

The Third IASTED International Multi-Conference on
Automation, Control, and Information Technology
ACIT 2010

in cooperation with the Russian Academy of Sciences

June 15 - 18, 2010
Novosibirsk, Russia

Conference «Information and Communication Technology» (ACIT-ICT 2010)
Conference «Control, Diagnostics, and Automation» (ACIT-CDA 2010)
Conference «Optical Information Technology» (ACIT-OIT 2010)

Organizers:

- International Association of Science and Technology for Development (IASTED)
- Institute of Automation and Electrometry, Siberian Branch of the Russian Academy of Sciences (SB of RAS)
- Institute of Computational Technologies, Siberian Branch of the Russian Academy of Sciences (SB of RAS)
- Novosibirsk State University
- Russian Foundation for Basic Research
- Korvet, Ltd.

Location:

The House of Scientists
Morskoy ave., 23, Akademgorodok, Novosibirsk, 630090, Russia
The House of Scientists Phone: (+7 383) 330-1780, 330-3615
ACIT Local Secretariat Phone: (+7 383) 333-3775

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Conference «Information and Communication Technology» (ACIT-ICT 2010)

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- | | |
|--|---|
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Conference «Optical Information Technology» (ACIT-OIT 2010)

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T. Wilkinson – University Of Cambridge, UK

Conference «Control, Diagnostics, and Automation» (ACIT-CDA 2010)

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- V.E. Zyubin** – Institute of Automation and Electrometry SB of RAS, Russia

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- O.I. Potaturkin** – Institute of Automation and Electrometry SB of RAS, Russia

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- V.V. Yanke** – Institute of Automation and Electrometry SB of RAS, Russia

ACIT'2010 SCHEDULE

REGISTRATION

Tuesday, June 15, 2010 08:30 - 16:00 House of Scientists, Inner Foyer

WELCOME ADDRESS

TUESDAY, June 15, 2010 House of Scientists, SMALL HALL

09:30 - 09:40 Presenters: Yu.I. Shokin, O.I. Potaturkin (Russia)

PLENARY SESSION

TUESDAY, June 15, 2010 House of Scientists, SMALL HALL

09:40 – 10:30 Plenary session

10:30 – 10:40 Collective photo

10:40 – 11:00 **COFFEE BREAK**

SOCIAL PROGRAM

TUESDAY, June 15, 2010 House of Scientists

18:30-21:00 Ice-Breaking party

WEDNESDAY, June 16, 2010 Novosibirsk Opera and Ballet Theatre

18:30 Swan Lake (P. Tchaikovsky) Ballet in 4 acts

Departure from House of Scientists at 16:40

THURSDAY, June 17, 2010 House of Scientists

18:30-22:30 Banquet

THURSDAY, June 17, 2010 - FRIDAY, June 18, 2010

Excursions

ACIT - ICT

ICT - SIGNAL AND IMAGE PROCESSING

CHAIR:

Dr. Pei Xiao (Queen's University Belfast, Belfast, UK)

TUESDAY, June 15, 2010 SMALL HALL

Time	Paper #	Paper Title	Authors
11:00	691-046	Registration and Analysis of X-Ray Images Received from the System of Radiographic Control (SRC) "Sibscan"	V.A. Kulikov, S.A. Popov, and V.S. Kirichuk (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
11:20	691-048	Widely Linear Equalization of Rotationally Variant Signals	P. Xiao ¹ , C. Cowan ¹ and H. Zhang ² (¹ Institute of ECIT, Queen's University Belfast, UK; ² Department of ISEE, Zhejiang University, Hangzhou, PR China)
11:40	691-060	Algorithm for Accelerated Solution of Set of Linear Equations with Special Toplitz Matrices	V.M. Efimov, A.L. Reznik, and A.V. Torgov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
12:00	691-061	Sampling Functions of Periodic Signal at its Non-Uniform Digitizing	V.M. Efimov, A.L. Reznik, and A.V. Torgov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
12:20	691-062	Reliability of Random Discrete Image Reading Estimated with Computation Analysis	A.L. Reznik, V.M. Efimov, and A.A. Soloviev (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

