

2014 6th International Congress on Ultra Modern Telecommunications and Control Systems and Workshops

(ICUMT 2014)

**St. Petersburg, Russia
6-8 October 2014**



**IEEE Catalog Number: CFP1463G-POD
ISBN: 978-1-4799-5292-2**

Program

OPNTDS

Green Networks: An energy-oriented model for IP Over WDM Optical Networks

Georgia Beletsoti (Aristotle University of Thessaloniki, Greece); Constantine Kyriakopoulos, Georgios Papadimitriou and Petros Nicopolitidis (Aristotle University, Greece); Emmanouel Varvarigos (University of Patras & Computer Technology Institute, Greece)
pp. 1-6

Keynote: Control Systems, Robotics, and the Neurosciences: A New(?) Convergence

Coffee Break

Optical Networks and Systems

IFAISTOS: A Fair and Flexible Resource Allocation Policy for Next-Generation Passive Optical Networks

Panagiotis Sarigiannidis (University of Western Macedonia, Greece); Georgios Papadimitriou and Petros Nicopolitidis (Aristotle University, Greece); Emmanouel Varvarigos (University of Patras & Computer Technology Institute, Greece); Malamati Louta (University of Western Macedonia, Greece); Vasiliki Kakali (Aristotle University of Thessaloniki, Greece)
pp. 7-14

Energy-aware Lightpath Routing in Optical Networks Based on Adaptive Heuristics

Constantine Kyriakopoulos, Georgios Papadimitriou and Petros Nicopolitidis (Aristotle University, Greece); Emmanouel Varvarigos (University of Patras & Computer Technology Institute, Greece)
pp. 15-22

Cost Effective WDM-AON with Multicarrier Source Based on Dual-Pump FOPA

Sergejs Olonkins, Sandis Spolitis, Iļja Ļašuks and Vjaceslavs Bobrovs (Riga Technical University, Latvia)
pp. 23-28

RABAN I: Recent Advances in Broadband Access Networks

Frequency domain data-aided channel estimation for OFDM signals

Dmitry Sarana and Vladimir Irtuga (SAD-COM Ltd., Russia)
pp. 29-32

Dynamic, Fair and Coordinated Resource Allocation for Backhaul Links for Heterogeneous Load Conditions in LTE-Advanced Relay Systems

Miguel Eguizabal-Alonso and Angela Hernández-Solana (University of Zaragoza, Spain)
pp. 33-40

SFR-based vs. FFR-based Inter-Cell Interference Coordination for Inband Relay LTE-A Networks

Miguel Eguizabal-Alonso and Angela Hernández-Solana (University of Zaragoza, Spain)
pp. 41-47

Performance Study of BFAM 2D-RLS Channel Estimator for AOFDM based Two-Way Relay

Arun Joy (Albertian Institute of Science & Technology, India); Vijay Kumar Chakka (Shiv Nadar University Greater Noida, India)
pp. 48-53

Ergodic Capacity Optimization in Coexisting DVB-LTE-Like Systems

Hiba Bawab (INSA Rennes, Lebanese University, France); Philippe Mary (INSA Rennes, IETR UMR CNRS, France); Jean-François Hélard (IETR, France); Youssef Nasser (American University of Beirut, Lebanon); Oussama Bazzi (Lebanese University, Lebanon)
pp. 54-59

eMBMS LTE Usage to Deliver Mobile Data

Sergey Mitrofanov (Saint-Petersburg State University of Aerospace Instrumentation, Russia); Alexey Anisimov (State University of Aerospace Instrumentation, Russia); Andrey Turlikov (Saint-Petersburg State University of Aerospace Instrumentation, Russia)
pp. 60-65

Control Systems 1

Simulation of nonlinear models of QPSK Costas loop in MATLAB Simulink

Nikolay Kuznetsov (University of Jyväskylä, Finland); Olga A. Kuznetsova (Saint-Petersburg State University, Russia); Gennady Leonov (Saint Petersburg State University, Russia); Pekka Neittaanmäki (University of Jyväskylä, Finland); Marat Yuldashev (Saint Petersburg State University, Russia); Renat Yuldashev (Saint-Petersburg State University, Finland)
pp. 66-71

