



**15th Saint Petersburg International Conference
on Integrated Navigation Systems
26 – 28 May 2008, Russia**

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PRELIMINARY PROGRAM *

MONDAY, 26 MAY

8.00 – 9.50 REGISTRATION OF CONFERENCE PARTICIPANTS

10.00 – 10.15 **OPENING CEREMONY**

SESSION I – INERTIAL SYSTEMS AND SENSORS

PLENARY PAPERS

- 10.15 – 10.35 1. **V.G. Peshekhonov, L.P. Nesenyuk, D.G. Gryazin, B.A. Blazhnov, 1481**
Ya.A. Nekrasov, V.D. Aksenenko, M.I. Yevstifeyev
(Federal State Unitary Enterprise Central Scientific and Research Institute (CSRI) Elektropribor, Saint Petersburg, Russia)
Inertial Modules on Micromechanical Sensors. Development and Tests Results
- 10.35 – 10.55 2. **V.B. Nikishin, A.I. Sinev, P.G. Chigirev, A.V. Melnikov, A.V. Ulyanov, 1791**
V.Yu. Burov, A.A. Kopicheva (JSC Gaspriboravtomatikaservice, Saratov, Russia)
The Application of the Inertial Micromechanical Module, Intended for the Measuring of Main Pipelines Parameters

POSTER PAPERS **

- 10.55 – 11.15 3. **O.M. Lysova, T.G. Nesterenko, I.V. Plotnikova (Tomsk Polytechnic 1451**
University, Tomsk, Russia)
The Analysis of Technological Errors of Micromechanical Gyroscopes
- 1541 4. **Michael Warden (Acutronic, Switzerland)**
A High Bandwidth, Short Stroke Rotary Shaker for MEMS Testing
- 2061 5. **A.S. Barabashov, I.S. Mykolishyn, Yu.A. Yatsenko (Innalabs UA, Kyiv, 1541**
Ukraine)
Sensing Element Parameters Optimization for Coriolis Vibrating Gyro Accuracy Increasing

* The Conference Program Committee reserves the right to make alterations to the final Conference Program.

** The authors of poster papers present 1-2 slides within 3 minutes at the plenary session; the discussion will be continued at the posters.

- 2151 6. **V.V. Chikovani, Yu.A. Yatsenko, A.S. Barabashov, P.I. Marusyk** (*INNALABS Holding Inc., Kiev, Ukraine*)
Improved Accuracy Metallic Resonator CVG
- 1511 7. **B.S. Lunin** (*M.V.Lomonosov Moscow State University, Moscow, Russia*),
M.Yu. Shatalov (*Sensor Science and Technology (SST) of CSIR Material
Science and Manufacturing (MSM), Tshwane University of Technology,
Pretoria, South Africa*)
Balancing of Thin-Walled Metal Resonators for Low-Cost Solid-State
Gyroscopes
- 1851 8. **A.B. Gavrilenko, I.V. Merkuruyev, V.V. Podalkov** (*Moscow Power
Engineering Institute (Technical university), Moscow, Russia*)
Algorithms of Wave Solid-State Gyroscopes Resonator Oscillations Control

11.15 – 11.45 COFFEE BREAK

PLENARY PAPERS

- 11.45 – 12.05 9. **I.V. Popova, A.A. Semenov, A.M. Lestev, V.A. Burtsev, O.I. Rakityanski,**
2121 **V.A. Ivanov** (*Joint-stock company GYROOPTICS Ltd., St. Petersburg, Russia*)
Encapsulated Micromechanical Gyros and Accelerometers for Digital Navigation
and Control Systems
- 12.05 – 12.25 10. **V.Ya. Raspopov, V.V. Matveev** (*Tula State University, Tula, Russia*)
2031 Onboard Information-Operating Systems on Micromechanical Sensitive
Elements for Pilotless Flying Devices of Various Purpose