Time	Paper #	Paper Title	Authors
12:40	691-070	Grid-based Ensemble Clustering Algorithm using Sequence of Fixed Grids	I.A. Pestunov ¹ , V.B. Berikov ² , and E.A. Kulikova ¹ (¹ Institute of Computational Technologies SB of RAS; ² Sobolev Institute of Mathematics SB of RAS, Novosibirsk, Russia)
13:00 - 14:00 DINNER			
<u>CHAIR:</u> Igor Pestunov (Institute of Computational Technologies SB of RAS, Novosibirsk, Russia)			
14:00	691-071	An Aperture Synthesis Software Model for Sonars and its Probation with Test and Real Signals	O.Yu. Dashevskii and E.S. Nejevenko (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
14:20	691-073	Arabic Language Letters Contour Compression	A.A. Ukasha (Department of Electronics Sebha University, Sebha, Libya)
14:40	691-074	Information Technology of Retouching of Point-Like Artefacts on Color Images	S.A. Bibikov ¹ , A.V. Nikonorov ² , and V.A. Fursov ^{1,2} (¹ Samara State Aerospace University; ² Image Processing Systems Institute of RAS, Samara, Russia)
15:00	691-078	Object Tracking based on Histogram Analysis of Thermal Image Sequences	L.V. Maksimov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
15:20	691-080	A Fast Hierarchical Morphological Image Processing	B.-S. Chow (Department of Electrical Engineering, National Sun Yat-Sen University, Kaohsiung, Taiwan)
15:40	692-006	Image Retrieval using Minimum Information Discrimination Criterion	A.V. Savchenko (State University Higher School of Economics, Nizhniy Novgorod, Russia)
16:00 - 16:20 COFFEE BREAK			
16:20	691-006	An Object Appearance Detection in a Sequence of Noisy Images Using Stochastic Approximation	V. Pyatkin and G. Salov (Institute of Computational Mathematics and Mathematical Geophysics SB of RAS, Novosibirsk, Russia)
16:40	691-010	Network Processing of Vibroseismic Data using the WOS Filters	A.P. Grigoruk and V.I. Znak (Institute of Computational Mathematics and Mathematical Geophysics SB of RAS, Novosibirsk, Russia)
17:00	691-011	Recognition of Forest Textures on Airphotos	M.N. Favorskaya ¹ , N.Y. Petukhov ¹ , I.M. Danilin ² , and A.I. Danilin ² (¹ Siberian State Aerospace University; ² Institute of Forest SB of RAS, Krasnoyarsk, Russia)
17:20	691-037	Automatization of Forest Recognition on Aerial Images	V.S. Sidorova (Institute of Computational Mathematics and Mathematical Geophysics SB of RAS, Novosibirsk, Russia)
17:40	691-055	Moving Object Classification on Bases of Spectral Signal Features in Seismic Guard System	D.O. Sokolova and A.A. Spector (Novosibirsk State Technical University, Novosibirsk, Russia)
18:00	693-010	Man-Made Objects Detection on the Basis of Processing of Multispectral Earth Remote Sensing Data	S.M. Borzov, A.A. Derbenev, and V.I. Kozik (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

ICT - SIGNAL AND IMAGE PROCESSING – CONTINUED

CHAIR:

Alexander Reznik (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

WEDNESDAY, June 16, 2010 SMALL HALL

09:00	691-063	Methods in the Multivariate Digital Signal Processing with using Spline-Interlineation	O.N. Lytvyn and O.P. Nechuyviter (Ukrainian Engineer-Pedagogical Academy, Department of Pure and Apply mathematics, Kharkiv, Ukraine)
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Time	Paper #	Paper Title	Authors
09:20	691-064	The Decision of 3D and 4D Problems of a Computer Tomography using Interflatation Functions	O.N. Lytvyn and Y.I. Pershina (Ukrainian Engineer-Pedagogical Academy, Department of Pure and Apply mathematics, Kharkiv, Ukraine)
09:40	691-017	Extraction Method for Textural Watermarks of Various Linear Raster Patterns Orientation Type	V.A. Fedoseev and V.A. Mitekin (Image Processing Systems Institute of RAS, Samara, Russia)
10:00	691-019	A New Semi-Fragile Watermarking Algorithm for Image Tampering Detection and Information Hiding	N.I. Glumov and V.A. Mitekin (Image Processing Systems Institute of RAS, Samara, Russia)
10:20	691-024	Local Artificial Image's Changes Detection	N.I. Glumov and A.V. Kuznetsov (Image Processing Systems Institute of RAS, Samara, Russia)
10:40	691-049	The Detector of Abandoned Objects	V.A. Ivanov, V.S. Kirichuk, and S.I. Orlov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
11:00 - 11:20 COFFEE BREAK			
11:20	691-020	Hierarchical Approximation Method as a Solution of Multivariate Indirect Measurements Problem	V.N. Kopenkov, V.V. Sergeev, and E.I. Timbay (Image Processing Systems Institute of RAS, Samara, Russia)
11:40	691-021	Efficient Mutually-Calculated Features for Linear Local Description of Signals and Images	V. Myasnikov (Image Processing Systems Institute of RAS, Samara, Russia)
12:00	691-022	Research of Different Problem of Effective Linear Local Features Construction Solving	O.A. Titova (Image Processing Systems Institute of RAS, Samara, Russia)
12:20	691-028	Comparison of Algorithms for Efficient Linear Local Features Construction	A.Yu. Bavrina (Image Processing Systems Institute of RAS, Samara, Russia)
13:00 - 14:00 DINNER			

