AC electronic inductor JET motors

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AC Electronic Inductor Jet Motors also known as Switched Reluctance Motors (**SRM**) are considered. Production-friendly construction of motor, simple diagram of valve switch, rotor sensor, potentialities of microprocessor current rise determine SRM choice for modern automatic control systems. SRM competitiveness is provided with specific configuration of tooth area and increased electromagnetic load values for starting conditions.
Different kinds of SRM embodiment are analyzed, tooth area parameters are systematized, analytic expressions for motor electromagnetic torque are obtained. Equations for magnetic field and ponderomotive forces are considered as well as features of magnetic field simulation in SRM. Motor starting moment ripples are examined. Differential equations of electromagnetic and electromechanical processes are presented for SRM transient and steady modes. Motor design procedure is stated. Block diagrams of valve switches, ways of control signals generation and composition of microprocessor control system software are given.

The book is intended for the specialists involved in designing of electric motors and automatic control systems as well as students and post-graduates acquiring the same profession.

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On behalf of the Organizing Committee of the 4th Conference of Young Scientists*Navigation and Motion Control*

Session "Smart control systems"

S.N.Vasiliev
Logical approach to dynamic systems control (L e c t u r e) 7
E.A.Cherkashin
Using artificial intelligence for information-control systems 24

T.I.Madzhara
A computer-aided system for solving optimal control problems 31

Session "Gyroscopic systems"

A.A.Stolbov
On increasing the calibration accuracy of the inertial navigation system based on attitude gyros 38

A.M.Boronakhin
The use of analytical gyro vertical for navigation on the railway track 45

V.V.Pchelin, A.V.Uskov
A stabilized gyro compass based on a strapdown short-period vertical 53

N.V.Goncharov, Yu.V.Filatov
Development of goniometric methods and means for monitoring the vehicle attitude 58

Session "Data processing"

L.A.Mironovsky
The theory of invariants and its application in diagnosis (L e c t u r e) 64

Yu.A.Litvinenko
Kalman filter sensitivity to uncertainty of water current when solving the problem of inertial navigation system damping by the log 83

A.P.Aleshkin, T.O.Myslivtsev
Adaptive empirical estimation of the state vector for a spacecraft under measurement shortage 89

M.S.Koryukin
The use of neuronet algorithms for processing data from redundant sensors 97

G.V.Bezmen
The possibility analysis for using neural networks in solving filtering problems 103

K.Yu.Petrova
Optimization of defect distinguishability in test diagnosis 107

I.S.Kayutin
Study of digital data processing algorithms for an acceleration sensor 115

D.P.Loukianov, A.Ya.Maizelis
Investigation of speed variations for high-speed gas flows in variable 121

cross-section nozzles

V.A.Smirnov

Algebraic synthesis of controllers of gyroscopic stabilization and control systems 129

A.V.Bobkov

A system of positioning by the terrain image on the basis of line set analysis 137

Session "Sensors of navigation and control systems"

M.I.Evstifeev, M.F.Smirnov, A.A.Untilov

The analysis of mechanical, electrical and thermal characteristics in designing a micromechanical gyro 142

D.P.Loukianov, I.Yu.Ladychuk

Study of microaccelerometers using surface acoustic waves 149

Yu.V.Shadrin, S.G.Kucherkov

Dynamic characteristics of a ring micromechanical gyro with the open loop 155

Yu.V.Povodyrev, S.M.Dyugurov

Development of methods and means to increase the accuracy of the angular data pickup system of a strapdown electrostatic gyro 160

V.N.Khodurov

Experimental investigation into the thermal drift of fiber-optic gyros 165

D.I.Lychev, S.G.Kucherkov

A precision rotary test bench for testing a micromechanical gyro 171

Session "Control theory and systems"

V.O.Nikiforov

Control of vehicles with roughly known characteristics: roughness, adaptation and robustness (L e c t u r e) 177

V.O.Rybinsky

Robust stabilization of linear periodic systems 188

K.Yu.Polyakov

Ultimate possibilities of smoothing random processes using continuous-digital filters 196

O.E.Yakupov

An adaptive electro-hydraulic servo drive of the aircraft 203

T.V.Turenko

A hybrid model of the direct digital control system with a unitary-code sensor 211

A.G.Klimenkov, A.L.Starichenkov, T.S.Chernysheva
The software of the simulator for hydrofoil ship motion control 218

Session "Electronic and electromechanical devices of navigation and control systems"

V.D.Aksenenko, S.I.Matveev
Synchronous demodulation using the digital signal processing technique 225

