PROGRAM

MONDAY, 31 MAY

8.00 – 9.50 REGISTRATION OF CONFERENCE PARTICIPANTS

10.00 – 10.15 OPENING CEREMONY

SESSION I – INERTIAL SYSTEMS AND SENSORS

Chairmen – **Prof. D.P.Lukianov**, Russia
Prof. J. Sinkiewicz, USA

PLENARY PAPERS

10.15 – 10.35 1. **Ya.A.Nekrasov, V.G. Peshekhonov** (*Concern CSRI Elektropribor, JSC, St. Petersburg,* ***Russia***), **C. Kergueris, P.Pfluger** (*Tronics Microsystems,* ***France***), **A. Elsayed, H. Haddara** (*Si-WareSystems,* ***Egypt***)
Test Results of an *RR*-Type Micromechanical Gyroscope

10.35 – 10.55 2. **S.F. Konovalov, V.P. Podchezertsev, D.V. Mayorov, Yu.A. Ponomarev, A.G. Sidorov** (*Bauman Moscow State Technical University, Moscow,* ***Russia***), **H.W. Park, N.Y. Kwon** (*Pongsan FNS, Nonsan-City,* ***Republic of Korea***), **G.S. Lee, J.B.Seo** (*ADD,* ***Republic of Korea***)
Two-Coordinate Micromechanical Rate Sensor with Magnetoelectric Torques of a Feedback on Channels of Excitation and Measurement

10.55 – 11.15 3. **V.V.Chikovani, Yu.A.Yatsenko** (*INNALABS Holding Inc., Kiev,* ***Ukraine***)
Investigation of Azimuth Accuracy Measurement with Metallic Resonator Coriolis Vibratory Gyroscope
The paper was not presented

11.15 – 11.45 COFFEE BREAK

PLENARY PAPERS

11.45 – 12.05 4. **A. Carre, L. Rosellini, O. Prat** (*Sagem Défense Sécurité, Paris,* ***France***)
HRG and North Finding

12.05 – 12.25 5. **Yu.G.Martynenko** (*Institute of Mechanics of Lomonosov Moscow State University, Moscow, **Russia***), **I.V.Merkuryev**, **V.V Podalkov** (*Moscow Power Engineering Institute (Technical University), Moscow, **Russia***)
Calibration of Parameters of Small Viscoelastic Anisotropy of the Resonator of a Wave Solid-State Gyroscope by the Results of Bench Tests

POSTER PAPERS*

12.25 – 13.00 6. **V.E.Dzhashitov, V.M.Pankratov, M.A.Barulina, A.V.Golikov** (*Precision Mechanics and Control Institute, Russian Academy of Sciences, Saratov, **Russia***)
Prospects for the Development and Creation of Superminiature Micromechanical Multipurpose Sensors of Inertial Information

7. **V.G.Andrejev, V.A.Belokurov, V.I.Galkin, V.N.Gorkin, V.I.Koshelev, A.V.Molchanov, I.S.Kholopov** (*Ryazan State Radioengineering University, Ryazan, **Russia***)
Signal Filtration for Rate Gyro Units

8. **V.B.Nikishin** (JSC «Gazpriboravtomaticaservice», *Saratov, **Russia***), **A.V.Melnikov** (JSC «Geophismash», *Saratov, **Russia***), **V.S.Shorin** (*Saratov State Technical University, Saratov, **Russia***)
Observability of Drift Parameters of a MEMS Inertial Measurement Unit

9. **V.Apostolyuk** (*National Aviation University, Kiev, **Ukraine***)
Demodulated Dynamics and Optimal Filtering for Coriolis Vibratory Gyroscopes
The paper was not presented

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* *The authors of the poster papers **at the plenary session** are given 3 min to present the **main idea** of the paper with 1 or 2 slides, if any; further discussion will continue at the posters.*

10. **M.V. Chirkin, V.Yu. Mishin, D.A. Morozov** (*Ryazan State Radio Engineering University, Ryazan,* ***Russia***),
A.V. Molchanov, M.A. Zakharov (*Moscow Institute of Electromechanics and Automatics,* ***Russia***)
Ring Laser Digital Signal Processing in Evaluating Laser Gyro Characteristics

