURBS Interpolator with Confined Chord Error and Tangential and Centripetal Acceleration Control Alessandro Bardine (Università di Pisa, Italy); Stefano Campanelli (Università di Pisa, Italy); Pierfrancesco Foglia (University of Pisa, Italy); Cosimo Prete (University of Pisa, Italy)</p>

Tuesday, October 19, 14:00 – 15:30

	Technical Session title and Contents
Room Pushkin 1: ICUMT-T Main Track	<p>Wireless Networking Chair: Alexander Sayenko (NSN, Finland)</p>

	<p><u>Passive TDOA Location in Mobile Ad-hoc Networks</u> Israel Martin-Escalona (Technical University of Catalonia, Spain); Francisco Barcelo-Arroyo (Universitat Politecnica de Catalunya (UPC), Spain); Marc Ciurana (Technical University of Catalonia (UPC), Spain)</p> <p><u>UAV Relay Network to Support WSN Connectivity</u> Edison Pignaton de Freitas (Halmstad University, Sweden); Tales Heimfarth (Federal University of Rio Grande do Sul, Brazil); Ivayr Farah Netto (Federal University of Lavras, Brazil); Carlos Eduardo Lino (Federal University of Lavras, Brazil); Carlos E. Pereira (Federal University of RGS - UFRGS, Brazil); Armando Morado Ferreira (Military Institute of Engineering, Brazil); Flavio Rech Wagner (Federal University of Rio Grande do Sul, Brazil); Tony I Larsson (Halmstad University, Sweden)</p> <p><u>A Practical Approach to Powering Wireless Sensor Nodes by Harvesting Energy from Heat Flow in Room Temperature</u> Reza Abbaspour (University of Vaasa, Finland)</p>
Room Pushkin 2: ICUMT-T Main Track	<p>MIMO Chair: Ozgur Ertug (Gazi University, Turkey)</p> <p><u>Performance analysis of dual-hop dual-antennas MIMO systems in Rayleigh fading</u> Zoran Hadzi-Velkov (Ss. Cyril and Methodius University, Macedonia); Jovan D. Stosic (Makedonski telekom AD, Macedonia)</p> <p><u>MIMO based Wireless Backhaul</u> Ehab Mahmoud Mohamed (Kyushu University, Japan)</p> <p>Cloud Computing Chair: XXX</p> <p><u>Sub-millisecond Level Latency Sensitive Cloud Computing Infrastructure</u></p>

	Zhitao Wan (Nokia Siemens Networks, P.R. China)
Room Pushkin 3: ICUMT-T Main Track	<p>Wireless Channels Issues Chair: Theofilos Chrysikos (University of Patras, Greece)</p> <p><u>Impact of Shadowing on Wireless Channel Characterization for a Public Indoor Commercial Topology at 2.4 GHz</u> Theofilos Chrysikos (University of Patras, Greece); Giannis Georgopoulos (University of Patras, Greece); Stavros Kotsopoulos (Wireless Telecommunications Laboratory, Greece)</p> <p><u>An Upper-bound Queueing Model for Multi-rate Downlink SDMA systems</u> Boris Bellalta (Universitat Pompeu Fabra, Spain); Alexey Vinel (Tampere University of Technology, Finland); Miquel Oliver (Universitat Pompeu Fabra, Spain)</p> <p><u>Spectral and Power Efficiency Trade-offs for Multi-antenna Reception Techniques under Co-Channel Interference</u> Ozgur Ertug (Gazi University, Turkey)</p>
Room Tolstoy 1: ICUMT-CS Main Track	<p>Autonomous Systems II Chair: XXX</p> <p><u>Measurement Preprocessing-Based Estimation Approach to Target Tracking</u> Tan-Jan Ho (Chung-Yuan Christian University, Taiwan); Y-J Chen (Chung-Yuan Christian University, Taiwan)</p> <p><u>Performance Analysis of a Kalman Filter Based Attitude Estimator for a Quad Rotor UAV</u> Dinuka Abeywardena (University of Moratuwa, Sri Lanka); Rohan Munasinghe (University of Moratuwa, Sri Lanka)</p> <p><u>An enhanced workflow management for Utility Management Systems</u></p>

	Srdjan Vukmirovic (Faculty of Technical Sciences, Serbia); Slobodan Lukovic (University of Lugano, Switzerland); Aleksandar Erdeljan (University of Novi Sad, Serbia); Filip Kulic (University of Novi Sad, Serbia)
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Tuesday, October 19, 16:00 – 18:00

	Technical Session title and Contents
Room Pushkin 1: ICUMT-T Main Track	<p>Applications and Services Chair: Yevgeni Koucheryavy (Tampere University of Technology, Finland)</p> <p><u>Managing Wireless IP-Connectivity Experiences as Mobile Social Media</u> Roberto R. F. Lopes (University of Sao Paulo, Brazil); Bert-Jan van Beijnum (University of Twente, The Netherlands); Edson D. S. Moreira (University of Sao Paulo, Brazil)</p> <p><u>Viability and Guidelines for the Effective Integration of Consumer WiFi in Industrial Plants</u> Daniele Brevi (Istituto Superiore Mario Boella, Italy); Luca Pilosu (ISMB, Italy); Francesco Fileppo (Istituto Superiore Mario Boella, Italy); Riccardo M. Scopigno (Istituto Superiore Mario Boella, Italy)</p> <p><u>Geo Messages</u> Dmitry Namiot (Moscow State University, Russia)</p> <p><u>TransCryptDFS: A Secure Distributed Encrypting File System</u> Rohit Agrawalla (Indian Institute of Technology Kanpur, India); Dharmendra Modi (Indian Institute of Technology Kanpur, India); Rajat Moona (Indian Institute of Technology Kanpur, India)</p>
Room Pushkin 2: ICUMT-T Main Track	<p>Traffic modeling and analysis Chair: Bernd Wolfinger (University of Hamburg, Germany)</p>