Robust Synchronization of Nonlinear Dynamical Networks with Delay & Disturbances

Igor Furtat (ITMO University, Russia)
pp. 72-77

Best's conjecture on pull-in range of two-phase Costas loop

Konstantin Alexandrov (St. Petersburg State University, Russia); Nikolay Kuznetsov (University of Jyväskylä, Finland); Gennady Leonov (Saint Petersburg State University, Russia); Svetlana Seledzhi (Saint Petersburg State University, Finland)
pp. 78-82

BPSK Costas loop: simulation of nonlinear models in MATLAB Simulink

Nikolay Kuznetsov (University of Jyväskylä, Finland); Olga A. Kuznetsova (Saint-Petersburg State University, Russia); Gennady Leonov (Saint Petersburg State University, Russia); Svetlana Seledzhi (Saint Petersburg State University, Finland); Marat Yuldashev (Saint Petersburg State University, Russia); Renat Yuldashev (Saint-Petersburg State University, Finland)
pp. 83-87

Simulation of nonlinear models of modified BPSK Costas loop for non sinusoidal waveforms in MATLAB Simulink

Nikolay Kuznetsov (University of Jyväskylä, Finland); Gennady Leonov and Marat Yuldashev (Saint Petersburg State University, Russia); Renat Yuldashev (Saint-Petersburg State University, Finland)
pp. 88-94

I/O Standard Based Thermal/Energy Efficient Green Communication For Wi-Fi Protected Access on FPGA

Bishwajeet Pandey (Chitkara University, India); D. M. Akbar Hussain (Aalborg University, Denmark); Tanesh Kumar and Teerath Das (South Asian University, India)
pp. 95-98

VCTS: Special Session on Vehicle Connectivity Technology & Services

Context-Driven On-Board Information Support: Smart Space-Based Architecture

Alexander Smirnov, Alexey Kashevnik and Nikolay Shilov (SPIIRAS, Russia); Oleg Gusikhin (Ford, USA)
pp. 99-104

Network Synchronization of Vehicle Multiprotocol Unit System Clock

Popov Serge (St. Petersburg State Polytechnical University, Russia); Vadim Glazunov (Saint-Petersburg State Polytechnic University, Russia); Leonid M. Kurochkin (St. Petersburg State Polytechnic University, Russia); Mikhail Kurochkin (Telematics St. Petersburg State Polytechnic University, Russia)
pp. 105-110

Vehicle Speed Estimation Using Roadside Sensors

Dmitrii Obertov and Vladimir Bardov (ITMO University, Russia); Boris Andrievsky (IPME RAS & SPb State University, Russia)
pp. 111-117

Automated Test System Based on Tellus for In-vehicle CAN Network

Xinhong Yang (China Beijing Automotive Technology Co., Ltd, P.R. China)
pp. 118-122

Layer 1 and 2 of a Ring-based, Real-Time Network for In-Vehicle Communication

Harald Richter and Ahmad Obeid (Clausthal University of Technology, Germany); Mikhail Glukhikh and Mikhail Moiseev (St. Petersburg State Polytechnical University, Russia)
pp. 123-130

Designing Roadside Mesh Network with TDMA

Alexander A Bahtin (Moscow Institute of Electronic Technology (Technical University), Russia); Roman Safronov, Ilya Muravyev and Sultanmurad Muratchaev (National Research University of Electronic Technology (MIET), Russia)
pp. 131-135

Security and Attacks Prevention

Secret Key Generation Based on Channel and Distance Measurements

Ahmed Badawy (Politecnico di Torino, Italy); Tamer Khattab and Tarek M. Elfouly (Qatar University, Qatar); Amr Mohamed (Qatar University & Qatar University Wireless Innovations Center, Qatar); Daniele Trincherio (Politecnico di Torino & iXem Labs, Italy)
pp. 136-142

Performance Comparison of Defense Mechanisms Against TCP SYN Flood DDoS Attack

Samad Salehi Kolahi (Unitec Institute of Technology, New Zealand); Amro Alghalbi (Unitec New Zealand, New Zealand); Abdulmohsen Alotaibi, Saarim Ahmed and Divyesh Lad (Unitec, New Zealand)
pp. 143-147

