

**CONTENTS & ABSTRACTS****FUZZY CONTROLLERS AND CONTROL SYSTEMS . . . . . 2****Kudinov Yu. I., Dorokhov I. N., Pashchenko F. F.**

Analysis, synthesis and classification problems of fuzzy controllers and control systems are discussed. The publications on fuzzy controllers are analyzed with the focus on logic-linguistic and taught controllers and control systems. A fuzzy difference TS-model, which describes dynamic objects and fuzzy controllers, is considered. The application of Lyapunov techniques for fuzzy systems stability estimation and fuzzy controller synthesis is shown. System structure and teaching techniques for fuzzy control systems with neuro-fuzzy TS plant and controller models are presented. Fuzzy and statistical controllers and control systems are compared.

**NONSTATIONARY PROCESS MONITORING: ANALYSIS AND INVESTIGATION OF STEADY STATE CHANGES . . . . . 15****Grebenyuk E. A.**

The algorithm of on-line steady state change detection is offered, which detects the switches from nonstationary process to stationary and vice versa. The analysis of process properties influence on cointegration relationships is undertaken.

**MULTI-OBJECTIVE INVESTMENT PORTFOLIO OPTIMIZATION. THE DETERMINISTIC CASE. . . . . 21****Rykov A. S., Iskhodjanov R. R.**

The paper offers a method for solving a multi-objective constrained optimization problem of resource allocation that takes place in investment portfolio management. The method belongs to the deformed configuration methods class. Some problems of the method application are also considered.

**INFORMATIONAL MANAGEMENT IN SOCIO-ECONOMIC SYSTEMS: CONTROL ELEMENTS AND THE WAYS OF INFORMATIONAL INFLUENCE . . . . . 25****Kononov D. A., Kulba V. V., Shubin A. N.**

The development results of a topical branch of research — informational management — are submitted. The paper provides the structural analysis of a socio-economic system and describes the mechanisms and ways of informational management.

**CORPORATION MANIPULATING MECHANISMS. . . . . 34****Agheev I. A., Gurlev I. V., Tsyganov V. V.**

Conditions for progressiveness and optimality of corporation evolution management mechanisms with the self-learning of classification in stochastic environment are found. The analysis of the manipulation mechanisms used in process of technocratic management of organization's evolution is undertaken. Two types of manipulation are considered the first type manipulation effects the emotions of the interested person (Pupil), while the second type employs quantitative indices and the rationality of the self-learning interested person (Scientist). The paper shows that there exists such manipulation, under which the corporative mechanism becomes regressive.

**STRUCTURAL AND PARAMETRIC IDENTIFICATION OF ABNORMAL SITUATIONS IN COMPLEX PROCESS SYSTEMS . . . . . 39****Ivashkin Yu. A.**

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**DESIGN CONCEPTS OF INTELLIGENT USER INTERFACE FOR OPERATOR SUPPORT SYSTEMS. . . . . 43****Lebedev V. G.**

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**SYSTEM-LEVEL SELF-DIAGNOSIS OF ARISING FAULTS AND THEIR ELIMINATION IN RECONFIGURABLE SYSTEMS . . . . . 48****Vedeshnikov V. A.**

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**DESIGN CONCEPTS OF ONBOARD CONTROL COMPLEXES FOR AUTOMATIC SPACECRAFTS . . . . . 62****Mikrin E. A., Sukhanov N. A., Platonov V. N., et al.**

The paper expounds an approach to onboard control complexes (OCC) design for automatic spacecrafts, and describes key OCC components and their tasks. It presents the structure of software, which is the key element in OCC integration. Finally, the OCC performance of Yamal telecommunication spacecrafts operated at geostationary orbit is considered.

**MULTIPLICATIVE ALGEBRA AND ITS APPLICATION IN LOGICAL DATA PROCESSING . . . . . 67****Vykhovanets V. S., Malyughin V. D.**

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**HARD REALTIME OPERATION OF LOCAL GRID SYSTEMS . . . . . 78****Stetsyura G. G.**

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