	<p><u>Analysis of World of Warcraft Traffic patterns and User behavior</u> Maria Kihl (Lund University, Sweden); Andreas Aurelius (Acreo AB, Sweden); Christina Lagerstedt (Acreo AB, Sweden)</p> <p><u>Traffic analysis and characterization of Internet user behavior</u> Maria Kihl (Lund University, Sweden); Andreas Aurelius (Acreo AB, Sweden); Christina Lagerstedt (Acreo AB, Sweden); Per Ödling (Lund University, Sweden)</p> <p><u>SumD-BMAP/D/1/K queuing system with priorities</u> Dmitri Moltchanov (Tampere University of Technology, Finland); Yevgeni Koucheryavy (Tampere University of Technology, Finland)</p> <p><u>On Erlang B-formula and ERT method extension</u> Manfred Schneps-Schneppe (Ventspils University College, Latvia); Manfred Schneps-Schneppe (Ventspils University College, Latvia)</p> <p><u>Dynamic channel allocation scheme with a queue for elastic traffic</u> Gely Basharin (Peoples' Friendship University of Russia, Russia); Sergei Shtatnov (Peoples' Friendship University of Russia, Russia)</p>
Room Pushkin 3: ICUMT-T Main Track	<p>IMS Chair: Alexey Vinel (Tampere University of Technology, Finland)</p> <p><u>Registration Performance Comparison Between IP Multimedia Subsystem and Session Initiation Protocol Networks</u> Jari Kellokoski (University of Jyväskylä, Finland); Erno Tukia (University of Jyväskylä, Finland); Eero Wallenius (University of Jyväskylä, Finland); Timo Hämäläinen (University of Jyväskylä, Finland); Jyri Naarmala (University of Vaasa, Finland)</p> <p><u>Towards IPTV Service Discovery and Selection in an IMS Environment</u></p>

	<p>Mosiuoa J Tsietsi (Rhodes University, South Africa); Ray Musvibe (Rhodes University, South Africa); Alfredo Terzoli (Rhodes University, South Africa); George Wells (Rhodes University, South Africa)</p> <p>Networking III Chair: Alexey Vinel (Tampere University of Technology, Finland)</p> <p>Towards Modular Redesign of Networked System Mark Sh. Levin (Institute for Information Transmission Problems, Russian Academy of Sciences, Russia); Alexander V Safonov (Moscow Institute of Physics and Technology (State University), Russia)</p> <p>Using an RTSP Proxy to implement the IPTV Media Function via a streaming server Alfredo Terzoli (Rhodes University, South Africa); Karen Bradshaw (Rhodes University, South Africa) authors list Zelalem</p>
Room Tolstoy 1: ICUMT-CS Main Track	<p>Intelligent Computation and Control Chair: XXX</p> <p>Optimal coordination of overcurrent relays using Honey Bee Algorithm Vahid Rashtchi (Zanjan University, Iran); Javad Gholinezhad (Zanjan University, Iran); Peyman Farhang (Zanjan University, Iran)</p> <p>Improvement of Ant Colony System by Using of Narrowing of Search Domain and Adaptive Number of Search Nodes Vahid Rashtchi (Zanjan University, Iran); Alireza Jamshidi (Zanjan University, Iran)</p> <p>Dispersion Management and Gain Flattened for a Bridge-Type Hybrid Amplifiers in a Pumping Recycling Mechanism Shien-Kuei Liaw Yu-Sheng Huang, Hsin-Kai Hung, Nan-Kuang Chen, Kuei-Chu Hsu, Yi-Lin Yu, Ting Wang (National Taiwan University of Sciene & Technology, Taiwan); A. Manshina and Y. Tver'yanovic (Laser</p>

	<p>Research Institute, Saint-Petersburg State University, Saint Petersburg, Russia)</p> <p><u>Multi-Period Generation Expansion Planning Using Genetic Algorithm</u> Saeid Jalilzadeh (Zanjan University, Iran)</p> <p><u>A New Approach for Subtransmission System Expansion Planning with genetic alghorithm</u> Saeid Jalilzadeh (Zanjan University, Iran)</p>
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Wednesday, October 20, 09:00 – 12:30

	Technical Session title and Contents
Room Pushkin 1: ICUMT-T Main Track	<p>Wireless Networks II Chair: Alexey Vinel (Tampere University of Technology, Finland)</p> <p><u>Performance Optimization of TH-UWB system in Multipath Channel</u> Anis Naanaa (Ecole nationale d'ingénieurs de Tunis, Tunisia)</p> <p><u>Fair Access Rate "FAR" Provisioning in Multi-hop Multi-channel Wireless Mesh Networks</u> Jalaa Hoblos (Kent State University, USA)</p> <p><u>Network Address Assignment in Mobile Ad-Hoc Networks</u> Mohammad Al-Shurman (Jordan university of science and technology, Jordan); Mamoun F. Al-Mistarihi (Jordan University of Science and Technology, Jordan); Ahmad Qudaimat (Palestine Polytechnic University, Palestine)</p> <p>Cooperative transmission Chair: Alexey Vinel (Tampere University of Technology, Finland)</p>

	<p><u>Optimized Closed-form Power Allocation for Outage Restricted Cluster-based Cooperative Networks over Nakagami-m Channels</u> Azar Taheri (Iran University of Science and Technology, Iran); Bahman Abolhassani (Iran University of Science and Technology, Iran)</p> <p><u>Energy-Efficient Cooperative Routing for multi-hop Networks Over Nakagami-m and Rice Channels</u> Azar Taheri (Iran University of Science and Technology, Iran); Bahman Abolhassani (Iran University of Science and Technology, Iran)</p> <p>UI Chair: Alexey Vinel (Tampere University of Technology, Finland)</p> <p><u>Development of tangible user interface for linking context modeling and 3D map of the smartphone</u> Jin-Suk Kang (Jangwee Research Institute for National Defence, Ajou University, Korea)</p>
Room Pushkin 2: ICUMT-T Main Track	<p>Networking III Chair: Yevgeni Koucheryavy (Tampere University of Technology, Finland)</p> <p><u>Novel RAT selection mechanism based on Hopfield Neural Networks</u> Valentin Rakovic (Faculty of Electrical Engineering and Information Technologies - Skopje, Macedonia); Liljana Gavrilovska (Faculty of Electrical Engineering and Information Technologies, Macedonia)</p> <p><u>Heuristic Mobility-Aware OLSR Protocol for Inter-Vehicle Communication (VANET)</u> Ukrit Arom-oon (King Mongkut's University of Technology North Bangkok, Thailand)</p> <p>Wireless Channels Issues II Chair: Yevgeni Koucheryavy (Tampere University of Technology, Finland)</p> <p><u>New Stopping Criterion for Turbo Code in the Presence of SNR Mismatch</u> Shahab Asoodeh (Shahid Beheshti University, Iran)</p>

