



ACIT`2010 SCHEDULE

TUESDAY, June 15, 2010



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**

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	691-048	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)
11:20	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)
11:40	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)
12:00	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)
12:20	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)
12:40	691-073	Arabic Language Letters Contour Compression	A.A. Ukasha (Department of Electronics Sebha University, Sebha, Libya)

13:00 - 14:00 **DINNER**

Time	Paper #	Paper Title	Authors
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CHAIR:

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	691-074	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)
14:40	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)
15:00	691-080	A Fast Hierarchical Morphological Image Processing	B.-S. Chow (Department of Electrical Engineering, National Sun Yat-Sen University, Kaohsiung, Taiwan)
15:20	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)

16:00 - 16:20 COFFEE BREAK

16:20	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)
16:40	691-037	Automatization of Forest Recognition on Aerial Images	V.S. Sidorova (Institute of Computational Mathematics and Mathematical Geophysics SB of RAS, Novosibirsk, Russia)
17:00	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)
17:20	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)
17:40	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)

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)

Time	Paper #	Paper Title	Authors
11:40	692-009	Automation of Thermal-Physical Experiment:	A. Nazarov, A. Serov, M. Bodrov, and V. Simakov

		Control of the Spray Pulse Source and Methods of Gas-Droplet Flow Investigation	(Institute of Thermophysics SB of RAS, Novosibirsk, Russia)
12:00	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)
12:20	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)
12:40	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)

13:00 - 14:00 DINNER

14:00	692-028	Automated Control System for Horizontal Solar Telescope of Sayansk Solar Observatory	A.N. Bevzov, V.N. Kotov, A.A. Lubkov, C.A. Lylov, and S.V. Perebeynos (Institute of Automation and Electrometry SB of RAS, Novosibirsk, Russia)
14:20	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)
14:40	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. Karnev, 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. Karnev, 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)

Time	Paper #	Paper Title	Authors
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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)
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)
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Time	Paper #	Paper Title	Authors
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. Goonko¹ and Yu.A. Shkredov² (¹Novosibirsk State Technical University, ²Scientific-manufacturing cooperative "Complex systems", Novosibirsk, Russia)

SOCIAL PROGRAM

TUESDAY, June 15, 2010 House of Scientists

18:30-21:00 Ice-Breaking party