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S.N. Kirillov, P.S. Pokrovsky. ALGORITHM OF MODULATION TYPE CLASSIFICATION FOR UNKNOWN RADIO SIGNAL OF SPACE RADIO COMMUNICATION SYSTEMS

Key words: modulation type classification, communication space systems, feature dictionary, decision rule.

Feature dictionary of 10 elements is substantiated, which provides classification stability to the errors determining carrier frequency, bit rate and power of unknown space communication systems signal. Proposed modification of decision rule increases average probability of correct classification by 16 %. Developed algorithm provides average probability of correct classification at least 70 % for a signal-to-noise ratio more than 13.7 dB.....3

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Key words: radio image, Doppler filtration, estimation of coordinates.

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Key words: images combination, mutual correlation function, fuzzy similarity measure.

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Key words: gyro bias, attitude, linear autoregression, time sequences modeling, redefined Yule Walker's equation.

We propose and investigate a method for approximating the bias of MEMS gyro by overdetermined autoregressive model. The model has large (50...150) degree of overdetermination to enable subsequent calculation of a small (2...4) order model. The resulting autoregressive coefficients are included in the fundamental matrix for linear Kalman filtering. This method was used to process data taken by ADIS16405 navigation sensor. The use of second order

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Key words: earth space investigation, trajectory measurements interpolation, data integration, Khurgin-Yakovlev representation.

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Key words: informativity, correlation-extremal navigation systems, entropy.

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Key words: wavelet-filtering, Radon transform, one-dimensional defects, filtering threshold, AFM-scan, power spectral density.

Characteristic properties of superpolished surfaces are analyzed by means of wavelet filtering in Radon space images of atomic force microscope scans. Distortions of one-dimensional defects and deviations in power spectral density of residual chaotic relief are identified with mistakes in wavelet expansion separation. Filtering threshold influence on Fourier transform contrast of surface tool marks and correlation of separated images of one-dimensional defects and residual chaotic relief are investigated. The importance of the results obtained as applied to polishing quality integrated assessment of dielectric substrates meant for ring laser mirrors is discussed40

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Key words: autocorrelation function, side lobes, weighting, complementary signals, Pascal triangle, phase shift, Doppler Effect.

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Key words: adaptive routing, routing algorithms, corporate networks, communication providers.

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Key words: interface, module, component, interprogramm interaction, entry point, binary compatibility.

A method of interoperability between components of complex software systems, based on the organization of associative relationships is considered. The method allows you to create heritable, fast and easy to implement tools for cross-program interaction. The method proved effective because of its many years of use in implementation of interfaces in large software systems of remote sensing data processing developed at SRI "Photon"56

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Key words: simulation model, microcontroller, SPICE-simulation, debug output, ARM Cortex-M3.

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Key words: nanostructured semiconductors, nanostructures, contact phenomena, admittance spectroscopy, atomic force microscopy.

Automated stand is developed. It implements admittance spectroscopy method with atomic force microscopy (AFM) for investigation of electrophysical properties of nanostructured semiconductor materials and nanostructures. Operating principles and technical characteristics of the stand as well as advantages and limitations of admittance spectroscopy method in combination with AFM are considered. It is shown that combined use of admittance spectroscopy method and AFM technique discovers additional opportunities for experimental investigation of electrophysical characteristics of semiconductor materials. It leads to qualitatively new level of micro- and nanostructure diagnostic methods66

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Key words: monopole mass analyzer, lengthwise electric field, mass peak intensity.

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Key words: reed, microarcs, switching voltage, erosion, the contact surface.

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Key words: standard meter, He-Ne laser, beet frequency, LGN-212-1M, Zeeman's effect.

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Key words: diode pumping, DPSS laser, pump homogeneity, concentration of active ions, laser processing of materials. It is offered:

- method of obtaining quasi-homogeneous distribution of pump radiation on cross-section of active medium in side diode-pump solid-state lasers;
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Key words: ion-optical systems, radio frequency linear fields, plane discrete electrodes, RF mass-reflectron, method of average potential.

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Key words: experimental setup "INGIR-Mega-15", inductive energy storage, magnetic force,

electric explosion of metal, long-lived plasmoid.

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Key words: clustering, neural networks, Kohonen network, self-organization, machine learning.

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Key words: modernization, reindustrialization, technological way, development institutes.

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Key words: the investments; the structure of the investment resources.

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