[A real-time algorithm for fingerprint localization based on clustering and spatial diversity](#)

Xiaokang Lin, Xing-chuan Liu, Sheng Zhang, Qing-yuan Zhao and Xiao-kang Lin (Tsinghua University, P.R. China)

[Improvement eye diagram opening by base band Pre-distortion over Nonlinear Channel in DVB-RCS Transmitter](#)

Parvin Sojoodi Sardrood (Iran Telecommunication Research Centre, Iran)

Closing

APTP+MS 2010: Applied Problems in Theory of Probabilities and Mathematical Statistics Related to Modeling of Information Systems

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

October 18, 2010, Room Tolstoy 3 (floor 20)

08:45 – 10:45 Plenary session ICUMT (including all workshops), room Shantan, floor 1

10:45 – 11:00 Coffee break

11:00 – 12:30 Session I

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

[Analytical Model of Adaptive Traffic Carrying Signal Power Control](#)

Gely Basharin (Peoples' Friendship University of Russia, Russia); Abel Konnon (People's Friendship University of Russia, Russia)

[Analytical Model of Streaming and Elastic Traffic with Dynamic Channel Allocation Scheme](#)

Gely Basharin (Peoples' Friendship University of Russia, Russia); Tatyana Aterekova (Peoples' Friendship University of Russia, Russia)

[Dynamic channel allocation scheme with a queue for elastic traffic](#)

Gely Basharin (Peoples' Friendship University of Russia, Russia); Sergei Shtatnov (Peoples' Friendship University of Russia, Russia)

[On SIP Session Setup Delay Modeling in Next Generation Networks](#)

Pavel Abaev (Peoples' Friendship University of Russia, Russia)

[Recursive Computation for a Multi-Rate Model with Elastic Traffic and Minimum Rate Guarantees](#)

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

[Analytical Modeling of P2PTV Network](#)

Aminu Adamu (Peoples' Friendship University of Russia, Russia); Yuliya Gaidamaka (Peoples' Friendship University of Russia, Russia); Andrey Samuylov (Peoples' Friendship University of Russia, Russia)

[The Resource Allocation Problem in the Design of Virtual Private Networks with Unicast and Multicast Connections](#)

Mikhail Luzgachev (Peoples' Friendship University of Russia, Russia); Konstantin Samouylov (Peoples' Friendship University of Russia, Russia)

12:30 – 13:30 Lunch

13:30 – 15:30 Session II

Chair: Yury Khokhlov (Peoples' Friendship University of Russia, Russia)

[Matrix-Analytical Approach to Analysis of a Single-Server Retrial Queue with Non-Reliable Removable Server](#)

Dmitry Efrosinin (Peoples' Friendship University of Russia, Russia); Olga Semenova (Research and Development Company "INSET", Russia)

[Waiting Characteristics of Queueing System Geo/Geo/1/ \$\infty\$ with Negative Claims and a Bunker for Superseded Claims in Discrete Time](#)

Alexander Pechinkin (Institute of Informatics Problems, RAS, Russia); Rostislav Razumchik (Peoples' Friendship University of Russia, Russia)

[The Mathematical Model of the Traffic Transfer Process with a Rate Adjustable by RED](#)

Anna Korolkova (Peoples' Friendship University of Russia, Russia); Ivan Zaryadov (Peoples' Friendship University of Russia, Russia)

[Modeling of Network Traffic](#)

Ciro D'Apice (University of Salerno, Italy); Yury Khokhlov (Peoples' Friendship University of Russia, Russia); Olga Galaktionova (Tver State University, Russia); Michele Pagano (University of Pisa, Italy)

[Transform-free analysis of an M/G/1/K queue with exceptional service and queue length dependent service time](#)

Mitko Dimitrov (UNWE-Sofia, Bulgaria)

[Multiagent Model for Jobs Flows Planning and Pricing in Distributed Computing Systems](#)

Mikhail Konovalov (Institute of Informatics Problems, RAS, Russia)

[Algorithm of nodes load estimation in the network with repetitions from source and static buffer management scheme](#)

Yaver Agalarov (Institute of Informatics Problems, RAS, Russia)

15:30 – 16:00 Coffee break

16:00 – 17:45 Session III

Chair: Alexander Zeifman (Vologda State Pedagogical University, Russia)

[Moment properties of queueing systems and networks](#)

Evsey Morozov (Institute of Applied Mathematical Research, Karelian Research Centre, RAS, Russia); Alexander Rumyantsev (Institute of Applied Mathematical Research, Karelian Research Centre, RAS, Russia)

[Regenerative analysis of a finite buffer fluid queue](#)

Ruslana Goricheva (Institute of Applied Mathematical Research, Karelian Research Centre, RAS, Russia); Oleg Lukashenko (Institute of Applied Mathematical Research, Karelian Research Centre, RAS, Russia); Evsey Morozov (Institute of Applied Mathematical Research, Karelian Research Centre, RAS, Russia); Michele Pagano (University of Pisa, Italy)

[On stability for \$M_t/M_t/N/N\$ queue](#)

Alexander Zeifman (Vologda State Pedagogical University, Russia); Anna Korotysheva (Vologda State Pedagogical University, Russia); Yakov Satin (Vologda State Pedagogical University, Russia)

[Consistency of statistical criteria and model transformation](#)

Alexander Grusho (Moscow State University, Russia); Elena Timonina (Russian State University for the Humanities, Russia)

[On the constants in the uniform and non-uniform versions of the Berry-Esseen inequality for Poisson random sums](#)

Irina Shevtsova (Moscow State University, Russia); Julia Nefedova (Moscow State University, Russia)

[Reconstruction of probability distributions of stochastic SAR Images](#)

Oleg Shestakov (Moscow State University, Russia)

