DATA TRANSMISSION AND PROCESSING

S.N. Kirillov, V.M. Berdnikov. ROBUST ALGORITHM OF SPEAKER POSITION DETERMINATION FOR DISTRIBUTED MICROPHONE NETWORK

Key words: determination of the position, distributed microphone network, speech signal, speaker, difference time of receipts of the signal, two-stage processing.

S.V. Chelebaev, V.N. Loktyukhin, A.V. Antonenko. WATCHING OPERATION PRINCIPLE ADC STRUCTURE SYNTHESIS ON THE UPDATED HOPFIELD NETWORK BASIS

Key words: neural network, Hopfield network, information representation form converters, frequency, code.

S.N. Buzykanov, A.V. Petrunin. SPEECH SIGNALS SEGMENTATION BASED ON WAVELET TRANSFORMATION IN WEIGHTED SOBOLEV SPACE

<u>Key words</u>: weighted Sobolev space W_2^1 , speech segmentation, fast wavelet transform.

P.V. Babayan, A.B. Feldman. OBJECT LOCALIZATION IN THE IMAGE IN TECHNICAL VISION SYSTEMS OF MOBILE ROBOTICS COMPLEXES

Key words: image sequence, coordinates measuring, geometrical deformations, motion detection.

V.A. Goncharov. DEVELOPMENT OF NETWORK ATTACK DETECTION METHODS FOR MULTI GIGABIT HIGH-SPEED COMPUTER NETWORKS

Key words: network attack, intrusion detection system, signature search, signature converter, search optimization.

RADIOTECHNICAL AND MEASURING SYSTEMS

V.I. Koshelev, V.A. Belokurov. THRESHOLD CALCULATION BY SMALL TANGER MULTIFRAME DETECTION

Key words: multiframe detection, small tanger, density of Weibull distribution.

I.V. Baranov, V.V. Yezersky. HINDRANCES INFLUENCE ON THE ERROR OF DISTANCE MEASUREMENT IN INDUSTRIAL APPLICATION FREQUENCY RANGE FINDER

Key words: close radar-location, frequency modulation, error of distance measurement, noise, hindrance, stirring reflector.

Influence of hindrances characteristic for systems of close industrial radar-location on distance measurement error is investigated. Influence of the noise which has passed through the preliminary amplifier with three kinds of frequency characteristics is thoroughly analyzed. Quantitative estimations of noise influence during the change of weight function form are given. Influence of the hindrances caused by stirring reflector located in the working zone of range finder is investigated. Quantitative estimations of received error of distance measurement are given.

O.E. Balashov, A.I. Stepashkin. VIDEO SURVEILLANCE AND TARGET DESIGNATION HELMET SYSTEM

Key words: target designation helmet system, video surveillance, angle measurement.

O.R. Nikitin, I.S. Prokhorov. ADAPTIVE SELECTION OF OPERATION FREQUENCIES IN RADIO COMMUNICATION MULTICHANNEL TRANSMITTING-RECEIVING COMPLEXES WITH FREQUENCY HOPPING PLAN

Key words: radio frequency, electromagnetic compatibility, transmitting-receiving complex, attenuation of electromagnetic wave, out of band radiation, intermodulation.

S.I. Kholopov. ANALYSIS OF RELAY PLL WITH NULLABLE INTEGRATORS

Key words: coherent oscillations, astatic PLL system, relay phase discriminator, region of stability, locking band.

Formulas for determining the range of frequency detuning that doesn't cause the transition of pulsed PLL in beats mode are derived. Relations allowing to perform the choice of nullable integrators parameters for a given phase error and to assess the significance of system capture

COMPUTER SCIENCE AND APPLIED MATHEMATICS

V.P. Koryachko, Y.L. Izhvanov, A.P. Shibanov. METHOD OF HIGH-SPEED REFERENCE CHANNELS CHARACTERISTICS CALCULATION OF RUSSIAN UNIVERSITY NETWORK RUNNET

Key words: Federal University computer network, protected aggregated channel, moment generating function, genetic algorithms.

A.N. Pylkin, R.V. Tishkin, S.V. Trukhanov. DATA MINING TASKS AND THEIR DECISION IN MODERN RELATIONAL DATABASE MANAGEMENT SYSTEMS

Key words: algorithm, data, intellectual information processing, Data Mining.

V.V. Belov, V.I. Chistyakova. INTERPRETATIVE FORMULA FOR EXTENDED (LONG DOUBLE) BINARY CODE OF FLOAT POINT TYPE

Key words: IEEE 754, representation of real numbers, machine zero, machine epsilon.

V.E. Borzykh, A.V. Morozova. METHOD OF NUMERICAL DIFFERENTIATION ERROR DEFINITION OF SIGNALS WITH LIMITED VALUES OF DERIVATIVES

Key words: error, differentiation, signal, system.