POSTER PAPERS *

- 12.25 – 13.00 11. **Yu.N. Korkishko, V.A. Fedorov** (*RPC OPTOLINK Ltd, Moscow, Zelenograd,*
1651 *Russia*), **A.V. Chernodarov, A.P. Patrikeev** (*Zhukovsky Air Force Engineering
Academy, Moscow, Russia*), **S.E. Perelyaev** (*Moscow Institute of Electromechanics
and Automatics, Moscow, Russia*)
Multilevel Processing of Fiber-Optic-Gyro Signals in Strapdown Inertial
Navigation Systems
- 2211 12. **B.K. Syvyakov, Yu.P. Slapovskaya** (*Saratov State Technical University,*
Saratov, Russia)
Simulation of Microwave Pulse Resonance Gyroscopes with Active Circle
Resonator
- 1931 13. **G. Eduardo Sandoval-Romero, Salvador Palma-Vargas, Angélica Ramírez-**
Ibarra (*Centro de Ciencias Aplicadas y Desarrollo Tecnológico, Universidad
Nacional Autónoma de México, México*)
Improvement for Basic Sagnac's Interferometers Response
- 1431 14. **S.N. Podkorytov, S.Yu. Kolomiyytsev** (*PC NIIREK H/C Leninetz, Saint
Petersburg, Russia*)
Algorithmic Compensation for Laser Gyro Drift

* The authors of poster papers present 1-2 slides within 3 minutes at the plenary session; the discussion will be continued at the posters.

- 1641 15. **S.M. Yakoushin** (*Perm State Technical University, Perm, **Russia***)
Multiple Mode Strapdown Autonomous Marine Gyrocompass on Fiber Optic Gyros
- 1701 16. **A.A. Fomichev, A.B. Kolchev, P.V. Larionov, V.B. Uspensky** (*JSC Lasex, Moscow region, Dolgoprudny, **Russia***)
Spline Model of a Laser Gyro Temperature Drift
- 1811 17. **I.A. Vasin** (*Ryazan State University, Ryazan, **Russia***), **A.V. Molchanov** (*Moscow Institute of Electromechanics and Automatics, Moscow, **Russia***), **D.A. Morozov, M.V. Chirkin** (*Ryazan State University, Ryazan, **Russia***)
Technical Fluctuations in a Ring Cavity and Error Analysis for a Laser Gyro
- 1861 18. **A.V. Derevyankin, A.I. Matasov** (*Moscow Lomonosov State University, Moscow, **Russia***)
On the Theory for the Calibration of Accelerometers
- 1941 19. **S.A. Yasuykov** (*Bauman Moscow State Technical University, Moscow, **Russia***)
On Factors Influencing Stability of Rotary Centering of Electrostatic Suspension
- 1201 20. **V.E. Dzhashitov, V.M. Pankratov, A.V. Golikov** (*Precision Mechanics and Control Institute, Russian Academy of Sciences, Saratov, **Russia***)
Computer Lectures on the Applied Theory of Gyros on the Basis of Materials of I-XIV International Conferences on Integrated Navigation Systems

13.00 – 14.00 LUNCH

PLENARY PAPERS

- 14.00 – 14.20 21. **Thomas Kluegel** (*BKG, Koetzing, **Germany***), **Ulrich Schreiber** (*TU Muenchen, Koetzing, **Germany***), **Sven Voigt** (*LITEF GmbH, Freiburg, **Germany***), **Alexander Velikoseltsev** (*TU Muenchen, Koetzing, **Germany***)
1751
Sagnac Interferometry for the Determination of Rotations in Geodesy and Seismology
- 14.20 – 14.40 22. **Yu.N. Korkishko, V.A. Fedorov, V.E. Prilutsky, V.G. Ponomarev** (*LPC Optolink Ltd., Zelenograd, Moscow, **Russia***), **P.K. Plotnikov, A.V. Mikheyev** (*Saratov State Technical University, **Russia***)
1401
Experimental FOG and Accelerometers Studies through Analysis of Their Parameters and Utilizing Results for SINS Errors Prediction

POSTER PAPERS *

- 14.40 – 15.20 23. **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***)
1461

* The authors of poster papers present 1-2 slides within 3 minutes at the plenary session; the discussion will be continued at the posters.