[Multichannel Systems with Impatient Customers](#)

Yuri Ryzhikov (Institute of computer science and automation of RAS, Russia)

17:45 – 18:00 Closing of the Workshop

FOAN 2010:

Chair: Edvin Skaljo, BH Telecom, Bosnia and Herzegovina

October 18, 2010, Room 1450 (floor 14)

08:45 – 10:45 Plenary session ICUMT (including all workshops), room Shantan, floor 1

10:45 – 11:00 Coffee break

11:00 - 12:30

11:00 -12:30 Technology and services session

FOAN Foreword by Chair

[Uganda's National Transmission Backbone Infrastructure Project: Technical Challenges and Way Forward](#)

Tonny Bulega (Makerere University, Uganda); Apollo Kyeyune (Makerere University, Uganda); Paul Onek (Makerere University, Faculty of Computing and Information Technology, Uganda); Ronald Sseguya (Makerere University, Faculty of Computing and Information Technology, Uganda); Denis Mbabazi (Makerere University, Faculty of Computing and Information Technology, Uganda); Egrance Katwiremu (Makerere University, Faculty of Computing and Information Technology, Uganda)

[Testbed Design and Implementation of HDMI based 3D Broadcast CWDM Access Network](#)

Jun-ichi Mizusawa (Aoyama Gakuin University, Japan)

[GPON in Telecommunication Network](#)

Faruk Selmanovic (BH Telecom, Bosnia and Herzegovina); Edvin Skaljo (BH Telecom Sarajevo, Bosnia and Herzegovina)

12:30 – 13:30 Lunch

13:30- 14:15 Keynote talk: Gerd Keiser: Applications of Photonic Devices to Life Sciences and Healthcare Systems

14:15 – 15:30 System performance and optical devices session. Session Chair – G. Kaiser

[BER Performance of Free Space Optical \(FSO\) MIMO Systems in Severe Atmospheric Turbulence Channels](#)

Salma Darwish (Arab Academy for Science and Technology, Egypt); Moustafa Hussein Aly (Arab Academy for Science, Technology & Maritime Transport, Egypt); Ahmed AboulSeoud (University of Alexandria, Faculty of Engineering, Egypt)

[Measurement of optical power in the upstream of PON signal from a single ONU at the side of the central office by Optical Power meter](#)

Edvin Skaljo (BH Telecom Sarajevo, Bosnia and Herzegovina); Aljo Mujcic (University of Tuzla, Bosnia and Herzegovina)

[Wavelength-tunable Er³⁺-doped fs mode-locked fiber laser using fundamental mode cutoff filters](#)

Nan-Kuang Chen (National United University, Taiwan); Kuei-Chu Hsu (National Central University, Taiwan); Jim-Wein Lin (National Tsing Hua University, Taiwan); Feng-Zhou Liu (National United University, Taiwan); Yi-Ning Chen (National United University, Taiwan); Shien-Kuei Liaw (National Taiwan University of Science & Technology, Taiwan); Jui-Ming Hsu (National United University, Taiwan); Alina Manshina (St. Petersburg State University, Russia); Yuriy Tver'yanovich (St. Petersburg State University, Russia)

[Status Monitoring Concept for a WDM PON](#)

Gerd Keiser (National Taiwan University of Science and Technology, Taiwan)

15:30 - 16:00 Coffee break

16:00 – 17:30

[Optical Transmission Performance for DML considering Laser Chirp and Fiber Dispersion using AMOOFDM](#)

Ahmed Gharba (Orange Labs, France); Philippe Chanclou (France Telecom R&D, France); Meryem Ouzzif (Orange Labs, France); Jérôme Le Masson (CREC Saint Cyr, France); Naveena Genay (Orange Labs, France); Benoit Charbonnier (Orange Labs, France); Emmanuel Grard (3SPhotonics, France); Victor Rodrigues (3SPhotonics, France); Maryline Hélard (INSA Rennes, France); Luiz Anet Neto (Orange Labs, France)

[Dispersion Management and Gain Flattened a hybrid EDFA/RFA with Pumping Recycling Mechanism](#)

Shien-Kuei Liaw (National Taiwan University of Science & Technology, Taiwan); Yu-Sheng Huang (National Taiwan University of Science and Technology, Taiwan); Hsin-Kai Hung (National Taiwan University of Sci. and Tech., Taiwan); Nan-Kuang Chen (National United University, Taiwan); Kuei-Chu Hsu (National Central University, Taiwan); Yu Yi- Lin (National Taiwan University Science and Technology, Taiwan); Ting Wang (National Taiwan University of Sci. and Tech., Taiwan); Alina Manshina (St. Petersburg State University, Russia); Yuriy Tver'yanovich (St. Petersburg State University, Russia)

[Delay Bound Analysis for Hybrid Networks: Interoperable IEEE 802.11b/g WLAN over Fiber](#)

Erna Sugesti (Institut Teknologi Telkom, Indonesia); Purnomo Priambodo (Universitas Indonesia, Indonesia); Kalamullah Ramli (Universitas Indonesia, Indonesia); Bagio Budiardjo (Electrical Engineering Department, University of Indonesia, Indonesia)

OPNTDS 2010: Optical Networking Technologies and Data Security

Chair: Prof.(Dr.) S.K.Sudheer, Department of Optoelectronics, University of Kerala,
Thiruvananthapuram, India
October 18, 2010, Room 1950 (floor 19)

08:45 – 10:45 Plenary session ICUMT (including all workshops), room Shantan, floor 1

10:45 – 11:00 Coffee break

11: 00 - 12:30

Welcome address by Chair

[Extra Low Weight FSO System Aiming Laser](#)

Sergey Biryuchinskiy (St.-Pb. University of IT, Mechanics and Optics, Russia); Konstantin Melnikov (Laser & Information Technologies Co, Ltd., Belarus)

[A Neural Network Based approach for Fingerprint recognition system](#)

Avinash Kumar Jha (Vellore Institute of technology University, India); Supriya Narasimham (VIT University, India); Sudheer Sreedhara Krishna (Hindustan University (Hindustan Institute of Technology and Science), India); V P Mahadevan Pillai (University of Kerala, India)