ICT - COMPUTER VISUALIZATION AND SOFTWARE

CHAIR:

Boris Dolgovesov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

WEDNESDAY, June 16, 2010 SMALL HALL

14:00	691-002	GPU-based Binary Adaptive Ray Casting for Freeform Objects with Perturbation Functions	S.I. Vyatkin, M. Gorodilov, and B.S. Dolgovesov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
14:20	691-023	Some Aspects of Creating Presentation Systems based on the Technology of Integrated Virtual Reality	B.S. Dolgovesov, B.S. Mazurok, V.G. Vandanov, M.A. Kovalkov, A.V. Pavlov, and B.B. Morozov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
14:40	691-066	Generation of Isosurface on a Large Mesh	A.A. Akayev ¹ , B.N. Chetverushkin ² , A.K. Kuzin ³ , N.N. Shabrov ³ , S.G. Orlov ³ , and M.V. Iakovovski ⁴ (¹ Moscow State University, ² Institute for Mathematical Modeling of RAS, Moscow; ³ St. Petersburg State Polytechnical University, St. Petersburg; ⁴ Institute for Mathematical Modeling of RAS, Moscow, Russia)
15:00	691-081	Computer Visualization and Cognitive Graphics Tools for Applied Intelligent Systems	A.E. Yankovskaya ¹ , D.V. Galkin ² , and G.E. Chernogoryuk ³ (¹ Tomsk State University of Architecture and Building; ² Tomsk State University; ³ Siberian State Medical University, Tomsk, Russia)
15:20	691-029	Method of Surveillance Devices Arrangement on Terrain	M.V. Gashnikov and V.A. Fedoseev (Image Processing Systems Institute of RAS, Samara, Russia)
15:40	691-075	Ontology to Support Web Design Activities in E-Commerce Software Development Process	M. Bakaev and T. Avdeenko (Novosibirsk State Technical University, Novosibirsk, Russia)

Time	Paper #	Paper Title	Authors
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ICT - DISTRIBUTED PROCESSING AND DATABASE TECHNOLOGY

CHAIR:

Marat Khairtdinov (Institute of Computational Mathematics and Mathematical Geophysics SB of RAS, Novosibirsk, Russia)

WEDNESDAY, June 16, 2010 Room # 223

14:00	691-012	A Parallel Version of the Particle-in-Cell Method with Adaptive Mass Alteration	A.V. Snytnikov, V.A. Vshivkov, and T.V. Snytnikova (Institute of Computational Mathematics and Mathematical Geophysics SB of RAS, Novosibirsk, Russia)
14:20	691-014	Corporate Network FEB RAS: New Ways of Development	S.I. Smagin, A.A. Sorokin, and S.V. Makogonov (Computer Centre FEB of RAS, Khabarovsk, Russia)
14:40	691-033	The Performance of Specialized Data Warehouses Increasing	K. Badmaeva (Institute of Computational Modelling SB of RAS, Krasnoyarsk, Russia)
15:00	691-034	Distributed Processing of Signals in Seismic Monitoring Networks	M.S. Khairtdinov, G.M. Voskoboinikova, and G.F. Seduhina (Institute of Computational Mathematics and Mathematical Geophysics SB of RAS, Novosibirsk, Russia)
15:20	691-076	Semantic Network of Knowledge in Science of Law	V. Tatsyi ¹ , A. Getman ¹ , S. Ivanov ¹ , V. Karasiuk ¹ , O. Lugoviy ¹ , and O. Sokolov ² (¹ Yaroslav the Wise National Law Academy of Ukraine; ² National Aerospace University; Kharkiv, Ukraine)

ICT - COMMUNICATION NETWORKS

CHAIRS:

John Bellardo (California State Polytechnic University, San Luis Obispo, USA)

Alexey Lagunov (Pomor State University, Archangelsk, Russia)