The Features of the Strapdown Inertial Orientation Systems Based on Three-Axis Fiber-Optic Gyros with one Common Light Source

- 1491 24. **Yu.G. Egorov, S.V. Smirnov** (*Bauman Moscow State Technical University, Moscow, Russia*)
Parameters Identification of Inertial Orientation System of Radio Telescope
- 1471 25. **Obaid Ur Rehman, Khalid Ishaq, Maqbool Ahmad** (*Institute of Space Technology, Karachi, Pakistan*)
Using Navigation Sensors for Self Alignment
- 1371 26. **Saman Mukhtar Siddiqui, Khalid Ishaq, Maqbool Ahmad** (*Institute of Space Technology, Karachi, Pakistan*)
Novel Integration of Sensors for Inertial Navigation System
- 1521 27. **A.A. Gusev, F.I. Makarchenko** (*Federal State Unitary Enterprise SPC AIM named after acad. N.A. Pilyugin, Moscow, Russia*)
Determination of Strapdown Inertial Unit Initial Alignment
- 1571 28. **Ye.I. Somov** (*Samara Scientific Center, Russian Academy of Sciences, Samara, Russia*), **S. Butyrin, V.K. Skirmunt** (*SRP Space-Rocket Center TsSKB-Progress, Samara, Russia*)
In-flight Alignment Calibration of a Space Telescope and a Star Tracker Cluster
- 1691 29. **L.V. Vodicheva, O.I. Maslova** (*Science and Production Association of Automatics, Yekaterinburg, Russia*)
An Impact of Sensor Bandwidth on the Accuracy of Orientation in Strapdown Inertial Systems
- 1891 30. **Mehdi Zamanian, Jafar Ghaisari, Farid Sheikholeslam** (*Isfahan University of Technology, Isfahan, Iran*)
Development of an INS Algorithm in Phi-Angle Approach for Large Attitude Errors
- 2001 31. **Mehdi Zamanian, Jafar Ghaisari, Farid Sheikholeslam, Niloofar Lavaei** (*Isfahan University of Technology, Isfahan, Iran*)
An Error Analysis Method Based on the Romberg Numerical Integration for Strapdown INS
- 1781 32. **N.N. Kokoshkin, E.I. Verzunov, D.A. Burov, V.N. Pheophanov** (*Federal State Unitary Enterprise "All-Russian Scientific Research Institute Signal, Kovrov, Vladimir region, Russia*)
Application of Basic Gyroscopic Structural Elements for the Development of a Gamut of Gyroscopes for Ground Mobile Objects
- 1991 33. **M.B. Bogdanov, A.V. Prohortsov, V.V. Saveliev, V.A. Smirnov, A.A. Chepurin** (*Tula State University, Tula, Russia*)
An Investigation of Strapdown System Errors Caused by Oscillations of the Vehicle

- 3341 34. **A.A. Dovbeshko, I.V. Maximov, V.V. Muravev, I.V. Rassooha, P.M. Rudenko** (*National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnical Institute, Kiev, Ukraine*)
Four-Frequency Laser Gyroscope with Linearly Polarized Counter-propagated Waves in the Non-planar Cavity

15.20 – 15.50 COFFEE BREAK

PLENARY PAPERS

- 15.50 – 16.10 35. **Yu.Yu. Broslavets, M.A. Georgieva, A.A. Fomitchev** (*Moscow Institute of Physics and Technology (State University), JSC Lasex, Dolgoprudny, Moscow region, Russia*)
1801
The Opportunity of Construction the Solid-State Laser Gyros on the Basis of a Ring Wavelength-tunable Laser on YAG:Cr⁴⁺