11. **N.I. Krobka** (*Branch of the Center for Ground-Based Space Infrastructure Facilities Operation "Scientific & Research Institute for Applied Mechanics named after Academician V. I. Kuznetsov", Moscow,* ***Russia***)
Differential Methods for Identification of the Structure of Noises of Fiber-Optical and Other Gyros

12. **N.I. Krobka** (*Branch of the Center for Ground-Based Space Infrastructure Facilities Operation "Scientific & Research Institute for Applied Mechanics named after academician V. I. Kuznetsov", Moscow,* ***Russia***)
The Features of Calibration of Three-Axis Laser Gyros with a Single Vibrator and with a Recessively Rotating Basis (30 and 20 Years Later)

13. **N.B. Vavilova, A.A. Golovan, N.A. Parusnikov, I.Yu. Sazonov** (*Lomonosov Moscow State University, Moscow,* ***Russia***)
Calibration of a Strapdown Inertial Navigation System Using a Low-Accuracy Single Axis Turntable

14. **A.E. Fedorov, D.A. Rekunov** (*Open Society «Ramensky Instrument Engineering Plant», Ramensky, Moscow region,* ***Russia***)
Bench calibration of the inertial measurement unit (IMU) of a strapdown inertial navigation system (SINS) with pitch limited angles

15. **Ye.I. Somov, S.A. Butyrin** *(Research Institute of Mechanical Systems Reliability, Samara State Technical University, Samara,* ***Russia***)
Digital Signal Processing, Calibration and Alignment of a Strapdown Inertial System for Attitude Determination of an Agile Spacecraft

13.00 – 14.00 LUNCH

Chairmen – **Prof. A.V. Nebylov,** Russia
Prof. I.M. Okon, Russia

PLENARY PAPERS

14.00 – 14.20 16. **Ya.I. Binder, A.S. Lysenko, T.V. Paderina, A.N. Fedorovich** (*Concern CSRI Elektropribor, JSC, St. Petersburg, **Russia***)
Continuous Gyro-Inclinometric Survey of Arbitrarily-Oriented Wellbores: Various Circuitry Designs, Problems and Solutions

14.20 – 14.40 17. **N.I. Krobka** (*Branch of the Center for Ground-Based Space Infrastructure Facilities Operation "Scientific & Research Institute for Applied Mechanics named after academician V. I. Kuznetsov", Moscow, **Russia***)
The Concept of Accurate Equations of Errors and Estimations of Quantum Limits of Accuracy of Strapdown Inertial Navigation Systems Based on Laser Gyros, Fiber-Optical Gyros, and Atom Interferometers on de Broglie Waves

POSTER PAPERS*

14.40 – 15.30 18. **Yu.Yu.Broslavets, M.A.Georgieva, A.A.Fomitchev** (*Moscow Institute of Physics and Technology (State University), JSC "Lasex", Dolgoprudny, Moscow region, **Russia***)
Specific Features of Using a Ring Mode-Locked YAG:Cr^{4+} Laser as a Laser Gyroscope

19. **Yu.N. Chelnokov, M.Yu. Loginov** (*Institute of Precision Mechanics and Control, Russian Academy of Sciences, Saratov, **Russia***)
Differential Error Equations for an Aided Strapdown Inertial Navigation System Functioning in the Normal Geographical Reference Frame. Derivation, Analytic Investigation and Simulation Results

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20. **Yu.A. Kuznetsov, S.V.Oleynik, V.A.Demenkov** (*Research Production Enterprise Hartron-Arkos, Kharkov,* ***Ukraine***), **Yu.Plaksiy** (*National Technical University «Kharkov Polytechnic Institute», Kharkov,* ***Ukraine***)
Application of the Models of Rotation for the Error Analysis of Algorithms for Gimballess Inertial Attitude Systems of Moving Objects

21. **H.S. Jung, D.K. Han, T.H. Keem** (*Hanwha Corporation R&D Center, Daejeon,* ***Korea*****)**
Estimation and Correction of Initial Attitude and Inertial Sensor Bias through Transfer Alignment