Attacks and their Defenses for Advanced Metering Infrastructure

Sheeraz Lighari (Aalborg University Denmark, Denmark)
pp. 148-151

Lunch

Keynote: Ford Applink and Open Source SmartDeviceLink

Coffee Break

Miscellaneous

A Generalized Correlation Noise Model for Pixel Domain Wyner-Ziv Video Coding

Anton Veselov and Marat Gilmudtinov (Saint-Petersburg State University of Aerospace Instrumentation, Russia)
pp. 152-156

Expanding Design Space for Complex Embedded Systems with HLD-methodology

Alexey Platonov (ITMO University & LMT Ltd., Russia); Arkady Kluchev (ITMO-University, Russia); Aleksandr Penskoii (ITMO University & LMT Ltd., Russia)
pp. 157-164

Vanadium Redox Flow Batteries Diagnostics Adapted for Telecommunication Application

Evgeny Denisov and Alfia Salakhova (Kazan National Research Technical University, Russia); Aditya Poudyal (Technical University of Ilmenau & Aalto University, Germany); Ralf Peipmann (Technical University of Ilmenau, Germany); Aouss Gabash (Ilmenau University of Technology, Germany)

Bandwidth Management - A Deep Packet Inspection Mathematical Model

Boudal Niang (Multinational High School of Telecommunications (ESMT), Senegal)

pp. 169-175

RABAN II: Recent Advances in Broadband Access Networks

Distributed Diffusion LMS based Energy Detection

Ahti Ainomäe (Tallinn University of Technology & KTH Royal Institute of Technology, Estonia); Tõnu Trump (Tallinn University of Technology, Estonia); Mats Bengtsson (KTH Royal Institute of Technology, Sweden)

pp. 176-183

On Possibilities of Capacity Increasing of High Speed Radio Downlink

Alexander A Bahtin (Moscow Institute of Electronic Technology (Technical University), Russia); Anastasia Semenova, Elena Omelyanchuk and Igor Teplyakov (National Research University of Electronic Technology (MIET), Russia)

pp. 184-189

M2M Gateway: The Centerpiece of Future Home

Jiri Hosek, Pavel Masek and Dominik Kovac (Brno University of Technology, Czech Republic); Franz Kröpfl (Telekom Austria Group, Austria)

pp. 190-197

An Experimental Study of the Key QoS Parameters in Public Wi-Fi Networks

Vladimir Lavrukhin (The Bonch-Bruevich St. Petersburg State University of Telecommunications, Russia); Olga A. Simonina (State University of Telecommunications, Russia); Egor Volodin (The Bonch-Bruevich St. Petersburg State University of Telecommunications, Russia)

pp. 198-203

EDCA mechanism and mobility support evaluation in IEEE 802.11s WMNs

Maria Zogkou and Angeliki Sgora (University of Piraeus, Greece); Periklis Chatzimisios (Alexander TEI of Thessaloniki, Greece); Dimitrios D. Vergados (University of Piraeus, Greece)

pp. 204-209

Investigation of Machine-to-Machine Traffic Generated By Mobile Terminals

Diana Chornaya (The Bonch-Bruevich Saint-Petersburg State University of Communications, Russia); Andrey Koucheryavy (Giprosviaz, Russia); Alexander Paramonov (The Bonch-Bruevich Saint-Petersburg State University of Communication, Russia)

pp. 210-213

Control Systems 2

Fuzzy Interval Type II Lateral Control of an Autonomous UAV

Ahmet Kuzu and Ozgur Songuler (Tubitak Uekae, Turkey); Ferhat Ucan (Tubitak Bilgem, Turkey)

pp. 214-219

Economical Digital and Pulse-Width Control of Land-survey Mini-satellites

Yevgeny Somov, Sergey Butyrin and Sergey Somov (Samara State Technical University, Russia); Vadim Salmin (Samara State Aerospace University, Russia)

pp. 220-227

Synergetic approach to quadrotor helicopter control with attractor-repeller strategy of nondeterministic obstacles avoidance

Gennady Veselov, Andrey Sklyarov and Sergey Sklyarov (Southern Federal University, Russia)

pp. 228-235

Adaptive Coding for Maneuvering UAV Tracking Over the Digital Communication Channel