[Design and Analysis of a Tunable Optical Channel Drop Filter Based on High Index Contrast Si/Air Broadband Reflectors](#)

Renil Kumar (SSN College of Engineering, India); Prita Nair (SSN College of Engineering, India)

[Watermarking on PCAS Compressed Images](#)

Krishnakumar V (University of Kerala, India); Kochunarayanan K (University of Kerala, Department of Optoelectronics, India)

[Multiband Behavioural Analysis of a Higher Order Fractal Patch Antenna](#)

Krishnakumar V (University of Kerala, India)

12:30 – 13:30 Lunch

13:30 - 15:30

[Hardwired Data Security Using Smart-Metric Algorithm](#)

Gaurav Sharma (Hindustan University, India); Mathan Kumar (Hindustan University, India); Mohammed Iris (Hindustan University, India); Sandhya Jayaraman (Anna University, India)

[Advanced Image Encryption and Decryption Using Sandwich Phase Diffuser and False Image along with Cryptographical Enhancement](#)

Abraham Oommen Panicker (VIT University, India); Mujeeb A (Cochin University of Science and Technology, India); A Jabeena (Assistant Professor Senior Grade, India)

[Motion Interpolation Using Inter frame Coding for Block Motion Picture](#)

R. Vinolee (Hindustan University, India); Vijayalakshmi J (KONGU ENGINEERING COLLEGE, India)

15:30 - 16:00 Coffee break

16:00 – 19:00

[Laser Ablated SiC Nanorods for Optoelectronics Applications](#)

Detty P (Department of Optoelectronics, India); V P Mahadevan Pillai (University of Kerala, India)

[Surface Plasmon Resonance Engineering of Gold Nanoparticles Using Off-axis PLD Technique](#)

Smitha S.L. (University of Kerala, India); Gopchandran K G (Department of Optoelectronics, University of Kerala, India, India); Abhilash Kumar G (University of Kerala, India)

[A Simulation study on DCF compensated SMF using OptSim](#)

Gopchandran K G (Department of Optoelectronics, University of Kerala, India, India); Sujith S (University of Kerala, India)

[Information Encryption and Decryption using Hyperchaotic systems in Delayed Nonlinear Feedback Systems](#)

Gopchandran K G (Department of Optoelectronics, University of Kerala, India, India); Gopakumar K (TKM College of Engineering, India); Premlet B (University of Kerala, India)

[Color Image Encryption and Decryption based on Jigsaw Transform Employed at the Input Plane of a Double Random Phase Encoding System](#)

Ratheesh kumar M (University of Kerala, India); Sudheer Sreedhara Krishna (Hindustan University (Hindustan Institute of Technology and Science), India); V P Mahadevan Pillai (University of Kerala, India)

[Modeling And Simulation Of Photonic Crystal Fiber Structure For Single Mode Polarization For Fiber Laser Applications](#)

Sujitha Puthukodan (The University of Kerala, India); Sudheer Sreedhara Krishna (Hindustan University (Hindustan Institute of Technology and Science), India); Dhruva Biswas (Bhabha Atomic Research Centre, India); V P Mahadevan Pillai (University of Kerala, India)

ASNC 2010: The Workshop on Advanced Sensing, Networking and Control
Chair: Liu Hui (Beihang University, China)
October 18, 2010, Room 1950 (floor 19)

08:45 – 10:45 Plenary session ICUMT (including all workshops), room Shantan, floor 1

10:45 – 11:00 Coffee break

11:00 – 12:30 Technical Session I: Design and modeling for networking

[A regional dangerous information service system using mobile communication and WEB map delivery technology](#)

Xiaoping Ling (kanagawa Institute of Technology, Japan)

[Configuration of Alarm Wireless Sensor Element](#)

Mark Sh. Levin (Institute for Information Transmission Problems, Russian Academy of Sciences, Russia); Alexander Fimin (NetCracker Technologies, Russia)

[Design and Implementation of Client Agent in the Network Admission Control](#)

CuiJiao Fu (Beihang University, P.R. China); Qinghua Cao (Beihang University, P.R. China)

[Simulation modelling and analysis of a realistic radio channel model for V2V communications](#)

Maria Kihl (Lund University, Sweden); Kaan B ur (Lund University, Sweden); Fredrik Tufvesson (Lund University, Sweden); Juan Luis Aparicio Ojea (Lund University, Sweden)

[Advanced Vehicular Sensor System](#)

Javad Yazdani (University of Central Lancashire, United Kingdom); Trevor Holden (University of Central Lancashire, United Kingdom)

12:30 – 13:30 Lunch

13:30-15:30 Technical Session II: Algorithm Development for networking

[3-D Localization Algorithm of Time-Changed Wireless Sensor Networks Based on Initial Topographical Information and Its Engineering Application](#)

Hua Deng (University of Electronic Science and Technology of China, P.R. China); Yao Xu (Southwest Jiaotong University of China, P.R. China)

[Cross-layer Optimal Policies for Stochastic Reliable Transmission in Wireless Sensor Networks](#)

Bin-bin Xiong (Tsinghua University, P.R. China); Jia Liu (Tsinghua University, P.R.China); Chuang Lin (Tsinghua University, P.R. China); Fengyuan Ren (Tsinghua University, P.R. China)

[A Window-based Optimization of Energy Detection in Time-varying Channels](#)

Qin Zhenquan (Dalian University of Technology, P.R. China); Li Lin (Dalian University of Technology, P.R. China); Sun Weifeng (Dalian University of Technology, P.R. China); Lei Wang (Dalian University of Technology, P.R. China)

[A Cognitive based Spectrum Sharing Scheme for LTE Advanced Systems](#)

Xinsheng Zhao (Southeast University, P.R. China); ZhiYi Guo (Southeast University, P.R. China); Qiang Guo (Southeast University, P.R. China)

[EHRP: Novel Energy-aware Hierarchical Routing Protocol in Wireless Sensor Network](#)

Amir Mollanejad (Islamic Azad University-Jolfa, Iran); Leili Mohammad Khanli (Science University of Tabriz, Iran); Mohammad Zeynali (Islamic Azad University-Bostanabad, Iran); Hadi Bahrbegi (Amir Azimi Alasti Islamic Azad University-Shabestar, Iran)