- 16.10 – 16.30 36. **Yu.A. Vinokurov, Yu.D. Golyaev, V.G. Dmitriev, Yu.Yu. Kolbas, N.V. Tikhmenev** (*Research & Development Institute Polyus named after M.F.Stelmakh, Moscow, Russia*)
1621
Three-axes Laser Zeeman Gyroscope with Increased Accuracy

17.00 – 21.00 SIGHT-SEEING GUIDED BUS TOUR OF ST. PETERSBURG

TUESDAY, 27 MAY

SESSION I – INERTIAL SYSTEMS AND SENSORS
(Continued)

PLENARY PAPERS

- 9.00 – 9.20 37. **B.E. Landau, S.S. Gurevich, G.I. Yemeliantssev, S.L. Levin, S.G. Romanenko, B.V. Odintsov** (*Federal State Unitary Enterprise Central Scientific and Research Institute (CSRI) Elektropribor, Saint Petersburg, Russia*)
1381
Calibration of Electrostatic Gyros in a Strapdown Inertial Attitude Reference System for Orbital Spacecrafts
- 9.20 – 9.40 38. **Jan Rohac, Michal Reinstein** (*CTU in Prague, Faculty of Electrical Engineering Technicka, Prague, Czech Republic*)
1631
Untraditional Approach to the Attitude Estimation in Low-cost Systems
- 9.40 – 10.00 39. **Ya.I. Binder, T.V. Paderina, V.G. Rozentsvein**
1351
(*Federal State Unitary Enterprise Central Scientific and Research Institute (CSRI) Elektropribor, Saint Petersburg, Russia*)
High-efficiency Precision Inclinometric Survey of Small-diameter Boreholes. The Results of Practical Implementation
- 10.00 – 10.20 40. **E.A. Izmailov, S.N. Lepe, A.V. Molchanov, E.F. Polikovskiy** (*The Moscow Institute of Electromechanics and Automation, Moscow, Russia*)
1241
Adjustment of Strapdown Inertial Navigation Systems (SINS) Using Scalar Methods of Measurements

POSTER PAPERS*

- 10.20 – 10.50 41. **Pedro Roquette, Renato Durão** (*Brazilian Navy Research Institute – IpqM, Rio de Janeiro, Brazil*), **Jonas Pinto** (*Brazilian Army Engineering Institute - IME, Rio de Janeiro, Brazil*)
2511 Software Support for Development of Inertial Sensors and Specification of INS
- 1601 42. **Yu.V. Chebotarevskiy, P.K. Plotnikov, Yu.A. Zakharov** (*Saratov State Technical University, Saratov, Russia*)
Identification and Compensation of Effect of Frictional Forces Moments (Represented by Predisplacement Models) in Signals of Gyroscopic Instruments
- 2171 43. **M.A. Shavrina, S.A. Zaitcev, V.M. Nikiforov, G.N. Rumjantcev** (*Pilyugin Scientific-Production Center of Automatics and Instrument-Making, Moscow, Russia*)
Construction of Mathematical Model of Three-axis Gyro-stabilized Platform
- 1361 44. **V.M. Nikiforov, A.I. Sapozhnikov, M.A. Shavrina** (*Pilyugin Scientific-Production Center of Automatics and Instrument-Making, Moscow, Russia*)
Research of Influence of Parametrical Instability Gyro-stabilized Platform on Terminal Control
- 1561 45. **Ye.I. Somov** (*Samara Scientific Center, Russian Academy of Sciences, Samara, Russia*)
Optimization of the Gyromoment Guidance and Attitude Control Laws for the Land-surving Spacecraft
- 2041 46. **V.A. Smirnov** (*Tula State University, Tula, Russia*)
The Downsize System of Stabilization and Guidance a Line of Sight and Its Dynamics Feature
- 1221 47. **D. M. Kalihman, L. Ya. Kalihman, Yu.V. Sadomtsev, A.V. Polushkin, E.A. Deputatova, R.V. Ermakov, S.F. Nahov** (*Federal State Unitary Enterprise Korpus, Saratov, Russia*)
Precision Test Simulator Incorporated Rate Gyro As Inertial Sensitive Element and Digital Control System
- 1261 48. **D.M. Kalihman, L.Ya. Kalihman, Y.V. Sadomtsev, A.V. Polushkin, P.B. Yermakov, S.F. Nahov, V. Yu. Chebotarevsky** (*Federal State Unitary Enterprise Korpus, Saratov, Russia*)
Application of Microprocessors to Schemotechnical Designs of Precision Quartz Pendulum Accelerometers
- 1441 49. **Yang Yafei** (*Control and simulation center, Harbin Institute of Technology, Harbin, China*)
Observability Analysis and Optimal Observable Subspace Determination of Strapdown Inertial Navigation Systems