Boris Andrievsky (IPME RAS & SPb State University, Russia); Alexander Fradkov (Institute for Problems of Mechanical Engineering, Russia)

pp. 236-241

Stability and Performance of Networked Control of Quadcopters Formation Flight

Stanislav Tomashevich (ITMO University, Russia); Boris Andrievsky (IPME RAS & SPb State University, Russia)
pp. 242-247

Comparison of UAV-based Reconnaissance Systems Performance Using Realistic Mobility Models

Dalimir Orfanus (ABB, Norway); Edison Pignaton de Freitas (Federal University of Rio Grande do Sul, Brazil)
pp. 248-253

NsCC: 1st International Workshop on Nano-scale Computing and Communications

Statistical Multiplexing for Neural Nanonetworks in case of Neuron Specific Faults

Hakan Tezcan, Sema Oktug and Fatma Nese Kok (Istanbul Technical University, Turkey)
pp. 254-259

Coarse-grained model of protein interaction for bio-inspired nano-communication

Sergey Knyazev, Sergey Tarakanov and Vladimir Kuznetsov (ITMO University, Russia); Yevgeni Koucheryavy (Tampere University of Technology, Finland); Yevgeni Stepanov (Steklov Institute of Mathematics, Russia); Yuri Porozov (ITMO University, Russia)
pp. 260-262

Services

A Context Broker To Enable Future IoT Applications And Services

Oscar Rodríguez Rocha (Politecnico di Torino, Italy); Boris Moltchanov (Telecom Italia, Italy)
pp. 263-268

Internet of Things Scalability: Analyzing the Bottlenecks and Proposing Alternatives

Márcio Gomes (Universidade do Vale do Rio dos Sinos, Brazil); Rodrigo Righi (Unisinos, Brazil); Cristiano A Costa (Universidade do Vale do Rio dos Sinos, Brazil)
pp. 269-276

Experimental Implementation of Demand Response Service for Residential Buildings

Seung Ho Hong (Hanyang University, Korea); Yi-Chang Li (Hanyang University & Ubiquitous Network Systems Lab., Korea); Jung Hoon Park (Hanyang University, Korea); Bing Zhao (China Electric Power Research Institute, P.R. China)
pp. 277-282

Network Modeling and Control

Redundant queuing system with unreliable servers

Vladimir Vishnevsky (Russian Academy of Sciences, Russia); Dmitry Kozyrev (Institute of Control Sciences of the Russian Academy of Sciences & Peoples' Friendship University of Russia, Russia); Olga Semenova (ZAO Research and Development Company "INSET", Russia)
pp. 283-286

Adaptive Control of Cloud Computing Resources in the Internet Telecommunication Multiservice System

Serg Mescheryakov (St. Petersburg State Polytechnic University, Russia); Dmitry Shchemelinin (RingCentral Inc, USA); Vadim Efimov (RingCentral Inc., Russia)
pp. 287-293

A Mixed-Method Approach to Fault Tolerance and Management for Resilient Hierarchical Routing

Ahmed Ismail (American University in Cairo, Egypt); Karim G Seddik (American University in Cairo & Alexandria University, Egypt)
pp. 294-301

Welcome Reception

Short Range Wireless Technologies

A Scalable Localization System for Critical Controlled Wireless Sensor Networks

Thanh-Dien Tran (University of Coimbra, Portugal); José Oliveira (Eneida Wireless & Sensors, S.A., Coimbra, Portugal); Jorge Sá Silva and Vasco Pereira (University of Coimbra, Portugal); Nuno Sousa (Eneida Wireless & Sensors, S.A., Coimbra, Portugal); Duarte Raposo and Francisco Cardoso (University of Coimbra, Portugal)
pp. 302-309

Practical Concerns of Implementing Machine Learning Algorithms for W-LAN Location Fingerprinting

Jörg Schäfer (Frankfurt University of Applied Sciences, Germany)
pp. 310-317

Metrics for short-term radio signal disturbances detection in Wireless Sensor Networks

Marina Eskola and Tapio Heikkilä (Technical Research Centre of Finland, Finland); Marko Korkalainen (VTT Technical research centr of Finland, Finland)
pp. 318-325

Self-organizing relay network supporting remotely deployed sensor nodes in military operations

Dalimir Orfanus (ABB, Norway); Frank Eliassen (University of Oslo, Norway); Edison Pignaton de Freitas (Federal University of Rio Grande do Sul, Brazil)
pp. 326-333