15:30 – 16:00 Coffee Break

16:00-17:20 Technical Session III: Theory application for networking

[A DNA and Amino Acids-Based Implementation of Playfair Cipher](#)

Mona Sabry (faculty of computer science and information systems, Ain Shams University, Egypt); Mohamed Hashem (Ain Shams University, Egypt); Taymoor M. Nazmy (Ain Shams University, Egypt)

[Distributed Control Based on Tie-Set Graph Theory for Smart Grid Networks](#)

Kiyoshi Nakayama (Soka University, Japan); Norihiko Shinomiya (Soka University, Japan)

[Mobile Sensor Network Deployment Using Cellular Learning Automata Approach](#)

Maryam Kalantary (Azad university in Qazvin, Iran); Mohammad Reza Meybodi (Amirkabir University of Technology, Iran)

[Application examples of the network fixed point theory for space-air-ground integrated communication network](#)

Hui Liu (Beihang University, P.R. China); Jun Zhang (Beihang University, P.R. China); L L Cheng (City University of Hong Kong, P.R. China)

SoS 2010: The International Workshop on System of Systems

Chairs: Dr. Alex Gorod (Stevens Institute of Technology, USA), Dr. Alexander Fridman (Russian Academy of Science, Russia), Dr. Brian Sauser (Stevens Institute of Technology, USA)

October 18, 2010, Room 1650 (floor 16)

08:45 – 10:45 Plenary session ICUMT (including all workshops), room Shantan, floor 1

10:45 – 11:00 Coffee break

1100-1110	Opening Remarks	A. Gorod , Stevens Institute of Technology, (USA)
1115-1140	<i>Keynote: Overview of SoS Cases Around the World and Especially in Australia</i>	V. Ireland , University of Adelaide, (Australia)
1145-1210	<u>A Personal History in System of Systems</u>	B. White , CAUSES, (USA)
1215-1240	<u>Incremental Coordination in Collaborative Networks</u>	A. Fridman , Institute for Informatics and Mathematical Modelling, Kola Science Centre of Russian Academy of Science, (Russia) O. Fridman , Institute for Informatics and Mathematical Modelling, Kola Science Centre of Russian Academy of Science, (Russia)
Lunch		
1340-1405	<i>Keynote: INCOSE Russian Chapter Approach to Enabling System of Systems Engineering</i>	A. Levenchuk , International Council on Systems Engineering (INCOSE), (Russia)
1410-1435	<u>A Quantitative Approach to Analysis of a</u>	A. Gorod , Stevens Institute of Technology, (USA)

	<u>System of Systems Operational Boundaries</u>	<u>A. Fridman</u> , Russian Academy of Science, (Russia) <u>B. Sauser</u> , Stevens Institute of Technology, (USA)
1440-1505	<u>Network Effects and Institutional Filters: a Piece of New Reality for Economic Systems of Systems</u>	<u>R. Nizhegorodtsev</u> , Institute for Control Studies Russian Academy of Science, (Russia)
1510-1535	<u>The System of Interests Conciliation in the Management of an Enterprise Within the Vertically Integrated Structure</u>	<u>V. Tsukerman</u> , The Luzin Institute for Economic Studies, (Russia) <u>I. Selin</u> , The Luzin Institute for Economic Studies, (Russia) <u>L. Ivanova</u> , The Luzin Institute for Economic Studies, (Russia)
Coffee Break		
1600-1625	<i>Invited Talk: Russian Smart Grid System of Systems Engineering</i>	<u>E. Naumov</u> , INVEL, (Russia)
1630-1655	<u>A Framework for Performance Based Logistics - A System of Systems Approach</u>	<u>D. Nowicki</u> , School of Systems and Enterprises, Stevens Institute of Technology, (USA) <u>W.S. Randall</u> , Auburn University, (USA) <u>A. Gorod</u> , Stevens Institute of Technology, (USA)
1700-1725	<u>A Framework for Decision Making in Extended Enterprises: the FAA NextGen Case</u>	<u>H. Darabi</u> , Stevens Institute of Technology, (USA) <u>M.Mansouri</u> , Stevens Institute of Technology, (USA) <u>N. Andalibi</u> , Stevens Institute of Technology, (USA)
1730-1755	<u>Ultra-High Speed Wireless System Technology From a System of Systems Perspective</u>	<u>B. Heydari</u> , Stevens Institute of Technology, (USA) <u>M.Mansouri</u> , Stevens Institute of Technology, (USA)

WMCNT 2010: The 2nd International Workshop on Mobile Computing and Networking Technologies

Chairs: Georgios I. Tsiropoulos and Dimitros G. Stratogiannis, National Technical University of Athens (NTUA), Greece

October 18, 2010, Room 1550 (floor 15)

08:45 – 10:45 Plenary session ICUMT (including all workshops), room Shantan, floor 1

10:45 – 11:00 Coffee break

11: 00 - 12:30

11:00 -12:30 Seesion 1: Link Quality and Access Techniques for Wireless Communications

[BER Analysis of Dual-Carrier Modulation \(DCM\) over Rayleigh Fading Channel](#)

Hyun-Seok Ryu (Korea University, Korea); Jun-Seok Lee (Korea university, Korea); Chung G. Kang (Korea University, Korea)

[Modeling and Statistical Characterization of Wideband Indoor Radio Propagation Channels](#)

Yuanyuan Ma (University of Agder, Norway); Matthias Pätzold (University of Agder, Norway)

[Supply and Demand, a Dynamic Topology Control Method for Mesh Networks](#)

Daniel Camara (EURECOM, France); Christian Bonnet (Institut Eurecom, France)

12:30 – 13:30 Lunch

13:30 - 15:30 Session 2: “Mobile Communications and Heterogeneous Networking”

[REF: Resilience Evaluation Framework](#)

Bruno Miguel Sousa (University of Coimbra, Portugal); Kostas Pentikousis (Huawei Technologies, Germany); Marilia Curado (University of Coimbra, Portugal)

[OoS-Guaranteed Local Mobility Management with Dual Tunnel in Heterogeneous Wireless Networks](#)