THURSDAY, June 17, 2010 SMALL HALL

09:00	691-026	A Novel Flow based Approach in Routing Decision Mechanism	M. Kalendar, A. Tentov, D. Jakimovska, and G. Dokoski (University "Ss Cyril and Methodius", Skopje, Republic of Macedonia)
09:20	691-041	HIDRA: Hierarchical Inter-Domain Routing Architecture	B. Clevenger, D. Nelson, and J.M. Bellardo (California Polytechnic State University, San Luis Obispo, CA, USA)
09:40	691-065	Multi-Gigabit Challenges: Similarities between Scientific Environments and Media Production	E. Siemens, R. Einhorn, A. Aust, and L. Fuerst (TIXEL GmbH, Hannover, Germany)
10:00	691-072	Suppression of Patterning Effects in Digital Communications by an Adaptive Constrained Coding	A. Skidin ¹ , M. Fedoruk ^{1,2} , A. Redyuk ¹ , O. Shtyrina ¹ , A. Shafarenko ³ , and S.K. Turitsyn ⁴ (¹ Institute of Computational Technologies SB of RAS; ² Novosibirsk State University, Novosibirsk, Russia; ³ Department of Computer Science University of Hertfordshire; ⁴ Photonics Research Group, Aston University, United Kingdom)
10:20	691-079	Optical Spectrum CDMA: Simulation Analysis for Zero Cross Correlation Code	E.I. Babekir ¹ and N.M. Saad ² (¹ Electrical & Electronics Department, Al-grif Shrg Technical College, Khartoum, Sudan; ² Electrical & Electronics Department, Universiti Teknologi PETRONAS, Malaysia)
10:40	691-015	IEEE 802.16: Analysis of Probability-Time Characteristics	V. Drozdova (Department of Telecommunication Networks Siberian Telecommunications University (SibSUTIS), Novosibirsk, Russia)

11:00 - 11:20 COFFEE BREAK

Time	Paper #	Paper Title	Authors
11:20	691-047	ORL Scheme for WiMAX and LTE System with Convolutionally Coded Spatial Multiplexing	W. Yin ¹ , P. Xiao ² , C. Cowan ² (UK), S. Liu ³ , and Q. Huang ³ (¹ School of EECE, University of Newcastle; ² Institute of ECIT, Queen's University Belfast, Belfast, UK; ³ School of Electronic Science&Technology National University of Defence Technology, China)
11:40	691-077	Usage of the Statistical Theory for Increasing Rate of Operation of Standard 802.11n Network Indoors	A. Lagunov and O. Eshevsky (Pomor State University, Archangelsk, Russia)
12:00	691-005	Modelling and Simulation Approach for the Performance Evaluation of a Wireless Sensor Network	M. LaManna (SELEX Sistemi Integrati, Roma, Italy)

ACIT - CDA

CDA - APPLICATIONS

CHAIRS:

Alex Bezvov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

Konstantin Budnikov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

TUESDAY, June 15, 2010 Room # 220

11:00	691-068	A Framework of an Acoustic Navigation Network Servicing Multiple Autonomous Underwater Vehicles	A.V. Myagotin ¹ and I.N. Burdinsky ² (¹ Institute of Marine Technology Problems, Vladivostok; ² Pacific National University, Khabarovsk, Russia)
11:20	692-002	Industrial Intelligent Control Systems: Fundamentals and Applications	V.B. Trofimov and S.M. Kulakov (Siberian State Industrial University, Novokuznetsk, Russia)
11:40	692-009	Automation of Thermal-Physical Experiment: Control of the Spray Pulse Source and Methods of Gas-Droplet Flow Investigation	A. Nazarov, A. Serov, M. Bodrov, and V. Simakov (Institute of Thermophysics SB of RAS, Novosibirsk, Russia)
12:00	692-010	State-of-the-Art in Control of Aerial Payload Delivery	O.A. Yakimenko, N.J. Slegers, E.A. Bourakov, and C.W. Hewgley (Naval Postgraduate School, Monterey, CA, USA)
12:20	692-022	The Structure and Hardware of Control System for Power Linear Accelerator	A. Batrakov, G. Fatkin, I. Ilyin, P. Logatchev, A. Pavlenko, and V. Sazanskiy (Budker Institute of Nuclear Physics SB of RAS, Novosibirsk, Russia)
12:40	692-026	Automation of Experimental Studies in Supersonic Wind Tunnels	G.M. Sobstel ¹ , V.V. Garkusha ¹ , V.V. Yakovlev ¹ , V.M. Gilyov ² , V.I. Zapryagaev ² , and A.S. Pevzner ² (¹ Design Institute for Computer Engineering SB of RAS; ² Khristianovich Institute of Theoretical and Applied Mechanics SB of RAS, Novosibirsk, Russia)

13:00 - 14:00 DINNER

14:00	692-068	Innovative Water Treatment Plant Monitoring and Automation System in Large Gas Refinery	A. Firoozshahi (Islamic Azad University, Damavand branch, Tehran, Iran)
14:20	692-078	Intelligent and Innovative Monitoring of Large Tank Farm based on DCS	A. Firoozshahi (Islamic Azad University, Damavand branch, Tehran, Iran)
14:40	692-027	On the Question of Building an Open System of Automated Diagnostics for Novosibirsk Subway	A.S. Maltsev, M.A. Sobolev, and A.P. Yan (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
15:00	692-028	Automated Control System for Horizontal Solar Telescope of Sayansk Solar Observatory	A.N. Bezvov, V.N. Kotov, A.A. Lubkov, C.A. Lylov, and S.V. Perebeynos (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

