

A. Sh. Adkhamova	Krasovskii damping problem for a multidimensional control system of retarded type	5
O. N. Ageev	On realizations of dynamical systems	5
A. A. Amosov	On the solvability of radiative-conductive heat transfer problems in systems of opaque and semitransparent for radiation bodies	6
A. I. Aptekarev	Multiple orthogonal polynomials with respect to Hermite weights: applications and asymptotics	6
D. E. Apushkinskaya	A posteriori estimates for obstacle problems	7
A. A. Arkhipova	Local regularity of weak solutions to a class of strongly nonlinear parabolic systems	8
D. V. Artamonov	Antisymmetrized Gelfand–Kapranov–Zelevinskij systems	9
N. V. Artamonov	Solvability of an operator Riccati integral equation in a reflexive Banach space	10
A. Ashyralyev, C. Ashyralyev	The second order of accuracy difference schemes for integral type time-nonlocal parabolic problems	11
S. N. Askhabov	Second-order integro-differential equation with difference kernels and inhomogeneity in the linear part	12
E. A. Baderko, M. F. Cherepova	Smooth solution of the second initial-boundary value problem for a parabolic system in a nonsmooth domain on the plane	13
A. Balci	Analysis and numerics for (non)local models and differential forms with Lavrentiev gap: beyond regularity	14
J. Batt, E. Jörn, A. L. Skubachevskii	Stationary spherically symmetric solutions of the Vlasov–Poisson System depending on local energy	14
Ya. I. Belopolskaya	Probabilistic representation of a solution to the Cauchy–Neumann problem for a nonlinear parabolic equation	15
Ju. Belyaeva, B. Gebhard, A. L. Skubachevskii	On some examples of stationary solutions to the Vlasov–Poisson equations in a finite cylinder	16
M. Ben-Artzi	From crystals to Dirac operators spectral theory	16
S. I. Bezrodnykh	Multiple hypergeometric functions and applications	17
M. L. Blank	Shadowing property re(al)visited	18

G. A. Bocharov, D. S. Grebennikov, R. S. Savinkov	
Mathematics for immunology	21
H. G. Bock	
Inverse optimal control problems and application to modeling the gait of cerebral palsy patients	22
Ya. L. Bogomolov, A. D. Yunakovskiy	
Hyperbolization for nonlinear Schrödinger type equations	22
A. V. Boltachev, A. Yu. Savin	
On index of elliptic boundary-value problems associated with isometric group actions	23
P. Bonicatto, N. A. Gusev	
Weak superposition principle for signed measure-valued solutions of the continuity equation	24
D. I. Borisov, A. I. Mukhametrakhimova	
On operator estimates for elliptic operators in perforated domains	25
V. M. Buchstaber	
Integrable polynomial Hamiltonian KdV–Novikov hierarchies and their quantization	25
V. P. Burskii	
Weak solutions of boundary value problems for general quasilinear PDEs	26
Ya. A. Butko	
Subordination principle and Feynman–Kac formulae for generalized time-fractional evolution equations	27
D. Chalishajar	
Controllability of nonlinear third-order dispersion equation	28
G. A. Chechkin	
On Meyers estimates for Zaremba problem	28
N. V. Chemetov, A. Mazzucato	
Motion of rigid bodies in a viscous fluid with collisions and slippage	29
E. V. Chistyakova, V. F. Chistyakov	
On solvability of higher order differential algebraic equations with singular points	30
K. M. Chudinov	
Oscillation conditions for solutions to first-order delay differential equations	31
G. Crasta, I. Fragalà	
Concavity properties of solutions to Robin problems	32
V. G. Danilov	
Nonsmooth nonoscillating generalized solution to forward and backward in time Cauchy problem for Kolmogorov–Fokker–Plank equation	33
K. A. Darovskaya	
On a posteriori error estimates for a biharmonic obstacle problem	34
A. A. Davydov	
Optimal cyclic exploitation of distributed renewable resource with diffusion	35
M. N. Demchenko	
A characterization of the space of divergence-free vector fields from BMO based on the paradifferential operator calculus	36
M. V. Demina	
The Darboux theory of integrability for polynomial Liénard differential systems	36