Jong Tae Park (Kyungpook National University, Korea); Seung-Man Chun (Kyungpook National University, Korea)

[Enabling Roaming management in GPRS and WLAN networks based on SIP](#)

Dulce Selene Rosas Mendieta (Universidad de La Ciénega del Estado de Michoacán de Ocampo, Mexico); Octavio Ramirez (Instituto Tecnológico de Jiquilpan, Mexico)

[Performance Modeling of Web Access over HSPA Networks](#)

Manuel Alvarez-Campana (Universidad Politecnica de Madrid, Spain); Enrique Vazquez (Universidad Politécnica de Madrid, Spain); Joan Vinyes (Universidad Politécnica de Madrid, Spain)

15:30 - 16:00 Coffee break

October 19, 2010, Room 1550 (floor 15)

Plenary session, room Pushkin 1+2+3, floor 20

9:00 – 9:45 Keynote Prof. Antonio Bicchi (University of Pisa, Italy): Towards a Society of Robots Behaviors, Misbehaviors, Consensus and Security

9:45 – 10:30 Keynote Prof. Juha Ronning (University of Oulu, Finland): Human-Machine Interface

10:30 – 11:00 Coffee break

11:00 – 13:00 Tutorial Session: “Wireless Broadband Networks: Standardization, Issues and Challenges” performed by Dr. Periklis Chatzimisios

13:00 – 14:00 Lunch

14:00 – 15:30 Session 3: “Recent Advances in Ad-Hoc and Sensor Networks”

[Store and Haul with Repeated Controlled Flooding](#)

Tyson Thedinger (The University of Kansas, USA); Abdul Jabbar (The University of Kansas, USA); James P. G. Sterbenz (University of Kansas & Lancaster University (UK), USA)

[An extended framework for the development of WSN applications](#)

Luigi Pomante (University of L'Aquila, Italy); Luciano Lavagno (Politecnico di Torino,, Italy); Stefano Olivieri (MathWorks, Italy); Mohammad Mozumdar (University of California, Berkeley, USA); Antonio Spinosi (University of L'Aquila, Italy)

[Cross-layer tuning of the neighbor sensing mechanism in mobile ad hoc networks](#)

Nicolas Letor (University of Antwerp, Belgium); Chris Blondia (University of Antwerp, Belgium)

15:30 – 16:00 Coffee Break

16:00 – 18:00 Session 4: "Research Advances in MAC – Layer for Wireless Communications

[Energy-Efficient MAC Protocols for Wireless Body Area Networks: Survey](#)

Gopalan Sai Anand (Kyungpook National University, Korea); Jong Tae Park (Kyungpook National University, Korea)

[An In-Depth Study of Asynchronous MAC Protocols with Low Power Listening](#)

Maria Chondronasiou (Aristotle University of Thessaloniki, Greece); Polyxeni Papadia (Aristotle University of Thessaloniki, Greece); Eirini Karapistoli (Aristotle University of Thessaloniki, Greece); Fotini-Niovi Pavlidou (Aristotle University of Thessaloniki, Greece)

[GWM-MAC Protocol for High-Throughput Backbone Wireless Mesh Networks Operating within 60-80 GHz](#)

Vladimir Vishnevsky (Russian Academy of Sciences, Russia); Andrey Larionov (ZAO Research and Development Company "INSET", Russia)

[A Novel Fair Mapping Scheme for IEEE 802.16 Downlink Sub-Frame](#)

Panagiotis Sarigiannidis (Aristotle University Thessaloniki, Greece); Malamati D Louta (University of Western Macedonia, Greece); Periklis Chatzimisios (Alexander TEI of Thessaloniki, Greece)

[Modifying the HIPERLAN/1 CAC Layer Protocol for Intermittent Connectivity](#)

Constantine Coutras (Pace University, USA)

RNDM 2010: The 2nd International Workshop on Reliable Networks Design and Modeling

Chair: Dr. Jacek Rak (Gdansk University of Technology, Poland)

October 19, 2010, Room Tolstoy 3 (floor 20)

Opening Session (9:00 – 9:30)

Keynote Talk I (9:30 – 10:30)

Three More Aspects of Resilience: Multi-Domain, Multicast, Physical Impairments

Tibor Cinkler (Budapest University of Technology and Economics, HU)

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

Coffee Break (10:30 – 11:00)

Technical Session I (11:00 – 13:00)

Fault Management and Control in Survivable Networks

Chair: Tibor Cinkler (Budapest University of Technology and Economics, HU)

1. [A Meta-Heuristic Approach for Monitoring Trail Assignment in WDM Optical Networks](#)
Ahmed Haddad (Telecom ParisTech, FR); Elias A. Doumith (TELECOM ParisTech, FR); Maurice Gagnaire (Ecole Nationale Supérieure des Telecommunications, FR)
2. [Formal Analysis Approach on Networks with Dynamic Behaviours](#)
Gayan de Silva (Brno University of Technology, CZ); Petr Matousek (Brno University of Technology, CZ); Ondrej Rysavy (Brno University of Technology, CZ); Miroslav Sveda (Brno University of Technology, CZ)
3. [Analyzing Causes of Failures in the Global Research Network Using Active Measurements](#)
Eugene Myakotnykh (Norwegian University of Science and Technology, NO); Bjarne E. Helvik (Norwegian University of Science and Technology, NO); Otto J Wittner (UNINETT, NO)

4. [Failure Localization in Transparent Optical Networks](#)

Dimitri Staessens (Ghent University - IBBT - IMEC, BE); Konstantinos Manousakis (University of Patras, GR); Uri Mahlab (Ecitele, IL); Didier Colle (IBBT - Ghent University, BE); Mario Pickavet (Ghent University, BE); Emmanouel Varvarigos (University of Patras, GR); Piet Demeester (Ghent University, BE)

Lunch (13:00-14:00)

Technical Session II (14:00 – 15:30)

Survivability of Anycast, Multicast and Overlay Networks

Chair: Dimitri Staessens (Ghent University - IBBT - IMEC, BE)

1. [A Mixed Integer Programming Model for Multicast Routing with Multipath Delay Jitter Reduction](#)

Matin Bagherpour (Norwegian University of Science and Technology, NO); Oivind Kure (NTNU, NO)