10.50 – 11.20 COFFEE BREAK

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SESSION II –INTEGRATED SYSTEMS

PLENARY PAPERS

- 11.20 – 11.40 50. **Oliver Meister, Natalie Frietsch, Christian Ascher, Gert F. Trommer**
2021
(*Institute of Systems Optimization, University of Karlsruhe, Karlsruhe, Germany*)
Adaptive Path Planning for VTOL-UAVs
- 11.40 – 12.00 51. **L.N. Blokhin, A.P. Krivonosenko, V.G. Vovk, Yu.N. Bezkorovayniy**
2431
(*National Aviation University Ukraine, Kiev, Ukraine*)
Problem and Algorithms of Structural Identification of Multivariable
Stabilization Plant with an Arbitrary Dynamics (by the Example of the Helicopter
with Cargo Bracket)
- 12.00 – 12.20 52. **V.S. Lobanov, N.V. Tarasenko, D.N. Shulga, V.N. Zboroshenko** (*FSUE*
2201
*Central Scientific Research Institute of Machine Building (TsNIIMash), Korolev,
Moscow region, Russia*), **V.P. Fedotov** (*FSUE Scientific Production Association
named after S. A. Lavochkin, Khimki, Moscow region, Russia*)
Research of Returned Vehicle Dynamic of Automatic Space Complex Phobos-
Ground on Active Mission Phases

POSTER PAPERS*

- 12.20 – 13.00 53. **A.V. Zbrutsky, A.A. Prach** (*National Technical University of Ukraine Kiev*
1921
Politechnic Institute, Kiev, Ukraine)
The Compensation of External Disturbances in the Control System with Dynamic
Feedback
- 2141 54. **A.V. Nebylov, V.A. Nebylov, A.P. Shepeta** (*State University of Aerospace*
Instrumentation, St. Petersburg, Russia)
Sea Plane Landing Control AT Employing Measured Data of Wave Disturbances
- 2091 55. **E.V. Babkin, M.Yu. Belyaev, N.A. Bryukhanov, A.I. Ivanov, T.V. Matveeva,**
V.V. Tsvetkov (*Rocket and Space Corporation Energia, Korolyov, Moscow*
region, Russia), **V.V. Sazonov** (*Keldysh Institute of Applied Mathematics RAS,*
Moscow, Russia)
Research of Applicability of Modes of the Spacecraft Progress Uncontrolled
Attitude Motion for Experiments in Microgravity Science
- 1711 56. **M.N. Krasilshchikov, D.A. Kozorez, K.I. Sypalo** (*Moscow State Aviation*
Institute, Moscow, Russia)
Unmanned Helicopter Deeply Integrated Onboard Navigation System Operating
in Terrain-Following Mode
- 1531 57. **D.A. Antonov, K.K. Veremeenko, M.V. Zharkov, R.Yu. Zimin** (*Moscow*
Aviation Institute Russian Federation, Moscow, Russia)
The Experimental Sample of the Automobile Integrated Navigation Module