Comparison of protocols for Ubiquitous wireless sensor network

Ammar Muthanna (State University of Telecommunications, Russia); Andrey Prokopiev (Ubitel, Russia); Alexander Paramonov (The Bonch-Bruевич Saint-Petersburg State University of Communication, Russia); Andrey Koucheryavy (Giprosviaz, Russia)
pp. 334-337

A Differential Space-Time Coded RFID System

Kiattisak Maichalernnukul (Rangsit University, Thailand); Feng Zheng (University of Duisburg-Essen, Germany); Thomas Kaiser (Universität Duisburg-Essen, Germany)
pp. 338-340

Control Systems 3

Application of "Consecutive Compensator" Method for Robotic Manipulator Control

Alexey Margun, Konstantin Zimenko, Dmitry Nikolaevich Bazylev, Alexey Bobtsov and Artem Kremlev (ITMO University, Russia)
pp. 341-345

Teleoperation for Learning by Demonstration: Data Glove versus Object Manipulation for Intuitive Robot Control

Kamil Kukliński (Bialystok University of Technology, Poland); Thiusius Rajeeth Savarimuthu, Dorthe Sølvason, Maria aus der Wieschen, Franziska Kirstein and Kerstin Fischer (University of Southern Denmark, Denmark); Ilka Marhenke (University of Southern Denmark, Germany); Norbert Krueger (University of Southern Denmark, Denmark)
pp. 346-351

Decentralized Multi-Agent Tracking of Unknown Environmental Level Sets by a Team of Nonholonomic Robots

Alexey Matveev, Kirill Ovchinnikov and Anna Semakova (Saint Petersburg University, Russia)
pp. 352-359

Sliding Mode with Tuning Surface Control for MEMS Vibratory Gyroscope

Yury Myshlyayev (Bauman Moscow State Technical University, Kaluga Branch, Russia); Tar Yar Myo and Alexander Finoshin (Bauman Moscow State Technical University, Russia)
pp. 360-365

Suboptimal decentralized blanket coverage control of mobile autonomous sensor networks

Alexey Matveev (Saint Petersburg University, Russia); Mikhail Nasimov (Saint Petersburg State University, Russia)
pp. 366-371

Identification of a Layer of Spatially Distributed Motion Detectors in Insect Vision

Egi Hidayat (Uppsala University, Sweden); Alexander Medvedev (Uppsala University, France); Karin Nordström (Uppsala University, Sweden)
pp. 372-379

Low Layers Issues I

Energy Efficient Power Allocation in a Multi-Radio Mobile Device with Wireless Energy Harvesting

Olga Galinina (Tampere University of Technology, Finland); Andrey Turlikov (Saint-Petersburg State University of Aerospace Instrumentation, Russia); Jiri Hosek (Brno University of Technology, Czech Republic); Sergey Andreev (Tampere University of Technology, Finland)
pp. 380-385

A Spectrum Trading Algorithm Using an Agent in Cognitive Radio Networks

Shibing Zhang, Yonghong Chen, Guodong Zhang and Lili Guo (Nantong University, P.R. China)
pp. 386-389

Modeling Unreliable LSA Operation in 3GPP LTE Cellular Networks

Vladimir Y. Borodakiy (JSC Concern Sistemprom, Russia); Konstantin Samouylov and Irina A. Gudkova (Peoples' Friendship University of Russia, Russia); Darya Ostrikova (Peoples' Friendship University of Russia, Russia); Aleksei Ponomarenko-Timofeev (Tampere University of Technology, Finland); Andrey Turlikov (Saint-Petersburg State University of Aerospace Instrumentation, Russia); Sergey Andreev (Tampere University of Technology, Finland)
pp. 390-396

Studying an Inexpensive Wire Discone Antenna as a Candidate for TVWS Spectrum Monitoring / Sensing

Albert A. Lysko (Council for Industrial and Scientific Research & CSIR Meraka Institute, South Africa); Andy Lee (Google, USA); Arno Hart (TENET, South Africa); David Johnson (Council for Scientific and Industrial Research, South Africa)
pp. 397-401

Joint decoding of turbo code and AMR-WB vocoder in 3GPP LTE system

Akmal Akmalkhodzhaev, Akmalkhodzhaev (Saint-Petersburg University of Aerospace Instrumentations, Russia)
pp. 402-406