2. [Survivability of Anycast and Unicast Flows under Attacks on Networks](#)

Jacek Rak (Gdansk University of Technology, PL); Krzysztof Walkowiak (Wrocław University of Technology, PL)

3. [Link Availability Mapping in Infrastructure-based Overlay Networks](#)

Peera Pacharintanakul (University of Pittsburgh, US); David Tipper (University of Pittsburgh, US)

4. [Optimal Results for Anycast-Protecting p-Cycles Problem](#)

Adam Smutnicki (Wrocław University of Technology, PL); Krzysztof Walkowiak (Wrocław University of Technology, PL)

Coffee Break (15:30-16:00)

Technical Session III (16:00 – 17:30)

Fast Service Recovery

Chair: Otto Wittner (UNINETT, NO)

1. [Using AR\(I\)MA-GARCH Models for Improving the IP Routing Table Update](#)
Wouter Tavernier (Ghent University - IBBT, BE); Dimitri Papadimitriou (Alcatel-Lucent Bell, BE); Didier Colle (IBBT - Ghent University, BE); Mario Pickavet (Ghent University, BE); Piet Demeester (Ghent University, BE)
2. [WDM Network Re-optimization Avoiding Costly Traffic Disruptions](#)
Fernando Solano Donado (Warsaw University of Technology, PL); Michał Pióro (Warsaw University of Technology, PL; Lund University, SE)
3. [Dynamic Alternative Routing with Local Protection Paths in MPLS Networks](#)
Catarina Francisco (Nokia Siemens Networks S.A., PT); Lucia Martins (University of Coimbra, PT); Joao Redol (Nokia Siemens Networks S.A., PT); Paulo Monteiro (Nokia Siemens Networks Portugal, PT)
4. [Experimental Implementation of an IPTV Architecture Based on Content Delivery Network Managed by VPLS Technique](#)
Sergio Pompei (Fondazione Ugo Bordonì, IT); Alessandro Valenti (Fondazione Ugo Bordonì, IT)

October 20, 2010, Room Pushkin 3

Keynote Talk II (9:30-10:30)

Evaluation of Network Resilience and Survivability: Analysis, Simulation, and Experimentation

James P.G. Sterbenz (University of Kansas & Lancaster University, UK, US)

Chair: Krzysztof Walkowiak (Wrocław University of Technology, PL)

Coffee Break (10:30-11:00)

Technical Session IV (11:00-12:30)

Methods for Measurement, Evaluation, or Validation of Survivability

Chair: Teresa M. Gomes (University of Coimbra, PT)

1. [Inaccuracy of Availability Metrics Estimated by the Serial-Parallel Model](#)
Janos Szigeti (Budapest University of Technology and Economics, HU); Tibor Cinkler (Budapest University of Technology and Economics, HU)
 2. [A Comprehensive Framework to Simulate Network Attacks and Challenges](#)
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Egemen K Cetinkaya (University of Kansas, US); Dan Broyles (University of Kansas, US); Amit Dandekar (University of Kansas, US); Priya Srinivasan (University of Kansas, US); James P. G. Sterbenz (University of Kansas & Lancaster University, UK, US)

3. [Survivability of the MAP/PH/N Queue with Propagated Failures](#)

Khalid Al-Begain (University of Glamorgan, UK); Alexander N. Dudin (Belarusian State University, BY); Valentina I. Klimenok (Belarusian State University, BY)

Lunch (13:00-14:00)

Technical Session V (14:00-15:30)

Design of Dedicated/Shared Backup Paths

Chair: Wouter Tavernier (Ghent University - IBBT, BE)

1. [An Optimum Paths-Finding Algorithm for \(ALPHA\)+1 Path Protection](#)

Ming-Lee Gan (Universiti Tunku Abdul Rahman, MY); Soung Yue Liew (Universiti Tunku Abdul Rahman, MY)

2. [On the Complexity of Computing Shortest Fast Reroute Paths](#)

Aubin Jarry (University of Geneva, CH)

3. [Obtaining a SRLG-Disjoint Path Pair of Min-Sum Cost](#)

Teresa M. Gomes (University of Coimbra, PT); Luis Fernandes (University of Coimbra, PT)

4. [Linear Programming Approach to Link Capacity Design for Shared Protection](#)

Ryutaro Matsumura (NTT, JP); Masayuki Tsujino (NTT, JP); Haruhisa Hasegawa (NTT, JP)

Coffee Break (15:30-16:00)

Technical Session VI (16:00-17:30)

Models and Algorithms of Survivable Networks Design and Modeling

Chair: Peera Pacharintanakul (University of Pittsburgh, US)

1. [A Risk Management Approach to Resilient Network Design](#)

Korn Vajanapoom (University of Pittsburgh, US); David Tipper (University of Pittsburgh, US); Sira Akavipat (University of Pittsburgh, US)

2. [The Weighted Graphs Approach for the GMPLS Network Reliability Enhancement](#)

Paweł Różycki (University of Information Technology and Management, PL); Andrzej Jajszczyk (AGH University of Science and Technology, PL)

3. [IEEE 802.11n Based Wireless Backhaul Enabled by Dual Channel IPT \(DCH-IPT\) Relaying Protocol](#)

Ehab Mahmoud Mohamed (Kyushu University, JP)

4. [Adaptive Rate Network Coding using Raptor Codes for Large Wireless Relay Networks](#)

Sujung Yoo (Gwangju Institute of Science and Technology, KR)

Panel Discussion (17:45-18:30)

Future Research in Reliable Networks

Chair: Maurice Gagnaire (Ecole Nationale Supérieure des Telecommunications, FR)

Panelists: Tibor Cinkler (Budapest University of Technology and Economics, HU), Maurice Gagnaire (Ecole Nationale Supérieure des Telecommunications, FR), Teresa M. Gomes (University of Coimbra, PT), Jacek Rak (Gdansk University of Technology, PL), Dimitri Staessens (Ghent University - IBBT - IMEC, BE), James P.G. Sterbenz (University of Kansas & Lancaster University, UK, US), Krzysztof Walkowiak (Wroclaw University of Technology, PL)

Closing Session + Best Paper Award (18:30-18:45)