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- 1911 58. **E.G. Kharin, I.A. Kopylov, V.G. Polikarpov, V.A. Kopelovich** (*M.M.Gromov FRI, Zhukovsky, Moscow region, **Russia***)
Methods and Means of Evaluating Airplane Pilot-navigation Equipment at Flight Tests
- 2371 59. **E.I. Druzhinin** (*Institute Of System Dynamics And Control Theory, Irkutsk, **Russia***)
Adjustment of Analytical Models of Space Structures Using Test Data Obtained Under Actual Operating Conditions
- 2101 60. **Yu.V. Bolotin, M.Yu. Popelensky** (*Moscow Lomonosov State University, Moscow, **Russia***)
Transformations of Airborne Gravimetry Data
- 1271 61. **O.A. Stepanov, A.B. Toropov** (*Federal State Unitary Enterprise Central Scientific and Research Institute (CSRI) Elektropribor, Saint Petersburg, **Russia***)
A Comparison of Linear and Nonlinear Optimal Estimators in Nonlinear Navigation Problems
- 1331 62. **E.V. Pleshakova** (*The Institute of Mining of the Siberian Branch of Russian Academy of Science, Novosibirsk, **Russia***)
On Underground Pneumatic Impact Machine Navigation Methods
- 3111 63. **E.G. Zhanzherov, I.A. Kashina, A.V. Kulikov** (*Perm State Technical University, Perm, **Russia***)
The Research of United Control System of the Supersonic Pilotless Flying Vehicle
- 2221 64. **S.S. Mazein, B.A. Moshkin, M.B. Trapeznikov, E.I. Tytskiy** (*FSUE of Scientific and Production Association of Automatics, Ekaterinburg, **Russia***)
Distributed Control System of Discrete Final Elements

13.00 – 14.00 LUNCH

PLENARY PAPERS

- 14.00 – 14.20 65. **B.G. Gurskiy, A.I. Novikov, V.L. Solunin** (*CSRI of Automatics and Hydraulics, Moscow, **Russia***)
2011
Navigation System for Surface-Based UAV, Integrated with Satellite Navigation Equipment
- 14.20 – 14.40 66. **V.D. Dishel, E.L. Megiritsky, V.A. Nemkevich** (*Pilyugin Scientific-Production Center of Automatics and Instrument-Making, Moscow, **Russia***)
2251
Strategy of Synthesis of a Unified Contour of Terminal Guidance and Inertial-Satellite-aided Navigation in Control Systems of the Launcher and Upper Stage. The Analysis of the Flight Tests

- 14.40 – 15.00 67. **A.A. Fomichev, V.B. Uspensky, K.Yu. Schastlyvets, R.V. Pugachev, P.V. Larionov** (*JSC Lasex, Dolgoprudny, Moscow region, Russia*)
1611 Tests Results of an Integrated Navigating System at Incomplete Satellites Constellation

POSTER PAPERS *

- 15.00 – 15.20 68. **Deniz Kavak, Hakan Temeltas** (*Istanbul Technical University, Istanbul, Turkey*)
1871 Comparison of EKF and CEKF Based SLAM Algorithms with ICNN and JCBB Data Association Approaches for Mobile Robots
- 1971 69. **M.B. Bogdanov, A.V. Prohortsov, V.V. Saveliev, V.A. Smirnov, A.A. Chepurin** (*Tula State University, Tula, Russia*)
The Effectiveness Criteria for Strapdown System Correction with Usage of Two-Satellites-Based Navigational Data
- 1901 70. **S.B. Berkovich, N.I. Kotov, A.V. Sholokhov** (*IRSI Institute of Engineering Physics, Serpuhov, Russia*), **S.A. Bolotnov, V.K. Ilyin, V.I. Lobanov** (*JSC NPK Electrooptics, Moscow, Russia*), **V.A. Leeventsev** (*FSUE Sosensky Instrument-Making Factory, Russia*)
The Terrain Strapdown Inertial Navigation System Corrected on the Move under the Information of Checkpoints of a Highway Network
- 1681 71. **Jamshaid Ali, Umer Iqbal Bhatti, Muhammad Nzar** (*Center for Control and Instrumentation, National Engineering and Scientific Commission, Islamabad, Pakistan*)
Comparison of Nonlinear Filtering Methods for a Low Cost Multisensor Navigation Data Synthesis
- 1551 72. **V.M. Samoylov, D.V. Svyazhin** (*JSC Research & Production Enterprise TEMP-AVIA, Nignii Novgorod region, Arzamas, Russia*)
Compass Calibration for the Magnetic Heading Channel of the Integrated Standby Instrument System (ISIS)
- 1741 73. **E.A. Timofeev, G.S. Tsehanovich** (*The Russian Institute of Radionavigation and Time, Saint Petersburg, Russia*)
INS Simulator for Debugging INS and GNSS Integrated Data Processing Algorithms