Method of numerical differentiation maximum error definition of signals with limited values of derivatives is offered. The essence of the way consists in construction and in error measurement inverse-interfaced system block diagram analysis. Examples of error calculation which show advantages of the offered way in comparison with classical ways of errors estimation are given73

A.V. Prutzkov, A.K. Rozanov. SOFTWARE FOR WORDFORMS AND NUMERALS PROCESSING METHODS

Key worlds: natural language processing, computer-aided instruction system, labor contract analysis.

ELECTRONICS

A.E. Chizhikov, S.B. Ilyichev, A.A. Povorinsky. INVESTIGATION OF MONOCRYSTALLINE SILICON SOLAR CELL P-N JUNCTION CURRENT-VOLTAGE CHARACTERISTIC

Key worlds: solar cells, current-voltage characteristic, transient analysis.

E.V. Mamontov, D.W. Kiryushin. RADIO-FREQUENCY MASS REFLECTRON

Key words: time-of-flight mass analyzer, mass resolution.

Yu.V. Myakishev. THREE–DIMENSIONAL MATHEMATICAL MODELS OF ELECTRON BEAM INFLUENCE ON MATERIAL

Key words: mathematical model, electron beam, material, oscillation regime.

MANAGEMENT

Ye.P. Churakov, S.V. Bykov. SECURITIES PORTFOLIO OPTIMIZATION USING STOCHASTIC DIFFERENTIAL MODEL

Key words: portfolio value, stochastic Ito equation, risk, CaR criterion, direct and inverse tasks.

The problem of construction of optimal securities portfolio, the value of which is described by a stochastic Ito equation is considered. CaR criterion is used as a measure of risk. Direct task – to maximize portfolio value at restriction on the risk and inverse task – to minimize the risk of limited value are solved. Simpler algorithms than known foreign analogues are obtained. Algorithms correlation with algebraic equations infinite system normal decision is determined95

P.S. Sinyushin. UNCERTAINTY DECREASE AT ADMINISTRATIVE DECISIONS DEVELOPED BY MANAGING SUBJECT IN THE CONDITIONS OF SHADOW ECONOMY INFLUENCE

Key words: management, shadow economy, the information analysis, business investigation.

O.B. Kazakova. MANAGEMENT OF INNOVATIVE PRODUCTS AND SERVICES CREATION IN TERMS OF CLIENT ORIENTED PRODUCTION SYSTEMS

Key words: client oriented organization, production system, innovation, product life circle.

In	this	article	some	ways	to	create	new	products	and	services	in	terms	of	client	oriented	
production systems are determined											104					

BRIEF REPORTS

M.V. Dubkov, M.A. Burobin. IMPROVING THE SHAPE OF MONOPOLE MASS ANALYZER MASS PEAK

Key words: monopole mass analyzer, shape of mass peak, higher orders components in potential distribution.

Ye.V. Nikulchev, V.N. Petrushin, Ye.O. Malygin, A.A. Trubochkin, I.A. Chertikhina. PROBABILITY-INTERVAL APPROACH TO DATA ANALYSIS

Key words: interval estimates, data processing, bounded random variable.

A.V. Yudin. DIGITAL POWER REGULATOR ADJUSTING CHARACTERISTIC LINEARIZATION

Key words: linearization, peak regulation of power, phase regulation of power, discretely adjustable transformer.

A.F. Beliy. FORECASTING MODELS OF INFORMATION SYSTEMS STATES AT PROGRAM ACTIONS ON THEM AS EPIDEMICS

Key words: Information system, software of latent informational action, factors of influence, sensitivity equation, look-ahead estimations.

A.V. Rebrikov. BUNDLED SOFTWARE OF ALGORITHM AUTOMATED VERIFICATION BASED ON CONTRACT SPECIFICATIONS

Key words: automated verification, contract specification, structural test case generation, algorithm scaling, cyclomatic complexity measure.

This article is dedicated to implementation issue of unit test generation method based on reduction of algorithm operators which realizes software verification and makes possible to achieve maximum value of coverage criteria. Algorithms of code reduction and test case generation are described. The description of functional models of developed software is given.......122

A.V. Kuznetsov. LOCAL OPTIMALITY CONDITIONS OF CONTROL SYSTEM IN PIECE-WISE CONSTANT CLASS OF CONTROL LAWS

Key words: local optimality, piece-wise constant control.

This paper concerns the determined control system as a system of differential equation Linearity of the system is not supposed. Solution representation in integral form is obtained This involves reducing the optimization problem in piece-wise constant class of control laws finite dimension optimization problem. Conditions on local optimality in control system a	ns. ed. to are
proposed.	125
INFORMATION ABOUT THE AUTHORS (Russian)	129
INFORMATION ABOUT THE AUTHORS (English)	131