

Table of Contents

Mathematical Modeling

1. Modeling and coordinated control for the production and economic system E.V. Orlova.....	1-6
DOI: 10.18287/1613-0073-2017-1904-1-6	
2. One approach to control of a neural network with variable signal conductivity A. Olshansky, A. Ignatenkov.....	7-13
DOI: 10.18287/1613-0073-2017-1904-7-13	
3. A discrete phase problem in reconstruction of signals in space-rocket hardware A.A. Kuleshova, E.A. Shchelokov.....	14-22
DOI: 10.18287/1613-0073-2017-1904-14-22	
4. Mathematical models for forecast of geometrical parameters of assembly units V.A. Pechenin, M.A. Bolotov, N.V. Ruzanov.....	23-28
DOI: 10.18287/1613-0073-2017-1904-23-28	
5. Probability-theoretical model for product assembly parameters assessment N.V. Ruzanov, M.A. Bolotov, V.A. Pechenin.....	29-34
DOI: 10.18287/1613-0073-2017-1904-29-34	
6. About the attractor-repeller points during the descent of an asymmetric spacecraft in the atmosphere V.V. Lyubimov, V.S. Lashin.....	35-39
DOI: 10.18287/1613-0073-2017-1904-35-39	
7. Control of a one rigid-link manipulator in the case of non-smooth periodic trajectory N. Aksenova, V. Sobolev.....	40-42
DOI: 10.18287/1613-0073-2017-1904-40-42	
8. On stabilizability of the manifold of steady states in a model of the spread of a mutating viruses Ju. Ermoshkina.....	43-48
DOI: 10.18287/1613-0073-2017-1904-43-48	
9. Conditions for the loss of stability of equilibrium manifold in satellite model E. Shchepakina, V. Sobolev.....	49-51
DOI: 10.18287/1613-0073-2017-1904-49-51	
10. Viral evolution model with several time scales A.A. Archibasov.....	52-56
DOI: 10.18287/1613-0073-2017-1904-52-56	
11. Generalized model of pulse process for dynamic analysis of Sylov's fuzzy cognitive maps R.A. Isaev, A.G. Podvesovskii.....	57-63
DOI: 10.18287/1613-0073-2017-1904-57-63	
12. The method of augmented regularized normal equations for systems with sparse matrices S.Y. Gogoleva.....	64-66
DOI: 10.18287/1613-0073-2017-1904-64-66	
13. On possibilities for studying the problem of human society's evolution using simple mathematical models L.G. Teklina.....	67-71
DOI: 10.18287/1613-0073-2017-1904-67-71	
14. Mathematical model of power characteristics of the diagnostic fluorimeter V.N. Grishanov, V.S. Kulikov, K.V. Cherepanov.....	72-77
DOI: 10.18287/1613-0073-2017-1904-72-77	
15. Modeling and investigating the stability of a solution to the inverse problem of signal separation V.A. Zasov, Ye.N. Nikonorov.....	78-84
DOI: 10.18287/1613-0073-2017-1904-78-84	
16. Modeling and analysis of motion of a spacecraft with a tether aerodynamic stabilizer D. Elenev, Y. Zabolotnov.....	85-88
DOI: 10.18287/1613-0073-2017-1904-85-88	

17. Development of algorithms for diagnosing forms of lichen planus and predicting of the disease's course O.V. Serikova, V.N. Kalaev, N.A. Soboleva.....	89-92
DOI: 10.18287/1613-0073-2017-1904-89-92	
18. Calculation of the electrostatic field distribution formed by the generator of the off-electrode plasma M.A. Markushin, V.A. Kolpakov, S.V. Krichevskiy.....	93-99
DOI: 10.18287/1613-0073-2017-1904-93-99	
19. Approaches to the optimization of the placement of service-oriented cloud applications in the software-defined infrastructure of the virtual data center I. Bolodurina, D. Parfenov, K. Haenssger.....	100-107
DOI: 10.18287/1613-0073-2017-1904-100-107	
20. The elaboration of numerical simulation error light pulse propagation in a waveguide of circular cross-section A.A. Degtarev, A.V. Kukleva.....	108-112
DOI: 10.18287/1613-0073-2017-1904-108-112	
21. The calculation of the spatial spectrum of multidimensional fractals using the Fast Fourier transform O.A. Mossoulina.....	113-116
DOI: 10.18287/1613-0073-2017-1904-113-116	
22. Study of a singularly perturbed tuberculosis model E. Tropkina, E. Shchepakina.....	117-123
DOI: 10.18287/1613-0073-2017-1904-117-123	
23. Forecasting models generation of the electronic means quality R.O. Mishanov, S.V. Tyulevin, M.N. Piganov, E.S. Erantseva.....	124-129
DOI: 10.18287/1613-0073-2017-1904-124-129	
24. About scarce resources allocation in conditions of incomplete information N.L. Dodonova, O.A. Kuznetsova.....	130-134
DOI: 10.18287/1613-0073-2017-1904-130-134	
25. A model of milling process based on Morlet wavelets decomposition of vibroacoustic signals A.I. Khaymovich, S.A. Prokhorov, A.A. Stolbova, A.I. Kondratyev.....	135-140
DOI: 10.18287/1613-0073-2017-1904-135-140	
26. Intermediate asymptotic behavior of the stress and damage fields in the vicinity of the mixed-mode crack tip under creep regime L. Stepanova, E. Mironova.....	141-150
DOI: 10.18287/1613-0073-2017-1904-141-150	
27. Calculation of critical conditions for the filtration combustion model O. Vidilina, E. Shchepakina.....	151-157
DOI: 10.18287/1613-0073-2017-1904-151-157	
28. Mathematical modeling radio tomographic ionospheric parameters reconstruction via nanosatellites constellation for conditions of incomplete source data O.V. Phylonin, P.N. Nikolaev.....	158-167
DOI: 10.18287/1613-0073-2017-1904-158-167	
29. Modeling control over large space structure on geostationary orbit V.V. Salmin, A.S. Chetverikov, K.V. Peresypkin, I.S. Tkachenko.....	168-173
DOI: 10.18287/1613-0073-2017-1904-168-173	
30. On the method of step evaluation in construction descriptive models T.E. Rodionova, G.R. Kadyrova.....	174-177
DOI: 10.18287/1613-0073-2017-1904-174-177	
31. Server hardware resources optimization for virtual desktop infrastructure implementation K. Makoviy, D. Proskurin, Yu. Khitskova, Ya. Metelkin.....	178-183
DOI: 10.18287/1613-0073-2017-1904-178-183	
32. On delayed loss of stability in one mechanical problem E.V. Shchetinina.....	184-186
DOI: 10.18287/1613-0073-2017-1904-184-186	