15.20 – 15.50 COFFEE BREAK

PLENARY PAPERS

- 15.50 – 16.10 74. **A.N. Fedorchenko** (*Ramensky Instrument Plant, Russia*), **V.V. Tihomirov, S.A. Trubnikov** (*Moscow State University, Russia*), **N.A. Atamanov, V.A. Troitsky** (*NAVTECO Ltd., Moscow, Russia*), **M.A. Glazkov, I.V. Gusev** (*PIC Progress AG, Moscow, Russia*), **V.G. Nazarov** (*29-th Research Institute, Defence Ministry, Russia*)
1341 A Mobile Ground Geodetic Complex Using a Strap-down Inertial System

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- 16.10 – 16.30 75. **Philippe Lavoie, René Jr. Landry, Di Li** (*Department of Electrical Engineering Ecole de Technologie Supérieure Montreal, Quebec, Canada*)
1591
Inertial Navigation System Developed for MEMS Applications
- 16.30 – 16.50 76. **V.I. Kortunov, I.Yu. Dybska, G.A. Proskura** (*National Aerospace University named after N.E. Zhukovsky “KhAI”, Kharkov, Ukraine*)
1391
Integrated miniINS Based on the MEMS Sensors for UAV Control
- 16.50 – 17.10 77. **Pavel Davidson, Jani Hautamäki, Jussi Collin** (*Tampere University of Technology, Finland*)
1731
Using Low-Cost MEMS 3D Accelerometers and One Gyro to Assist GPS Based Car Navigation System
- 17.10 – 17.30 78. **P.P. Paramonov, Yu.I. Sabo** (*GUE SPb. ODO Electroavtomatika, St. Petersburg, Russia*), **V.Ya. Raspopov, Yu.V. Ivanov, D.M. Malutin, R.V. Alaluev, V.V. Matveev, S.E. Tovkach** (*Tula State University, Tula, Russia*)
2111
System of Navigation and Control – the Pilotless Flight Vehicle
- 17.30 – 17.50 79. **Abilio Azenha, Adriano Carvalho** (*Institute for Systems and Robotics, University of Porto, Porto, Portugal*)
1281
Integration of Communications Sub-System Into Localization and Control of AGVs
- 18.30 – 22.00 BANQUET

WEDNESDAY, 28 MAY

SESSION II – INTEGRATED SYSTEMS
(Continued)

PLENARY PAPERS

- 9.00 – 9.20 80. **N.V. Mikhailov** (*Mstar Semiconductor, Inc, Russia*)
2301
Relative Navigation of Space Vehicles Using GPS
- 9.20 – 9.40 81. **Vladimir V. Nikulin, Rahul M. Khandekar, Victor A. Skormin**
2071
(*Binghamton State University of New York, Binghamton, USA*)
High-Bandwidth Predictive Tracking System for Free-Space Laser Communications
- 9.40 – 10.00 82. **G.P. Anshakov, Ya.A. Mostovoy, V.A. Tipukhov, R.G. Zalyalova**
1961
(*State Research and Production Space –Rocket Center TsSKB-Progress, Samara, Russia*)
Quasi-continuous Star Monitoring of Inertial Memory Sensors on Earth Remote Sensing Satellites
- 10.00 – 10.20 83. **A.V.Inzartsev, A.V. Kamorniy, L.V. Kiselyov, Yu.V. Matvienko, A.M. Pavin, N.I. Rylov, R.N. Rylov** (*Institute of Marine Technology Problems FEB RAS, Vladivostok, Russia*)
3301
Integrated Positioning System of Autonomous Underwater Robot and Its Application in High Latitudes of Arctic Zone