First Large TV White Spaces Trial in South Africa: A Brief Overview

Albert A. Lysko (Council for Industrial and Scientific Research & CSIR Meraka Institute, South Africa); Moshe Timothy Masonta (Tshwane University of Technology & Centre for Scientific and Industrial Research (CSIR), South Africa); Luzango Mfupe (Tshwane University of Technology, South Africa); David Johnson (Council for Scientific and Industrial Research, South Africa); Fisseha Mekuria (Council for Scientific & Industrial Research, South Africa); Dumisa Ngwenya (Council for Scientific and Industrial Research, South Africa); Ntsibane Ntlatlapa (CSIR, South Africa); Mofolo Mofolo (Council for Scientific and Industrial Research (CSIR), South Africa); Litsietsi Montsi (CSIR - Meraka Institute, South Africa); Arno Hart (TENET, South Africa); Charli Charlie Harding and Andy Lee (Google, USA)
pp. 407-414

Lunch

Control Systems 4

The use of integral adaptation principle to increase the reliability of synchronous generator nonlinear excitation system

Andrey Kuz'menko (Southern Federal University & Computer Technologies and Information Security Institute, Russia); Alexander Synitsin and Alisa Zyryanova (Southern Federal University, Russia)
pp. 415-420

Comparative Study Between Subspace Method and Prediction Error Method for Identification of Gas Turbine Power Plant

Omar Mohamed (University of Benghazi, Libya)
pp. 421-428

Median Modal Control of Interval Continuous-Time Plants

Olga Slita and Anatoliy Ushakov (ITMO University, Russia)
pp. 429-433

PWM Speed Control of DC Motor based on Singular Perturbation Technique

Valery D. Yurkevich and Nikita Stepanov (Novosibirsk State Technical University, Russia)
pp. 434-440

Modified Robust Backstepping Algorithm for Plants with Time Delay

Igor Furtat (ITMO University, Russia); Evgeny Tupichin (Lukoil Overseas, Russia)
pp. 441-445

Synergetic synthesis of power saving control for locomotive asynchronous drive systems

Andrey Popov, Ivan Radionov and Alexey Mushenko (Southern Federal University, Russia)
pp. 446-450

Low Layers Issues II

Low Complexity K-Best based Iterative Receiver for MIMO Systems

Rida El Chall (INSA de Rennes & IETR, France); Fabienne Nouvel (University of RENNES, France); Maryline Héland (INSA Rennes & IETR Institute of Electronics and Telecommunications of Rennes, France); Ming Liu (Institute of Electronics and Telecommunications of Rennes (IETR), France)
pp. 451-455

Designing the MIMO SDR-based LPD Transceiver for Long-range Robot Control Applications

Vladimir Lavrukhin (The Bonch-Bruевич St. Petersburg State University of Telecommunications, Russia); Grigoriy Fokin (The Bonch-Bruевич St. Petersburg State University of Telecommunications & Radio Research and Development Institute (NIIR), Russia); Danil Bulanov, Dmitry Volgushev and Artem Kireev (The Bonch-Bruевич St. Petersburg State University of Telecommunications, Russia)
pp. 456-461

Blind Interference Alignment for Three-User Multi-Hop SISO Interference Channel

Pedram Kheirkhah (University of Tehran, Iran); Mahtab Mirmohseni (Sharif University of Technology, Iran); Mohammad Ali Akhaee (School of Electrical & Computer Eng., College of Eng., University of Tehran, Iran)
pp. 462-467

Closed-Form Expression of the Ergodic Capacity in a Cognitive Radio Link under Power Constraints

Maha Ghanem (Lebanese University, Lebanon); Hiba Bawab (INSA Rennes, Lebanese University, France); Oussama Bazzi (Lebanese University, Lebanon); Youssef Nasser (American University of Beirut, Lebanon); Philippe Mary (INSA Rennes, IETR UMR CNRS, France); Jean-François Héland (IETR, France)
pp. 468-472

Interference Alignment for Two-User Two-Hop Interference X-Channel with Delayed and No CSIT