33. Characteristics comparison of DTN networks routing protocols using hybrid model of nodes' mobility A.A. Tsarev, A.Yu. Privalov.....	187-190
DOI: 10.18287/1613-0073-2017-1904-187-190	
34. Two-stage approach to real-time assignment of Web Studio customer support tasks S. Begenova, T. Avdeenko.....	191-199
DOI: 10.18287/1613-0073-2017-1904-191-199	
35. Digital photoelasticity for calculating coefficients of the Williams series expansion in plate with two collinear cracks under mixed mode loading L.V. Stepanova, V.S. Dolgikh, V.A. Turkova.....	200-208
DOI: 10.18287/1613-0073-2017-1904-200-208	
36. Methods of bipolar microcircuits learning experiment S.V. Tyulevin, M.N. Piganov, E.S. Erantseva.....	209-213
DOI: 10.18287/1613-0073-2017-1904-209-213	
37. Frames and subspaces for phaseless reconstruction S.Ya. Novikov, M.E. Fedina.....	214-222
DOI: 10.18287/1613-0073-2017-1904-214-222	
38. Cellular automata-based model of group motion of agents with memory and related continuous model A.V. Kuznetsov.....	223-231
DOI: 10.18287/1613-0073-2017-1904-223-231	
39. Development of software system for analysis and optimization of taxi services efficiency by statistical modeling methods P. Azanov, A. Danilov, N. Andriyanov.....	232-238
DOI: 10.18287/1613-0073-2017-1904-232-238	
40. Detuning and dipole-dipole interaction effects on the entanglement of two qubits interacting with quantum fields of resonators E.K. Bashkirov.....	239-248
DOI: 10.18287/1613-0073-2017-1904-239-248	
41. Reduction of flexible joint manipulator mathematical model O.V. Vidilina, N.V. Voropaeva.....	249-253
DOI: 10.18287/1613-0073-2017-1904-249-253	
42. Model for constructing an option's portfolio with a certain payoff function M.E. Fatyanova, M.E. Semenov.....	254-262
DOI: 10.18287/1613-0073-2017-1904-254-262	
43. Stochastic Non-Markovian Schroedinger equation for a three-level quantum system V. Semin, A. Pavelev.....	263-265
DOI: 10.18287/1613-0073-2017-1904-263-265	
44. Numerical simulations of the quantum systems dynamics in the path integral approach A. Biryukov, M. Shleenkov.....	266-273
DOI: 10.18287/1613-0073-2017-1904-266-273	
45. Mathematical modeling of incentive mechanisms in projects for the development of new production O.V. Pavlov.....	274-279
DOI: 10.18287/1613-0073-2017-1904-274-279	
46. Nonlinear eigenvalue problems in fracture mechanics: eigenspectra and eigenfunctions A.A. Peksheva, L.V. Stepanova.....	280-288
DOI: 10.18287/1613-0073-2017-1904-280-288	
47. Study of the chain transfer agent's effect on the butadiene-styrene copolymer's properties based on the Monte-Carlo method T. Mikhailova, E. Miftakhov, S. Mustafina.....	289-292
DOI: 10.18287/1613-0073-2017-1904-289-292	

48. Reconstruction of realistic three-dimensional models of biological objects from MR-images for the radiation therapy purposes A.V. Lebedeva, V.V. Mamontova , S.A. Nemnyugin, A.V. Komolkin.....	293-295
DOI: 10.18287/1613-0073-2017-1904-293-295	
49. Neural network prediction model of the pilots' errors A.N. Danilenko.....	296-299
DOI: 10.18287/1613-0073-2017-1904-296-299	
50. Development of methods and algorithms for the classification of neurodegenerative diseases of the brain using MRI images O. Vasilchuk, A. Fedorov.....	300-305
DOI: 10.18287/1613-0073-2017-1904-300-305	
51. Use of graph-based and algebraic models in lifecycle of real-time flight control software A. Tyugashev.....	306-311
DOI: 10.18287/1613-0073-2017-1904-306-311	