Time	Paper #	Paper Title	Authors
15:20	692-066	Automated System for Measurement of Electrochemical Characteristics of Materials	I.N. Skovorodin ¹ , P.G. Safonov ¹ , N.F. Uvarov ² , A.S. Ulihin ² , D.I. Skovorodin ³ , and A.S. Arakcheev ³ (¹ Institute of Automation and Electrometry SB of RAS; ² Institute of Solid State Chemistry and Mechanochemistry SB of RAS; ³ Novosibirsk State University, Novosibirsk, Russia)
15:40	692-070	Automated System for Electrical Conductivity Relaxation Study of Solid Oxide Materials	Yu.S. Okhlupin ¹ , N.F. Uvarov ¹ , I.N. Skovorodin ² , P.G. Safonov ² , D.I. Skovorodin ³ , and A.S. Arakcheev ³ (¹ Institute of Solid State Chemistry and Mechanochemistry SB of RAS; ² Institute of Automation and Electrometry SB of RAS; ³ Novosibirsk State University, Novosibirsk, Russia)

16:00 - 16:20 COFFEE BREAK

CDA - AUTOMATION SYSTEMS AND DIAGNOSTICS

CHAIRS:

Vladimir Konyukh (Novosibirsk State Technical University, Novosibirsk, Russia)

Vladimir E. Zyubin (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

TUESDAY, June 15, 2010 Room # 223

11:00	692-015	Automatic Measurement of Spectra of a Tunnel Current	V.N. Vyukhin (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
11:20	692-016	DCS with Homogeneous Architecture based on Ethernet Network	O. Serdyukov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
11:40	692-024	Unified Configuration System for Physical Equipment and Software	A. Makeev, D. Bolkhovityanov, S. KarnaeV, and P. Cheblakov (Budker Institute of Nuclear Physics SB of RAS, Novosibirsk, Russia)
12:00	692-025	Device Server of the Distributed Control System	D. Berkaev, D. Bolkhovityanov, P. Cheblakov, Yu. Eidelman, S. KarnaeV, and A. Makeev (Budker Institute of Nuclear Physics SB of RAS, Novosibirsk, Russia)
12:20	692-041	An Approach to Developing an Open Modular Multi-Platform SCADA System	S.A. Belokon, M.N. Filippov, and Yu.N. Zolotukhin (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
12:40	692-047	Using Process-Oriented Programming in LabVIEW	V.E. Zyubin (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

13:00 - 14:00 DINNER

14:00	692-051	Capacitive Proximity Sensor Position Feedback in Active Vibration Control of Lightly Damped Cantilevers	G. Takács and B. Rohal'-Ilkiv (Institute of Automation, Measurement and Informatics Slovak University of Technology, Bratislava, Slovakia)
14:20	692-067	EPICS-DDS: Rationale, Status and Applications	N. Malitsky ¹ , N. Hasabnis ² , J. Shah ¹ , R. Talman ³ , and N. Wang ⁴ (¹ Brookhaven National Laboratory, Upton, NY; ² Stony Brook University, Stony Brook, NY; ³ Cornell University, Ithaca, NY; ⁴ Tech-X Corp., Boulder, CO, USA)
14:40	691-025	Identification of High-Level Object Manipulation Operations from Multimodal Input	A. Barchunova ¹ , M. Franzius ² , M. Pardowitz ¹ , and H. Ritter ³ (¹ Research Institute for Cognition and Robotics, Bielefeld University, Bielefeld, Germany, ² Honda Research Institute, Offenbach /Main, ³ Neuroinformatics Group, Bielefeld University, Germany)
15:00	692-005	Simulation of Mining in the Future	V. Konyukh (Novosibirsk State Technical University, Novosibirsk, Russia)

Time	Paper #	Paper Title	Authors
15:20	692-020	Motion Control of Two-Wheeled Robot with the Top Position of Cargo	A.S. Maltsev (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
15:40	692-032	Formation Control and Trajectory Tracking of Mobile Robots	K.Yu. Kotov, Y.N. Zolotukhin, and A.A. Nesterov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

16:00 - 16:20 COFFEE BREAK

CDA - CONTROL

CHAIRS:

Galina Frantsuzova (Novosibirsk State Technical University, Novosibirsk, Russia)

Anatoly Vostrikov (Novosibirsk State Technical University, Novosibirsk, Russia)