Pedram Kheirkhah (University of Tehran, Iran); Mahtab Mirmohseni (Sharif University of Technology, Iran); Mohammad Ali Akhaee (School of Electrical & Computer Eng., College of Eng., University of Tehran, Iran)
pp. 473-479

High-performance low-power smart antenna for smart world applications

Albert A. Lysko (Council for Industrial and Scientific Research & CSIR Meraka Institute, South Africa); Mofolo Mofolo (Council for Scientific and Industrial Research (CSIR), South Africa)
pp. 480-484

APTP+MS I

Two Approaches to Analyzing Dynamic Cellular Networks with Limited Resources

Valeriy Naumov (Service Innovation Research Institute, Finland); Konstantin Samouylov and Eduard Sopin (Peoples' Friendship University of Russia, Russia); Sergey Andreev (Tampere University of Technology, Finland)
pp. 485-488

Simulation of SIP-server with hysteretic input and Loss-Based Overload Control scheme

Konstantin Samouylov, Yuliya Gaidamaka and Margarita Talanova (Peoples' Friendship University of Russia, Russia); Oleg Pavlotsky (Moscow Technical University of Communications and Informatics, Russia)
pp. 489-494

Queuing Model for SIP Server Hysteretic Overload Control with K-state MMPP Bursty Traffic

Pavel Abaev (Peoples' Friendship University of Russia, Russia); Anastasia Khachko and Vitaly Beschastny (Peoples' Friendship University of Russia, Russia)
pp. 495-500

Sample Space Reducing for Statistical Decision Effectiveness Increasing

Fedor I Tsitovich and Ivan I Tsitovich (Institute for Information Transmission Problems, Russia)
pp. 501-506

Asymptotic Analysis of the Infinite-Server Queueing System with High-Rate Semi-Markov Arrivals

Alexander Moiseev and Anatoly Nazarov (Tomsk State University, Russia)
pp. 507-513

Queueing System with Renewal Arrival Process and Two Types of Customers

Ekaterina Pankratova and Svetlana Moiseeva (Tomsk State University, Russia)
pp. 514-517

Coffee Break

APTP+MS II

Stabilization of a high performance cluster model

Alexander Rumyantsev (Karelian Research Centre of RAS, Russia)
pp. 518-521

An application of the inspection paradox in stability analysis of optical systems

Evsey Morozov (Institute of Applied Mathematical Research, Karelian Research Centre, RAS, Russia); Lyubov Potakhina (Institute of Applied Mathematical Research, Karelian Research Centre RAS, Russia)
pp. 522-525

Economical analysis of congested networks

Sergey Vasilyev (Peoples' Friendship University of Russia & Russia, Russia); Leonid Sevastyanov (Peoples' Friendship University of Russia, Russia)
pp. 526-533

Time-related stationary characteristics in queuing system with constant service time under hysteretic policy

Yuliya Gaidamaka (Peoples' Friendship University of Russia, Russia); Alexander V. Pechinkin (Institute of Informatics Problems, RAS, Russia); Rostislav Valerievich Razumchik (Institute of Informatics Problems, RAS & Peoples' Friendship University of Russia, Russia)
pp. 534-540

Hierarchical Two-Level Game Model for Tasks Scheduling in a Desktop Grid

Vladimir Mazalov (Russian Academy of Science, Russia); Natalia Nikitina and Evgeny Ivashko (Institute of Applied Mathematical Research, Russia)
pp. 541-545

Optimal Quorum for the Model of Computational Grid with Redundancy

Ilya Chernov (Institute of Applied Math Research & Petrozavodsk State University, Russia)
pp. 546-551

On the accuracy of the effective bandwidth regenerative estimation

Alexandra Borodina (Institute of Applied Mathematical Research of Karelian Research Centre of RAS & Petrozavodsk State University, Russia); Ksenia Kalinina (Institute of Applied Mathematical Research of Karelian Research Centre of RAS, Russia); Evsey Morozov (Institute of Applied Mathematical Research, Karelian Research Centre, RAS, Russia)
pp. 552-556

The method of constructing models of peer to peer protocols

Anastasiya Demidova and Anna Korolkova (Peoples' Friendship University of Russia, Russia); Dmitry S Kulyabov (Peoples' Friendship University of Russia & The Joint Institute for Nuclear Research, Russia); Leonid Sevastyanov (Peoples' Friendship University of Russia, Russia)
pp. 557-562