Ya.V.Belyaev, Ya.A.Nekrasov
The methods for estimating the accuracy of a temperature stabilization system using the software for thermal fields calculation 229

A.M.Richnyak
A superconductive geomagnetic motor for spacecraft orientation and stabilization systems 233

Session "Computer technologies in navigation and control"

A.A.Belash, S.S.Gurevich
The central computer of the strapdown inertial attitude system and its software 241

D.A.Tomchin
The virtual laboratory for study and control of a single-rotor vibration bench 246

S.N.Turusov, O.Yu.Lukomskaya
The system of informational support for organizational readiness of the ship's crew 253

Session "Ship navigation"

A.V.Ulanov
The analysis of alternative approaches to managing the controlled motion of an underwater gliding vehicle 261

I.F.Shishkin, A.G.Sergushev
Using the science about tracks in water areas 268

A.G.Shpektorov, V.A.Zuev
Stabilization of a high-speed vehicle at the prescribed route 274

N.V.Kuzmina
Contrasting color of auxiliary information in the marine direction-finder 280

Session "Integrated navigation and orientation systems"

A.M.Boronakhin, A.V.Kazantsev. S.A.Karpasov
The results of experimental investigations of the navigation system on the railway as a part of the track measurement car CSRI-4 286

S.V.Ignatiev
A stabilized gyrocompass based on fiber-optic gyros with rotating sensor unit 291

A.A.Pisarevsky, A.N.Doronin
The integrated system for aircraft 299

Yu.V.Gavrilenko, N.A.Zaitseva, E.V.Kochneva
Suboptimal double-step filter for special navigation problems 303

Round table
"The results and forms of holding a conference using the Internet"

Yu.A.Litvinenko, O.A.Stepanov, D.O.Taranovsky
The experience in holding the conference of young scientists *Navigation and Motion Control* using the Internet 309

L i s t o f a u t h o r s 315

Foreword 5

Gravimetry

L.K. Zheleznyak, V.N. Koneshov

Up-to-date methods for studying gravity field of the World ocean 9

L.K. Zheleznyak

The Russian marine gravimetric system 14

A.V. Sokolov, S.V. Usov, L.S. Elinson

Gravity survey in conditions of marine seismic work 21

B.A. Blazhnov, L.P. Nesenjuk, V.G. Peshekhonov, A.V. Sokolov, L.S. Elinson, L.K. Zheleznyak

An integrated mobile gravimetric system. Development and test results 33

V.N. Ilyin, Yu.L. Smoller, S.Sh. Yurist

A mobile ground-based gravity meter. Development and test results 45

V.N. Berzhitzky , V.N. Ilyin , E.B.Saveliev, Y.L. Smoller, Yu.V. Bolotin, A.A.Golovan, N.A.Parusnikov, G.V. Popov, M.V. Chichinadze 48

GT-1A inertial gravimeter system design experience and results of flight tests

O.A. Stepanov, B.A. Blazhnov, D.A. Koshaev

The efficiency of using velocity and coordinate satellite measurements in determining gravity aboard an aircraft 61

Yu.I. Nikolsky

Problems of reduction in high-accuracy gravity measurements in geodesy and geology 75

Gravity gradiometry

G.B. Volfson

State and prospects of gravity gradiometry development 90

A.B. Manukin

Design of a measuring system for a highly sensitive gravity gradiometer using vertical pendulums 105

M.S. Petrovskaya, G.B. Volfson

Construction of geopotential models by the satellite gradiometry data 111

V.G. Peshekhonov, G.B. Volfson

Problem solution for design of a gravity variometer operating on a moving base 118

G.B. Volfson, M.I. Evstifeev, V.G. Rozentsvein, M.P. Semenova, Yu.I. Nikolsky, E.V. Rokotyan, S.F. Bezrukov

A new generation of gravity variometers for geophysical investigations 122

Borehole navigation

A.A. Molchanov, G.S. Abramov

Navigation in investigation of underground space in searching, 136

exploring and developing mineral deposits

V.G. Rozentsvein

146

State of the art of borehole gyroscopic navigation systems

E.V. Freiman, S.V. Krivosheyev, V.V. Losev

Peculiarities of attitude algorithm construction for gyroscopic 168

inclinometers based on a single-axis gyrostabilizer

N.P. Rogatykh

178

Methodical aspects of inclinometer design

V.M. Suminov, D.V. Galkin, A.A. Maslov

190

A mathematical error model of a gyro inclinometer