TUESDAY, June 15, 2010 Room # 220

16:20	692-007	Numerical Method for Solving a Nonlinear Time-Optimal Control Problem	G.V. Shevchenko (Sobolev Institute of Mathematics SB of RAS, Novosibirsk, Russia)
16:40	692-008	Sequential Synthesis of Time-Optimal Control for Dynamic Systems	V.M. Aleksandrov (Sobolev Institute of Mathematics SB of RAS, Novosibirsk, Russia)
17:00	692-019	Direct Quality Indices Analysis of Automation System based on their Roots Location	S.V. Efimov, S.V. Zamyatin, and S.A. Gayvoronskiy (Tomsk Polytechnic University, Tomsk, Russia)
17:20	692-035	Novel Approach to Sliding Mode Realization under Unremovable Imperfections	S.A. Kochetkov and V.A. Utkin (Institute of Control Sciences of RAS, Moscow, Russia)
17:40	692-043	The Localization Method for Output Feedback Control	A. Vostrikov (Novosibirsk State Technical University, Novosibirsk, Russia)

CDA - IDENTIFICATION

CHAIR:

Vladimir Chubich (Novosibirsk State Technical University, Novosibirsk, Russia)

TUESDAY, June 15, 2010 Room # 223

16:20	692-018	Application of Methods of Experiment Design Theory in Problem of Stochastic Nonlinear Discrete Systems Identification	V.M. Chubich (Novosibirsk State Technical University, Novosibirsk, Russia)
16:40	692-057	Stability Estimates in the Problem on Renewal of Coefficients of Linear Difference Equations	V.G. Demidenko (Institute of Computational Technologies SB of RAS, Novosibirsk, Russia)
17:00	692-061	Analysis and Prediction of Generalized Quality Indicators of Elevators Operation	A.V. Goonko ¹ and Yu.A. Shkredov ² (¹ Novosibirsk State Technical University, ² Scientific-manufacturing cooperative "Complex systems", Novosibirsk, Russia)

CDA - CONTROL (CONTINUED)

CHAIRS:

Galina Frantsuzova (Novosibirsk State Technical University, Novosibirsk, Russia)

Anatoly Vostrikov (Novosibirsk State Technical University, Novosibirsk, Russia)

WEDNESDAY, June 16, 2010 Room # 220

09:00	692-044	Tracking in Linear MIMO Systems under Unknown External Disturbances	S.A. Krasnova and V.A. Utkin (Institute of Control Sciences of RAS, Moscow, Russia)
09:20	692-045	Application of Relay Controller for Extremum Seeking in Nonlinear System	G.A. Frantsuzova (Novosibirsk State Technical University, Novosibirsk, Russia)
09:40	692-048	Control System with Additive Adjustment on Basis of Velocity Vector Method	O.Ya. Shpilevaya (Novosibirsk State Technical University, Novosibirsk, Russia)

Time	Paper #	Paper Title	Authors
10:00	692-060	High-Frequency-Gain Identification and Gain Tuning in Nonlinear Singularly Perturbed Control Systems	O.V. Bocharova and V.D. Yurkevich (Novosibirsk State Technical University, Novosibirsk, Russia)
10:20	692-071	Computation of Reachable Sets Guaranteed Bounds	A.N. Rogalyov (Institute of Computational Modelling SB of RAS, Krasnoyarsk, Russia)
10:40	692-073	Robust Adaptive Control of Uncertain Input-Perturbed Systems via a Singular Perturbation Redesign through Dynamic High-Gain Scaling	P. Krishnamurthy and F. Khorrami (Polytechnic Institute of NYU, Brooklyn, NY, USA)
11:00 - 11:20 COFFEE BREAK			
11:20	692-017	World Dynamics Evolution Management Applying the Model of Forrester by Parametrical Regulation	A.A. Ashimov, B.T. Sultanov, Zh.M. Adilov, Yu.V. Borovskiy, D.T. Aidarkhanov, As.A. Ashimov, Yu Yaoguo (The Kazakh National Technical University, Almaty, Kazakhstan)
11:40	692-021	Elements of the Parametrical Regulation Theory based on One Class of Computable General Equilibrium Models	A.A. Ashimov, B.T. Sultanov, Zh.M. Adilov, Yu.V. Borovskiy, N.Yu. Borovskiy, As.A. Ashimov, Yu Yaoguo (The Kazakh National Technical University, Almaty, Kazakhstan)
12:00	692-042	Bifurcation of Extremals in the Parametric Control Problem for the Three-Sector Model of Economy	A.A. Ashimov ¹ , Yu.V. Borowski ¹ , D.B. Nurseitov ² , S.Ya. Serovajski ³ , and B.T. Sultanov ¹ (¹ Satpayev KazNTU; ² Abay KazNPU; ³ al-Farabi KazNU, Almaty, Kazakhstan)

13:00 - 14:00 DINNER

CDA - MODELING AND SIMULATION

CHAIRS:

Konstantin Budnikov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

Gennadiy Lbov (Sobolev Institute of Mathematics SB of RAS, Novosibirsk, Russia)