Simulation of job allocation in distributed processing systems

Mikhail Konovalov (Institute of Informatic Problems & Russian Academy of Sciences, Russia); Rostislav Valerievich Razumchik (Institute of Informatics Problems, RAS & Peoples' Friendship University of Russia, Russia)
pp. 563-569

Designing installations for verification of the model of active queue management discipline RED in the GNS3

Tatiana Velieva and Anna Korolkova (Peoples' Friendship University of Russia, Russia); Dmitry S Kulyabov (Peoples' Friendship University of Russia & The Joint Institute for Nuclear Research, Russia)
pp. 570-577

Control Systems 5

Robust Control of Rapid Thermal Processes Applied to Vapor Deposition Processing

Stanislav Aranovskiy, Aleksandr Kapitonov, Alexey Bobtsov and Anton Pyrkin (ITMO University, Russia); Evgenii Zavarin (Ioffe Physical-Technical Institute, Russia); Denis Davydov (Ioffe Institute, Russia); Romeo Ortega (Centre National de la Recherche Scientifique, France)
pp. 578-583

Adaptive Control of Linear MIMO Systems

Alexey Bobtsov, Maxim Faronov, Igor Furtat, Anton Pyrkin and Sergey Arustamov (ITMO University, Russia)
pp. 584-589

Problem of Cycle-Slipping for Infinite Dimensional Systems with MIMO Nonlinearities

Vera Smirnova (Saint Petersburg State University of Architecture and Civil Engineering & Saint Petersburg State University, Russia); Anton Proskurnikov (Saint Petersburg State University and IPME RAS & University of Groningen, Russia); Natalia Utina (St. Petersburg State University of Architecture and Civil Engineering, Russia)
pp. 590-595

A Method for Inertia Tensors and Centres of Masses Identification on Symmetric Precessions

Natalia Dudarenko (Luleå University of Technology, Sweden); Vitaly Melnikov (ITMO University, Russia); Gennady Melnikov (University ITMO, Russia)

pp. 596-601

Fast Genetic Algorithm with Greedy Heuristic for p-Median and k-Means Problems

Lev Kazakovtsev (Siberian State Aerospace University named after M.F.Reshetnev, Russia); Aljona Stupina (Siberian Federal University, Russia)

pp. 602-606

Genetic Algorithm with Greedy Heuristic for Capacity Planning

Lev Kazakovtsev, Mikhail Gudyma and Alexander Antamoshkin (Siberian State Aerospace University named after M. F. Reshetnev, Russia)

pp. 607-613

Control Systems 6

Harmonic Detection at Initialization With Kalman Filter

Dil Muhammad Akbar Hussain, Raja Muhammad Imran and Ghulam Mustafa Shoro (Aalborg University, Denmark)

pp. 614-617

Interval State Estimation for a Biological Reactor Model

Tatiana Kharkovskaia and Artem Kremlev (ITMO University, Russia)

pp. 618-623

TMR Sensors for Reliable S2A Architectures

Shereen Abouelazayem, Ahmed Ibrahim, Mennatallah Morsi, Merna Abou Eita, Mostafa Hussein, Eslam Moustafa and Hassan Halawa (American University in Cairo, Egypt); Ramez M Daoud (American University in Cairo & KAMA Engineering Office, Egypt); Hassanein H. Amer (American University in Cairo (AUC), Egypt); Hany M. El-Sayed (Cairo University & Faculty of Engineering, Egypt)

pp. 624-630

Uniform deployment of second-order agents on a line segment

Sergey Parsegov (Institute for Control Science RAS, Russia); Anton Proskurnikov (Saint Petersburg State University and IPME RAS & University of Groningen, Russia)

pp. 631-636

Low Noise Amplifier for Integrated Angular Acceleration Sensor

Egor Belousov, Yuri Kruglov, Alexey Solodkov, Stepan Anchutin and Andrei Mikheev (National Research University of Electronic Technology, Russia)

pp. 637-640

On Possible Application Areas and Layout Configurations of Flexible Antennas

Aleksandr Timoshenko and Ksenia Lomovskaya (National Research University of Electronic Technology (MIET), Russia)

pp. 641-643

Bus city tour

Round Tables on Selected Topics