M. Denche, O. Zibouche	
On a class of transmission boundary value problems with integral boundary conditions	37
S. Yu. Dobrokhotov, A. V. Tsvetkova	
Effective Plancherel–Rotach type asymptotics of 2-D Hermitian orthogonal polynomials. The semiclassical approach	38
M. A. Dorodnyi	
Homogenization of nonstationary periodic equations at the edge of a spectral gap	39
P. B. Dubovski, M. Tamarov	
Asymptotics for Volterra equations with advanced variable	40
Ya. Dymarskii	
Korteweg–de Vries equation on the Uhlenbeck manifold	41
L. S. Efremova	
On some skew products on simplest multidimensional manifolds	42
M. El-Borai, Kh. El-Nadi	
Nonlocal abstract Cauchy problem for nonlinear fractional integral equation	42
M. Fahimi, K. Nouri, L. Torkzadeh	
A hybrid stochastic fractional order coronavirus mathematical model via the reservoir–people transmission network	43
V. E. Fedorov	
On generation of resolving family of operators for distributed order differential equations	44
T. N. Fomenko	
Application of the cascade search principle for zeros of functionals to the solution of one-parametric families of equations with multivalued operators	45
V. A. Gaiko	
Global bifurcation analysis and applications of multi-parameter dynamical systems	46
E. I. Galakhov, O. A. Salieva	
Nonexistence of solutions for some nonlinear inequalities with transformed arguments in a half-space	47
B. Gebhard	
On the Rayleigh–Taylor instability	47
A. Gladkov, M. Guedda	
Global existence of solutions of semilinear parabolic equation with nonlinear memory condition	48
A. V. Glushak	
On the relationship of solutions of singular equations with fractional powers of the operator coefficient of the equation	49
F. Golse	
Partial regularity in time for the Landau equation	50
V. Z. Grines	
On the coexistence of hyperbolic basic sets of dynamical systems	50
A. Hammami, A. Daouas, K. Saoudi	
Existence and multiplicity of solutions for a nonlocal problem with critical Sobolev–Hardy nonlinearities	52

N. O. Ivanov	Smoothness of generalized solutions of the second boundary-value problem for differential-difference equations on an interval of non-integer length . . .	53
E. P. Ivanova	Elliptic differential-difference equations with finite and infinite boundaries traces	53
N. R. Izvarina, A. Yu. Savin	On elliptic complexes in relative elliptic theory	54
Sh. Jabeen, M. Younis	Fixed point results of Reich contraction in fuzzy metric spaces endowed with graph	55
E. Kalita	Nonlinear elliptic equations of nonstrictly divergent form and subcoercive operators	56
L. A. Kalyakin	Perturbation of simple wave	57
M. I. Kamenskii, V. V. Obukhoskii, G. G. Petrosyan	On the existence of almost periodic solutions for systems governed by differential equation and sweeping process	58
A. Karapetyants	On certain new classes of integral operators in complex analysis	59
A. A. Kashchenko	Nonlocal dynamics of a model of coupled oscillators with large parameter and delay	59
I. S. Kashchenko	Bifurcations in second-order differential equations with delay	60
M. Khristichenko, Yu. Nechepurenko, D. Grebennikov, G. Bocharov	Computation and tracing of stationary solutions of Marchuk-Petrov model	61
P. Knopf, J. Weber	The two and one-half dimensional Vlasov-Poisson system: well-posedness and stability of confined steady states	62
A. N. Konenkov	On uniqueness of the classical solution to the Dirichlet problem for a parabolic system on the plane	63
A. A. Kon'kov	On blow-up conditions for solutions of inequalities with the ∞ -Laplacian	64
M. T. Kosmakova, M. I. Ramazanov	On an integral equation for fractionally loaded boundary value problem of heat conduction	65
A. A. Kovalevsky	Variational problems with measurable bilateral constraints in variable domains	66
V. A. Kozhevnikov, E. G. Apushkinskiy, A. M. Biryukov	Comparison of numerical methods for solving the homogeneous Dirichlet problem for the Helmholtz equation in an arbitrary domain	68
E. P. Kubyskin	Bifurcation analysis of periodic solutions to a nonlinear functional differential equation with a small parameter at the derivative	69