WEDNESDAY, June 16, 2010 Room # 223

09:00	692-031	New Algorithm for Klystrons Amplitude Frequency Characteristics Optimizing	G.M. Antonova (Institute of Control Sciences of RAS, Moscow, Russia)
09:20	692-059	A Method of Interval Prediction based on Logical Regularities	G.S. Lbov, M.K. Gerasimov, and G.L. Polyakova (Sobolev Institute of Mathematics SB of RAS, Novosibirsk, Russia)
09:40	692-053	Co-ordination of Expert Statements in Pattern Recognition Problems	A.A. Tolstik and G.S. Lbov (Sobolev Institute of Mathematics SB of RAS, Novosibirsk, Russia)
10:00	692-065	Modeling Stiff Hybrid Systems of High Dimension in ISMA	Yu.V. Shornikov ¹ , E.A. Novikov ² , M.S. Denisov ¹ , I.N. Tomilov ¹ , and D.N. Dostovalov (¹ Novosibirsk State Technical University, Novosibirsk, ² Institute of Computational Modelling SB of RAS, Krasnoyarsk, Russia)
10:20	692-030	Real Time Modeling of Flame Front Evolution by Kinematical Model	A.V. Menschikov ¹ , B.S. Mazurok ¹ , B.S. Dolgovesov ¹ , R.V. Fursenko ² , and S.S. Minaev ² (¹ Institute of Automation and Electrometry SB of RAS; ² Khristianovich Institute of Theoretical and Applied Mechanics SB of RAS, Novosibirsk, Russia)
10:40	692-062	Distributed Plants Intelligent Monitoring using Information Models of States	S.K. Andryushkevich and S.P. Kovalyov (Design Technological Institute of Digital Techniques SB of RAS, Novosibirsk, Russia)

11:00 - 11:20 COFFEE BREAK

Time	Paper #	Paper Title	Authors
11:20	691-018	Modern Hardware to Simulate Tsunami Wave Propagation	M.M. Lavrentiev ^{1,2} and A.A. Romanenko ² (¹ Sobolev Institute of Mathematics SB of RAS; ² Novosibirsk State University, Novosibirsk, Russia)
11:40	692-055	Development and Testing of the Automated System of Supervisor Subway Traffic Control with the Use of the Relay-based Interlocking System Model	S.A. Belokon, V.V. Vasilev, M.N. Filippov, and A.P. Yan (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
12:00	692-029	Software Modeling of Email Sensor	K.I. Budnikov, A.V. Kurochkin, and S.A. Lylov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

13:00 - 14:00 DINNER

CDA - EVENTOLOGICAL APPROACHES IN PROBABILITY THEORY AND ITS APPLICATIONS (SPECIAL)

CHAIRS:

Oleg Yu. Vorobyev (Institute of Mathematics Siberian Federal University, Krasnoyarsk State Trade-Economics Institute, Krasnoyarsk, Russia)

Arcady A. Novosyolov (Institute of Mathematics Siberian Federal University, Krasnoyarsk State Trade-Economics Institute, Krasnoyarsk, Russia)

THURSDAY, June 17, 2010 Room # 223

09:00	692-080	On Axiomatization of Eventology	O.Yu. Vorobyev (Institute of Mathematics, Siberian Federal University; Krasnoyarsk State Trade Economics Institute, Krasnoyarsk, Russia)
09:20	692-081	Valuation of Collateralized Debt Obligations	D.S. Slepov (Krasnoyarsk State Trade Economics Institute; Institute of Economics, Management and Environmental Studies, Siberian Federal University, Krasnoyarsk, Russia)
09:40	692-082	Eventological Models for Valuation Problem of Risk Bankruptcy of Business Enterprise	M. Sherykalova (Institute of Mathematics, Siberian Federal University, Krasnoyarsk, Russia)
10:00	692-083	About Distributions of Bipartite Random Vectors	D.V. Semenova (Institute of Mathematics, Siberian Federal University, Krasnoyarsk, Russia)
10:20	692-084	Modeling Coherent Preference Relations in Decision-Making under Risk	A.A. Novosyolov (Krasnoyarsk State Trade Economics Institute; Institute of Mathematics, Siberian Federal University, Krasnoyarsk, Russia)
10:40	692-085	Applications of Wide Dependence Theory in Eventological Scoring	E.E. Goldenok ^{1,2} , N.A. Lukyanova ^{2,1} , and D.V. Semenova ³ (¹ Krasnoyarsk State Trade Economics Institute; ² Siberian Federal University; ³ Institute of Mathematics Siberian Federal University, Krasnoyarsk, Russia)