SESSION III – SATELLITE SYSTEMS

PLENARY PAPERS

- 10.20 – 10.40 84. **R.N. Ahmetov, A.I. Manturov, Ya.A. Mostovoy, V.I. Rublev, Yu.M. Ustalov** (*State Research and Production Space –Rocket Center TsSKB-Progress, Samara, Russia*), **R.A. Dzesov** (*Federal State Unitary Enterprise Central Research and Development Institute of Mechanical Engineering, Korolev, Moscow region, Russia*)
1951
Several Analysis Results of Satellite Navigation System Operation on SC Resurs-DK
- 10.40 – 11.00 85. **Gerd Boedecker** (*Bavarian Academy of Sciences and Humanities, München, Germany*)
1881
Precision Aircraft Attitude Determination with Multi-Antennae GPS Receivers

POSTER PAPERS*

- 11.00 – 11.20 86. **A.N. Korotkov, R.I. Mustafaev, G.S. Tsehanovich** (*The Russian Institute of Radionavigation and Time, Saint Petersburg, Russia*)
1721
Definition of Antenna Rotation Parameters on GPS and GLONASS GNSS Signals
- 1251 87. **Nicola Lofu, Giampiero Montagna** (*Accent, Italy*), **Marco Pini** (*ISMB, Italy*), **Andrea Pizzarulli, Sabino Salerno, Gianluca Sensalari** (*Design Center Torino Wireless, Italy*)
Reconfigurable and Simultaneous Dual Band Galileo/GPS Front-end Receiver in 0.13-um RFCMOS
- 1771 88. **V.I. Baburov, N.V. Ivanszevich, E.A. Panov, N.V. Vasileva** (*Branch Office Open Joint Stock Company AUSRIRE AUSRIRE-Navigator, Saint Petersburg, Russia*)
Depending of GPS/GLONASS Positioning Accuracy from User Antenna Roll
- 1501 89. **A. Banachowicz** (*Gdynia Maritime University, Poland*), **G. Banachowicz, R. Bober, T. Szewczuk, A. Wolski** (*Maritime University of Szczecin, Szczecin, Poland*)
Correlation Functions of GPS/DGPS Position Coordinate Measurements
- 1661 90. **O.O. Barabanov, L.P. Barabanova** (*Degtyarev Kovrov State Technological Academy, Kovrov, Russia*)
Linear Extrapolation Method for DGPS
- 2081 91. **E.I. Ignatovich, A.F. Schekutiev** (*IAC KVNO TSNImash, Korolev Moscow region, Russia*)
Results of Imitation Tests of Some Onboard Algorithms Variants for SC GLONASS Intersatellite Measurements Processing
- 11.20 – 11.50 COFFEE BREAK

* The authors of poster papers present 1-2 slides within 3 minutes at the plenary session; the discussion will be continued at the posters.

PLENARY PAPERS

- 11.50 – 12.10 92. **Alexey Zhalilo** (*Main Astronomical Observatory of the NASU (MAO NASU), Kiev, Ukraine*)
1671
Alternative GPS/GNSS Positioning Post-session Centralized Services Using Multi-reference Processing Technologies and Mobile Internet
- 12.10 – 12.30 93. **Pavel Kovář, František Vejražka, Libor Seidl, Josef Špaček** (*Czech Technical University in Prague, Prague, Czech Republic*)
1841
Fast Acquisition of the GLONASS Signal
- 12.30 – 13.00 **CLOSING CEREMONY**
- 13.00 – 14.00 LUNCH
- 14.00 – 15.00 **VISIT TO THE EXHIBITION OF SPECIMENTS OF NEW EQUIPMENT DEVELOPED BY CSRI ELEKTROPRIBOR OR TO THE ENTERPRISE MUSEUM**
(*at conferees' option*)