22. **M.B. Bogdanov, M.B. Danilov, V.V. Saveliev** (*Tula State University, Tula,* ***Russia***)
Results of Exploratory Checkout of a Strapdown Navigation System Based on Fiber Optic Gyroscopes and Force-Rebalanced Accelerometers

23. **L.V. Vodicheva, E.L. Alievskaya, Yu. V. Parysheva** (*Science and Production Association of Automatics, Ekaterinburg,* ***Russia***)
Instrument Errors of a Strapdown Attitude Reference Unit for a Spinning Vehicle: an Estimation Technique and Some Results

24. **Yu.G. Egorov, S.V. Smirnov** (*Bauman Moscow State Technical University, Moscow,* ***Russia***)
The Synthesis of Parameter Setting Algorithms in the Adaptive Correction System of the Radio Telescope Inertial Orientation System

25. **V.V. Pchelin, A.V. Uskov, B.L. Sharygin** (*Concern CSRI Elektropribor, JSC, St. Petersburg,* ***Russia****)*
Navigational Support for the Ship-Based Helicopter Flights Using Gyro Technologies

26. **V.Ja. Raspopov, S.E. Tovkach, A.P. Shvedov** (*GOUVPO Tula State University,* ***Russia***), **P.P. Paramonov, Ju.I. Sabo** (*FGUP OKB "Electroautomatics" of P.A.Yefimov, St. Petersburg,* ***Russia***)
Verticals for Unmanned Aerial Vehicle of Different Functions

27. **B.V. Gryazev, V.V.Savel'ev, V.A.Smirnov** (*Tula State University, Tula,* ***Russia*****)**
Sight Line Stabilization System Compensating Linear Shifting Movement of the Vehicle

28. **V.M. Nikiforov, S.A. Zaitsev, A.S. Shiryaev** (*Federal State Unitary Enterprise "N.A.Pilyugin Scientific and Development Centre", Moscow,* ***Russia***), **E.V.Piskulin, E.A.Schedrin** (*Seprukhov Military Institute of Missile Forces, Serpukhov, Moscow Region,* ***Russia***)
System Theoretic Approach to the Development of Motion Control Technical Systems
The paper was not presented

29. **N.M. Bespalova, V.A. Zhezlov** (*Federal State Unitary Enterprise «N. A. Pilyugin Scientific and Development Centre», Moscow,* ***Russia***)
Motion Model of Gyrostabilizers in the Conditions of External Pitch Axis Nonhorizontal Orientation

30. **N.B. Vavilova, A.A. Golovan, A.A. Panyov** (*Laboratory of Navigation and Control, Lomonosov Moscow State University, Moscow* ***Russia***), **A.V. Konon, A.A. Laptiev** (*JSC NGKS, Lukhovits,* ***Russia***)
Development and Testing of the Navigation Algorithms Elaborated for Pipeline Inspection Systems

31. **M.B. Bogdanov, M.B. Danilov, V.V. Saveliev** (*Tula State University, Tula,* ***Russia****)*
Gyroscope-Free Method of Analytical Construction of the Plumb-Line under the Conditions of Intensive Maneuvering of a Vehicle

32. **D.M. Kalihman, L.Ya. Kalihman, Yu.V. Sadomtsev, A.V. Polushkin, E.A. Deputatova, R.V. Ermakov, S.F. Nahov** (*PC "KORPUS", a branch of FSUE N.A. Pilyugin "NPCAP", Saratov,* ***Russia***), **L.A.Izmailov, A.V.Molchanov** (*Moscow Institute of Electromechanics and Automatics, PLC,* ***Russia***), **M.V. Chirkin (***Ryazan State University,* ***Russia***)
Multi-Purpose Precision Test Simulator with a Digital Control System for Testing Rate Gyroscopes of Different Types