S. B. Kuksin	Kolmogorov's theory of turbulence and its rigorous one-dimensional analogy	70
V. G. Kurbatov, V. I. Kurbatova	Estimates of Green's function of the bounded solutions problem	70
A. Kuznetsov, E. Shishkina	Random motion in arbitrary direction: analytical model and simulation	71
K. Lee	Gromov–Hausdorff stability of global attractors and inertial manifolds	72
V. P. Leksin	Classical hypergeometric functions and Jordan–Pochhammer systems	73
V. V. Liiko	Mixed boundary-value problems for elliptic differential-difference equations in a bounded domain	75
V. L. Litvinov, K. V. Litvinova	Resonant vibration amplitude of a beam of variable length	76
T. Lomonosov	On algebraic approach in finding particular solutions of certain nonhomogeneous ODEs	77
E. I. Mahmoud	Analytical solution for fractional advection diffusion equation with variable coefficients and source term	78
S. Sh. Maity, S. Pal	Role of space in an eco-epidemic predator–prey system with the effect of fear and selective predation	79
V. V. Malygina	Estimation of the exponent of stable solutions to functional differential equations	80
I. N. Maslenikov	Local dynamics of a second-order equation with a delay in the derivative	81
A. E. Merzon, P. N. Zhevandrov, J. E. De La Paz Mendez	Exact solution of the BVP for the Helmholtz equation in a nonconvex angle with periodic boundary data	82
A. V. Mikhailov	Quantisation of free associative dynamical systems	83
D. S. Minenkov, M. M. Votikova	Asymptotics of the 1D shallow water equations in the form of running waves in a basin with variable bottom with vertical and gentle walls	83
C. A. Morales	On neural network trainings	84
A. B. Muravnik	Elliptic differential-difference equations with nonorthogonal translations in half-spaces	84
A. I. Neishtadt	On destruction of adiabatic invariance	85
A. V. Nesterov, A. V. Zaborskii	Asymptotics of the solution to the Cauchy problem for a singularly perturbed differential operator transport equation with small diffusion	86

D. A. Neverova	Mathematical modelling of immunodominance	87
N. Nguyen	Structural stability and limit shadowing for flows	87
V. V. Obukhovskii, S. V. Kornev, E. N. Getmanova	On the operator of translation along the trajectories of solutions of random differential inclusions	88
S. E. Pastukhova	Improved resolvent approximations in homogenization of higher order elliptic operators	89
A. V. Pavlov	Reflection of functions, geometry in space and regularity of the Laplace transform	90
S. Piskarev	Fractional differential equations and their approximations	91
M. V. Plekhanova, E. M. Izhberdeeva	Solvability of a linear degenerate equation with the Dzhrbashyan–Nersesyan derivative	92
P. I. Plotnikov	Geometric flows and shape optimization	93
M. A. Pogrebnyak	Behaviour of solutions of the traffic flow mathematical model	95
A. Poliakovskiy	Some remarks on a formula for Sobolev norms due to Brezis, Van Schaftingen, and Yung	96
M. V. Polovinkina, I. P. Polovinkin	On stability of stationary solutions in mathematical models in natural sciences and humanities	97
D. M. Polyakov	Spectral asymptotics for fourth-order differential operator	98
S. S. Postnov	Optimal control problems for linear fractional-order equations under different definitions of fractional integro-differential operators	99
A. F. Pranevich	About integral invariants of multidimensional differential systems	100
N. A. Rautian	Semigroup approach to studying Volterra integro-differential equations arising in viscoelasticity theory	101
A. V. Razgulin	Bound rates for convergence of FEM in the problem of wavefront reconstruction from its slope measurements with fractional order stabilizer	101
L. E. Rossovskii, A. A. Tovsultanov	Functional differential equations with dilation and symmetry	102
E. M. Rudoy	Justification of models of plates containing hard thin inclusions inside	103
N. Yu. Saburova	Estimates of total bandwidth for Schrödinger operators on periodic graphs	104

