

## CONTENTS

## THEORY AND METHODS OF SIGNAL PROCESSING

**Silvestrov A. M., Mukhina M. P., Seden I. V.**

Vernier algorithm of adaptive filtration, smoothing and prediction of trajectories.....11

## AUTOMATIC CONTROL SYSTEMS

**Tunik A. A., Rydlo K., Savchenko O. V., Melnik K. V.**

Practical experience of intellectual UAV attitude stabilization system computer-aided design.....17

**Ablesimov A. K., Kutova N. I.**

Evaluation of the quality of stabilization systems by normalized indirect indicators.....26

**Nadsadna O. I.**

Design of robust gain scheduled hold control system.....31

**Tupitsin N. F., Stepanenko I. A., Voloschenko E. I., Shildskiy S. S.**

The special case of operative programming method of flight route.....36

**Galaguz T. A.**

Structural-parametric design of robust control system with reduced-order observer.....42

**Komnatska M. M.**

Observer-based flight control system design under linear matrix inequalities approach.....46

**Vasiukhin M. I., Tkachenko O. M., Kasim A. M., Dolinniy V. V.**

The aggregation technology of applied software for aerial photography data processing to building map databases in precision agriculture system.....52

## COMPUTER-AIDED DESIGN SYSTEMS

**Gribov V. M., Hryshchenko Yu. V., Kozhokhina O. V.**

To the question of dependability calculation failures based on the exponential model of distribution of failures.....59

**Sineglazov V. M., Godny A. P.**

Structural synthesis of integrated computer-aided design system.....67

**Sineglazov V. M., Kupriyanchyk V. L.**

The information fire monitoring system.....71

**Sineglazov V. M., Daskal E. V.**

Design of a weather-compensated temperature regulator based on microcontrollers.....77

**Sineglazov V. M., Karabetsky D. P.**

Computer-aided design of solar power trackers.....83

**Sineglazov V. M., Dolgorukov S. O.**

Complex criteria for navigation equipment test table optimal design problem.....87

**Chumachenko E. I., Koval D. Yu., Sipakov G. A., Shevchuk D. D.**

Using ANFIS and NEFCLASS neural networks in classification problems.....93

## TRANSPORT SYSTEMS

**Sushchenko O. A.**

Two-axis gimbaled course system for marine vehicles.....99

**MATHEMATICAL MODELING OF PROCESSES AND SYSTEMS****Vishnevsky A. V.**

The binary weight matrix of an electronic composer algorithm.....105

**Zherdev M. K., Kredentser B. P., Kuzavkov V. V.**The problem of non-stationary thermal conductivity for multilayered structure  
of a radio-electronic component.....110**Melnikov D. E., Aznakayeva D. E., Aznakayev E. G.**

Cardiac electric signals formation modeling.....115

**Sineglazov V. M., Ziganshin A. A.**

Optimization of Savonius rotor parameters.....120

Requirements for Articles.....125