15.30 – 16.00 COFFEE BREAK

SESSION II – INTEGRATED SYSTEMS

Chairmen – **Dr. Yu.A. Litmanovich**, Russia
Prof. A.V. Zbrutsky, Ukraine

PLENARY PAPERS

16.00 – 16.20 33. **Donald E. Swihart** *(Air Force Research Laboratory, **U.S.A.**)*, **Arthur F. Barfield** (*Infoscitex Corp, **U.S.A.***), **Edward M. Griffin, Richard C. Lehmann, Shawn C. Whitcomb, Billie Flynn** (*Lockheed Martin Aeronautics Co., **U.S.A.***), **Mark A. Skoog** (*NASA Dryden Flight Research Center, **U.S.A.***), **Kevin E. Processor** (*Calspan Corporation, **USA***)
Design, Integration and Flight Test of an Automatic Ground Collision Avoidance System

16.20 – 16.40 34. **G.V. Antsev, A.A. Makarenko, V.A. Sarychev, L.S. Tournetsky** (*Joint-Stock Company «Radar mms», St. Petersburg, **Russia***)
A Software System of a Simulation Model of a Landing System for an Unmanned Aerial Vehicle

17.00 – 21.00 SIGHT-SEEING GUIDED BUS TOUR OF SAINT PETERSBURG

TUESDAY, 1 JUNE

SESSION II – INTEGRATED SYSTEMS
(*Continued*)

Chairmen – **Dr. B.S. Rivkin**, Russia
Mr. L. Camberlein, France

PLENARY PAPERS

9.00 – 9.20 35. **E.V. Karshakov** (*V.A.Trapeznikov Institute of Control Sciences RAS, Moscow, **Russia***)
Attitude System Corrected by Accelerations Calculated Using Satellite Navigation System Phase Measurements in Standard Mode

9.20 – 9.40 36. **A. Maier, S. Kiesel, G.F. Trommer** (*KIT – Institute of Systems Optimization, Karlsruhe,* ***Germany***)
Performance Analysis of Federated Filter for SAR/TRN/GPS/INS Integration

9.40 – 10.00 37. **V.B. Nikishin**, **A.I. Sinev** (*CJSC «Gaspriboravtomatikaservice», Saratov,* ***Russia***),
P.K. Plotnikov, **S.G. Naumov** (*Saratov State Technical University, Saratov,* ***Russia***)
Accuracy Improvement of Underground Navigation on the Basis of Integration of SINS, Odometers and GPS/GLONASS Receivers

10.00 – 10.20 38. **D.-H. Hwang, D.W. Lim, S.L. Cho, S. J. Lee (***Department of Electronics Engineering, Chungnam National University, Daejeon,* ***Korea***)
A Unified Approach to the Ultra-Tightly Coupled GPS/INS Integrated Navigation System

POSTER PAPERS*

10.20 – 11.00 39. **L.N. Belskii, V.D. Gokhfeld** (*FSUE "Academician N.A. Semikhatov Scientific and Production Association of automatics", Ekaterinburg,* ***Russia***), **V.A.Kapitonov** (*State Scientific and Production Space-Rocket Centre "TSSKB-PROGRESS", Samara,* ***Russia***), **V.M.Kutovoi, S.Ju.Perepelkina, A.A.Fedotov** (*FSUE "Academician N.A. Semikhatov Scientific and Production Association of automatics", Ekaterinburg,* ***Russia***)
Construction of a Navigation Device Prototype Model on the Basis of a Strapdown Inertial Unit, Satellite Navigation Equipment and Computing Device

40. **E.G. Kharin, I.A. Kopylov, V.A. Kopelovich, E.V. Klabukov** (*M.M.Gromov FRI, Moscow,* ***Russia***)
On-Board and Ground-Based Algorithms for the Integrated Processing of Inertial and Radionavigation Systems Data: Analysis and Working out Based on the Flight Test Data

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41. **H.O. Aro** (*National Space Research and Development Agency, Obasanjo Space Centre, FCT* ***Nigeria***)
Development of a Low-Cost Integrated Navigation System for Sounding Rocket

42. **Hamza Benzerrouk**, **Alexander Nebylov** (*International Institute for Advanced Aerospace technologies of St. Petersburg State University of Aerospace Instrumentation, Saint Petersburg,* ***Russia***)
Integrated Navigation System INS/GNSS Based on Joint Application of Robust Adaptive Linear and Nonlinear Filtering