11:00 - 11:20 COFFEE BREAK

11:20	692-086	Multivariate Extensions of Probability Theory's Limit Theorems: An Eventological View	O.Yu. Vorobyev ^{1,2} and L.S. Golovkov ² (¹ Institute of Mathematics, Siberian Federal University; ² Krasnoyarsk State Trade Economics Institute, Krasnoyarsk, Russia)
11:40	692-087	Eventological Models of Market Pricing for Different Structures Dependencies of Supply and Demand Events	E.E. Goldenok (Krasnoyarsk State Trade Economics Institute; Siberian Federal University, Institute of Mathematics, Krasnoyarsk, Russia)
12:00	692-088	Complexity and Elasticity of the Computation	V.V. Bykova (Institute of Mathematics, Siberian Federal University, Krasnoyarsk, Russia)

Time	Paper #	Paper Title	Authors
12:20	692-089	Eventological Approach to Factor Analysis of Complex Systems	I. Baranova (Siberian Federal University, Krasnoyarsk, Russia)

ACIT - OIT

OIT - OPTICAL INFORMATION TECHNOLOGY

CHAIRS:

Victor P. Korolkov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

Gennady G. Levin (All-Russian Research Institute of Optical and Physical Measurements (VNIIOFI), Moscow, Russia)

WEDNESDAY, June 16, 2010 Room # 220

14:00	693-007	Influence of Phase Changes on Reflection on Surface Measurements in Optical Profilometry	G.G. Levin, G.N. Vishnyakov, N.N. Moiseev, and V.L. Minaev (All-Russian Research Institute for Optical and Physical Measurements, Moscow, Russia)
14:20	693-008	Definition of Object Near Nanometer Shifting by 2D Optical Path Difference	G. Levin ¹ , V. Minaev ¹ , N. Moiseev ¹ , and Ya. Ilyushin ² (All-Russian Research Institute for Optical and Physical Measurements; ² M.V. Lomonosov Moscow State University, Moscow, Russia)
14:40	693-017	Rate-Adaptive Signalling Schemes Treated as Runlength-Limited Sequences for Atmospheric Free-Space Optical Communications	A. Jurado-Navas, J.M. Garrido-Balsells, M. Castillo-Vázquez, and A. Puerta-Notario (Department of Communications Engineering, University of Málaga, Málaga, Spain)
15:00	693-018	Nano-Particle Material Classification by Focused Gaussian Beam Scattering	E. Hemo, B. Spektor, and J. Shamir (Department of Electrical Engineering, Technion – Israel Institute of Technology, Haifa, Israel)
15:20	693-013	Multilayer Microholographic Storage and Two-Photon Recording Materials	I. Steinberg, Yu.A. Shepetkin (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
15:40	693-014	Table Top Terahertz Spectrometer based on Fiber Laser	V.D. Antsygin, A.A. Mamrashev, and N.A. Nikolaev (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
16:00	693-015	Diffractive Polypropylene Lenses for Terahertz Radiation	V.M. Vedernikov ¹ , P.M. Dutov ¹ , A.I. Kokarev ¹ , B.A. Knyazev ^{2,3} , I.G. Palchikova ^{1,3} , M.F. Stupak ^{1,3} , and Yu.V. Chugui ^{1,3} (¹ Technological Design Institute of Scientific Instrument Engineering SB of RAS; ² Budker Institute of Nuclear Physics SB of RAS; ³ Novosibirsk State University, Novosibirsk, Russia)

16:20 - 16:40 **COFFEE BREAK**

OIT - OPTICAL INFORMATION TECHNOLOGY (CONTINUED)

CHAIR:

Victor P. Korolkov (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

THURSDAY, June 17, 2010 Room # 220

09:00	693-002	System of High-Resolution Machine Vision with Stacked Photodiodes Structure of Photosensitive Sensor	V. Bessmeltsev and N. Goloshevsky (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
09:20	693-011	Optical Monitoring of Crystal Diameter during Czochralski Growth	S.V. Mikhlyaev (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)

Time	Paper #	Paper Title	Authors
09:40	693-005	Spectrophotometric Certification of Calibration Gratings	V.P. Korolkov ¹ , A.S. Konchenko ² , and R.K. Nasyrov ¹ (¹ Institute of Automation and Electrometry SB of RAS; ² Novosibirsk State University; Novosibirsk, Russia)
10:00	693-004	Simulation of the Multilayer Volume Holographic Gratings	M.Yu. Rodionov and E.F. Pen (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
10:20	693-009	Metrological Parameters Enhancement for Polar Coordinates Laser Pattern Generator	A.V. Kiryanov (Technological Design Institute of Scientific Instrument Engineering SB of RAS, Novosibirsk, Russia)
10:40	693-012	Phase-Statistical Method in High-Precision Angle Measuring Technologies: Special Features of Use	V.P. Kiryanov (Technological Design Institute of Scientific Instrument Engineering SB of RAS, Novosibirsk, Russia)
11:00 - 11:20	COFFEE BREAK		