43. **A.V.Prohortsov, V.V.Saveliev, A.A.Chepurin** (*Tula State University, Tula,* ***Russia***)
A Method for Eliminating Simulative Jams of a Satellite Navigation System by Using Information from a Strapdown System

44. **Syed Zahid Jamal** (*Institute of Space Technology, Karachi,* ***Pakistan****)*
Architecture and Performance Analysis of Tightly Coupled GPS/INS Integrated Navigation System for Airborne Applications

45. **K.K. Veremeenko, D.A. Antonov, M.V. Zharkov, R.Yu. Zimin** (*Moscow Aviation Institute (State Technical University), Moscow,* ***Russia***), **A.Yu. Chernodubov** (*Transas-Telematika Ltd, Moscow,* ***Russia***)
Small-Sized Integrated Navigation System

11.00 – 11.30 COFFEE BREAK

Chairmen – **Dr. A.V. Sokolov,** Russia
Mr. L. Camberlein, France

PLENARY PAPERS

11.30 – 11.50 46. **A.V. Chernodarov, A.P. Patrikeev, Ju.N. Korkishko, V.A. Fedorov** *(RPC "OPTOLINK" Ltd, Moscow,* ***Russia****)*, **S.E. Perelyaev** *(Moscow Institute of Electromechanics and Automatics, Moscow,* ***Russia****)*
Half-Scale Development of the Mathematical Software Support for the SINS-500 Inertial Satellite Navigation System Built Around Fiber-Optic Gyros

11.50 – 12.10 47. **Halil Ersin Söken, Chingiz Hajiyev** (*Istanbul Technical University, **Turkey***)
UKF Based In-Flight Calibration of Magnetometers and Rate Gyros for Pico Satellite Attitude Determination

12.10 – 12.30 48. **O.O. Barabanov, V.B. Moiseyenko** (*Degtyarev Kovrov State Technological Academy, Vladimir region, Kovrov, **Russia***)
Theoretical and Experimental Comparison of Some Ways of Mobile Track Robot Autonomous Navigation

POSTER PAPERS*

12.30 – 13.00 49. **A.N. Gora, V.I. Kortunov** (*National space university of N.E.Zhukovsky "KhAI", Kharkov, **Ukraine***)
Global System of Transfer of the Flight Data on the Basis of the Satellite Communication Channel
The paper was not presented

50. **V.V. Popovich, S.M.Vanurin, S.A. Kokh, V.V. Kuzionnyy** (*St. Petersburg Institute for Informatics and Automation of RAS, St. Petersburg, **Russia***)
Intellectual Geographic Information System for Navigation Safety

51. **Lucjan Gucma, Andrzej Bak, Maciej Gucma, Stefan Jankowski, Pawel Zalewski** (*Marine Traffic Engineering Institute, Maritime University of Szczecin, **Poland***), **Marko Perkovic** (*University of Lubljiana, **Slovenia**, EU Joint Research Center, Milano, **Italy***)
Laser Docking System Integrated with Pilot Navigation Support System. Background to High Precision, Fast and Reliable Vessel Docking

52. **A.M. Aleshechkin** *(Institute of Engineering Physics and Radio Electronics of Siberian Federal University, Krasnoyarsk, **Russia**)*
Accounting for Signal Travel Speed in Maritime Radiopositioning

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53. **V.V. Bartenev, S.F. Yatsun** (*Kursk State Technical University, Kursk, **Russia**)*
Motion Control of Mobile Wheeled Robots Based on the Signal of Optron Matrix
The paper was not presented

54. **K.A.Pupkov, A.D.Ustyuzshanin** (*Bauman Moscow State Technical University, **Russia***)
Optimization of Man-Machine Interaction for Spacecraft Control

55. **Kunle Fashade (***Center for Space Transport and Propolsion, Epe, Lagos State, **Nigeria*****), Adetoro Lanre** (*National Space Research and Development Agency, Abuja, Nigeria, Obasanjo Space Center, Abuja, **Nigeria)***
Transfer Orbit Trajectory Controller Design for a Typical Spacecraft Launching from Nigeria

56. **A.S. Galkina A.I. Manturov, V.E. Yurin** (*State Research and Production Space-Rocket Center "TsSKB-Progress", Samara, **Russia***)
Estimation of Remote Sensing Satellite Attitude Control for Curvilinear Swaths

57. **V.V.Voronov** (*R.E.T.Kronshtadt, ZAO, Moscow, **Russia***), **G.V.Trubnikov** (*CJSC Transas, St.Petersburg, **Russia***)
The Common Requirement Specification for the UAY Navigation Systems

58. **N.A. Dyadkov** (*Ural State Technical University, Ekaterinburg, **Russia***), **A.P. Panfilov, V.G. Osipov, A.L.Eisymont, D.E. Kosorukov (***JSC Research Center "Module", Moscow, **Russia*****)**
Implementation of a Digital Unified Program Receiver SoC for Integrated Navigation and Traffic Control Systems

13.00 – 14.00 L U N C H

Chairmen – **Prof. I.M. Okon,** Russia
Prof. J. Sinkiewicz, USA

PLENARY PAPERS

14.00 – 14.20 59. **Pavel Davidson, Jussi Collin, Jarmo Takala** (*Tampere University of Technology, **Finland***)
Application of Particle Filters to Map-Matching Algorithm

14.20 – 14.40 60. **I.V. Belokonov, M.V. Bondar**, **I.A. Kudriavtsev** (*Samara State Aerospace University, Samara, **Russia***)
Problems of Navigational Tracking of Tether System Deployment by an Example of Experiment YES2 on the Space Vehicle "Foton-M3"

14.40 – 15.00 61. **George Dekoulis** (*Department of Computer Science and Engineering, Frederick Research Centre, Frederick University, Nicosia, **Cyprus***)
Intelligent Navigation Strategies for Unattended Flight
The paper was not presented

POSTER PAPERS*

15.00 – 15.25 62. **S.B.Berkovich, N.I.Kotov, A.V.Sholokhov, A.Yu.Makhayev, E.G.Leiba** (*IRSI "Institute of Engineering Physics", Serpukhov, Moscow region, **Russia***), **V.A.Liventsev** (*Academician N.A.Pilyugin Scientific-Production Center of Automatics and Instrument-Making (PSPC), Moscow, **Russia***)
Mobile Azimuth Keeping System Using Digital Map of Road

63. **E.A. Mikrin, A.V. Bogachev, V.N. Platonov, A.V. Sumarokov, V.P. Shiryaev** (*RSC «Energia» JSC, Korolyov, Moscow region, **Russia***)
Effects of Reaction Wheel Rotor Unbalances on Microaccelerations Onboard an Advanced SC

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64. **Hamza Benzerrouk**, **A.V. Nebylov**, **G.B. Yatsevitch** (*International Institute for Advanced Aerospace Technologies of St.Petersburg State University of Aerospace Instrumentation, St. Petersburg, **Russia***)
Original Integrated Navigation System GNSS Tracker/Electronic Compass for Localization and Navigation of Blind People in a City

65. **V.A.Soldatenkov, Yu.K.Gruzevich, M.A.Lisov, V.M.Achildiev, P.F.Zorin, A.D.Levkovich** (*«Scientific Production Unity GEOPHIZIKA-NV» Stock Company, Moscow, **Russia***)
Optoelectronic Device for Determining the Geographical Coordinates of a Remote Object with a Micromechanical Strapdown Navigation System

66. **A.I. Sdvizhkov, A.I. Golubev,V.V. Matakhin, A.L. Slavsky** (*FSUE "ARSRI "Signal", Kovrov, Vladimir Region, **Russia***)
On the Issue of the Construction Principles and Results of Experimental Adjustment of a Contactless Radar Ground Vehicle Speed Meter in Different Operating Conditions

67. **I. G. Grebnev, A.V. Kornilov, D.V. Svyazhin** (*Arzamas Research & Production Enterprise "TEMP-AVIA" JSC, Arzamas, Nizhniy Novgorod Region, **Russia***)
Two-Axis Magnetometer Compass Calibration Procedures

68. **V.S.Lobanov, N.V. Tarasenko, V.A.Tkachenko, D.N.Shulga, V.N.Zboroshenko,** *(FSUE Central Scientific Research Institute of Machine Building (TsNIImash), Korolyov, Moscow region, **Russia**)*
Precision Orientation and Stabilization system for the Advanced Astrophysical SV

15.25 – 15.55 COFFEE BREAK

Chairmen – **Dr. Yu.A. Litmanovich**, Russia
Prof. A.V. Zbrutsky, Ukraine

PLENARY PAPERS

15.55 – 16.15 69. **A.Azenha, L.Peneda, A.Carvalho** (*Institute for Systems and Robotics, Faculty of Engineering, University of Porto**, Portugal***)
Accuracy Improvement of Indoors Localization with Radio Signal Strength Measurements

16.15 – 16.35 70. **E.A. Mikrin, M.V. Mikhailov, S.N. Rozhkov** (*Energia RSC, Korolyov, Moscow Region, **Russia**)*
Autonomous Navigation and Rendezvous of SC in a Lunar Orbit

16.35 – 16.55 71. **Agustin Cozzetti, Riccardo Scopigno** (*Istituto Superiore Mario Boella, Torino, **Italy***), **Letizia LoPresti** (*Politecnico di Torino, Torino, **Italy***)
Architectures for the Integration of GNSS Receiver and Vanet Transceiver: Potential Benefits of Tight-Coupled Architectures

16.55 – 17.15 72. **V.D.Dishel** (*Academician N.A. Pilyugin Scientific-Production Center of Automatics and Instrument-Making (PSPC), Moscow, **Russia***)
The World's First Application of Satellite Navigation in GNC Systems for Space Launch Vehicles

POSTER PAPERS*

17.15 – 17.40 73. **O.A. Stepanov, A.B. Toropov** (*Concern CSRI Elektropribor, JSC, St. Petersburg, **Russia***)
Comparison of Point Mass and Particle Filters in Map-Aided Navigation

74. **M.A. Basarab** (*Bauman Moscow State Technical University, **Russia***)
Spherical Approximation of Telemetry Information by Cumulative Quaternion Bases

75. **O.S. Amosov** (*Amur State University of Humanities and Pedagogy, Komsomolsk-on-Amur, **Russia***)
Optimal Estimation by Using Regression and Wavelets

76. **G.P. Losev** (*FSUE "Academician N.A. Semikhatov Scientific and Production Association of Automatics", Ekaterinburg, **Russia***)
Possible Methods for Qualitative Improvement of Precision Characteristics of Systems for Controlling Motion Paths of Ships, Missiles, Aircrafts and Other Vehicles

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77. **Yu.P. Ivanov** (*State University of Aerospace Instrumentation, **Russia***)
Universal Algorithm of Adaptive Optimal-Invariant Signal Filtering

78. **Yu.P. Ivanov, Vladimir G. Nikitin** (*State University of Aerospace Instrumentation, St. Petersburg, **Russia***)
Complex Optimal-Invariant Inertial Signal Processing with Consideration for Failures of Measuring Devices

79. **A.I. Diveev** (*Institution of Russian Academy of Sciences Dorodnicyn Computing Centre of RAS, Moscow, **Russia***), **K.A. Pupkov** (*Bauman Moscow State Technical University, **Russia***), **E.A. Sofronova** (*Peoples' Friendship University of Russia, Moscow, **Russia***)
Quality Improvement of Control Systems by Multi-Objective Synthesis Using the Network Operator Method
The paper was not presented

18.30 – 22.00 BANQUET

WEDNESDAY, 2 JUNE

SESSION II – INTEGRATED SYSTEMS
(Continued)

Chairmen – **Prof. A.V. Nebylov**, Russia
Prof. I.M. Okon, Russia

PLENARY PAPERS

9.30 – 9.50 80. **R.N.Akhmetov, V.P. Makarov, A.V. Sollogub** (*Samara Space Centre TsSKB-Progress, **Russia***)
Survivability Control Techniques of Low-Orbiting Earth Remote Sensing Unmanned Spacecraft

9.50 – 10.10 81. **S. Shiotani** (*Kobe University, Organization of Advanced Science and Technology, Kobe, **Japan***)
On Simulation of Numerical Navigation for a Ship under Effects of Weather

SESSION III – SATELLITE SYSTEMS

Chairmen – **Dr. O.A. Stepanov**, Russia
Dr. B.V. Shebshaevich, Russia

PLENARY PAPERS

10.10 – 10.30 82. **N.V.Mikhailov, M.V.Vasilev** (*MStar Semiconductor, St.-Petersburg, **Russia***), **V.F.Mikhailov** (*St. Petersburg State University of Aerospace Instrumentation, St.-Petersburg, **Russia***)
Autonomous Satellite Orbit Determination Using Spaceborne GNSS Receivers

10.30 – 10.50 83. **N.V. Mikhailov, A.V.Nikandrov** (*«MStar Semiconductor», Russian Office, St. Petersburg, **Russia***), **V.F. Mikhailov** (*St. Petersburg State University of Aerospace Instrumentation, St. Petersburg, **Russia***)
Multipath Identification and Mitigation in GNSS Receivers Using Cluster Analysis Methods

POSTER PAPERS*

10.50 – 11.30 84. **V.G. Valeev, I.N. Kornilov, S.I. Kudinov** (*The Urals State Technical University-UPI, Ekaterinburg, **Russia***)
Method to Increase Noise Immunity for User Satellite Radionavigation System (SRNS)

85. **L.P. Barabanova** (*Degtyarev Kovrov State Technological Academy, Kovrov, Vladimir region, **Russia***)
The Lower Bounds for the Geometrical Factors of the Global Navigation Satellite System

86. **Ki-Yeol Seo, Sang-Hyun Park, Won-Seok Jang, Deuk-Jae Cho (***GNSS Research Center, Korea Ocean Research & Development Institute (KORDI), Daejeon, **Korea***)
Design of Software DGNSS Reference Station and Integrity Monitor for Maritime Service

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* *The authors of the poster papers **at the plenary session** are given 3 min to present the **main idea** of the paper with 1 or 2 slides, if any; further discussion will continue at the posters.*

87. **V.V. Konin, A.S. Pogurelsky** (*National Aviation University, Kiev, **Ukraine***)
Development of GLONASS Signal Processing Software

88. **V.I. Baburov, N.V. Ivantsevich, O.I. Sauta** (*Branch Office Open Joint Stock Company «AUSRIRE» «AUSRIRE-Navigator», St. Petersburg, **Russia***)
Criteria of Preferences in the Problem of the Choice of the Satellite Receiver for the Navigation and Landing Complex

89. **N.V. Mikhailov, A.L. Botchkovsky, V.V.Chistyakov** *(«Mstar Semiconductor», Russian Office, St. Petersburg, **Russia**),* **V.F. Mikhailov** *(St. Petersburg State University of Aerospace Instrumentation, St. Petersburg, **Russia**)*
Multi-Peak Processing of GNSS Signals for Strong Multipath Environment

11.30 – 12.00 COFFEE BREAK

PLENARY PAPERS

12.00 – 12.20 90. **Pavel Kovář, Petr Kačmařík, František Vejražka** (*Department of Radio Engineering, Faculty of Electrical Engineering, Czech Technical University in Prague, Prague, **Czech Republic***)
Interoperable GPS, GLONASS and Galileo Software Receiver

12.20 – 12.40 91. **N.V. Mikhailov, S.S. Pospelov, M.V. Vasilyev, V.V. Chistyakov** (*«MStar Semiconductor», Russian Office, St.Petersburg, **Russia***), **N.V. Vasilyeva** (*Branch Office Open Joint Stock Company «AUSRIRE» «AUSRIRE-Navigator»,* (*«MStar Semiconductor», Russian Office, St. Petersburg, **Russia***)
Method of Fast First Fix Using Low Cost GNSS Receiver

12.40 – 13.00 CLOSING CEREMONY

13.00 – 14.00 LUNCH