V. Zh. Sakbaev, A. D. Shiryayeva	Nonlinear Schrödinger equation with delay and its regularization	104
A. Yu. Savin, K. N. Zhuikov	Eta-invariants for G -operators	105
D. Seba	On the nonlocal integral boundary value problem for fractional differential equations	106
A. I. Shafarevich	Short-wave asymptotics for evolutionary equations with abruptly varying coefficients	107
I. Shafirir, D. Golovaty	Minimizers of a variational problem for nematic liquid crystals with variable degree of orientation in two dimensions	107
L. G. Shagalova	Generalized solution of the Hamilton–Jacobi equation with a three-component hamiltonian exponentially dependent on the momentum	108
M. V. Shamolin	Tensor invariants of dynamical systems with a finite number of degrees of freedom with dissipation	109
T. A. Shaposhnikova	Boundary optimal control and homogenization: critical case	110
A. E. Shishkov	Large and very singular solutions to semilinear elliptic equations	110
A. A. Shkalikov	Half-range problem in operator theory	111
V. K. Shukla	Finite-time generalized synchronization between chaotic systems	112
S. Singh, V. K. Singh	A matrix approach for nonlinear weakly singular integro-partial differential equations	113
O. V. Solonukha	On solvability of parabolic differential-difference equations	113
N. Srivastava, V. K. Singh	A new numerical approximation of Caputo fractional derivative and its applications	114
V. A. Stukopin	Asymptotics of eigenvalues of large Toeplitz matrices	115
O. A. Sultanov	Bifurcations in near-Hamiltonian systems with damped oscillatory perturbations	116
T. A. Suslina	Homogenization of nonstationary Schrödinger-type equations	117
I. A. Taimanov	Singularities of solutions to soliton equations represented by L, A, B -triples and the zero level discrete spectra of L -operators	118
S. V. Tikhov, D. V. Valovik	Integral characteristic equation method to solve a nonlinear eigenvalue problem	119

A. A. Tolchennikov	Solution of the two-dimensional massless Dirac equation with linear potential and localized right-hand side	120
Kh. G. Umarov	Blow-up and global solvability of the Cauchy problem for the equation of non-linear long longitudinal waves in a viscoelastic rod	120
V. B. Vasilyev	On some questions in the theory of elliptic boundary-value problems	121
Yu. Vassilevski, A. Danilov, A. Lozovskiy, M. Olshanskii	Stable numerical schemes for modelling incompressible fluid flows in time-dependent domains	122
L. Véron	Boundary singular problems for mixed quasilinear equations	123
V. V. Vlasov	Spectral analysis of Volterra integro-differential equations and associated semigroups of operators	124
V. Volpert	Mathematical modelling of respiratory viral infections	125
R. Yang	Maxwell's equations and Yang–Mills equations in complex variables	125
N. V. Zaitseva	Smooth solutions of hyperbolic differential-difference equations in a half-space	126
M. L. Zaytsev	Peculiarity of solutions of Laplace equation as applied to the problem of describing the motion of a hydrodynamic discontinuity in a potential and incompressible flow in an external region	127
M. Zefzouf, M. Fabien	A new symmetric interior penalty discontinuous Galerkin formulation for the Serre–Green–Naghdi equations	127
K. N. Zhuikov	On the index of differential-difference operators in an infinite cylinder	128
A. A. Алиханов	Нелокальная краевая задача Стеклова первого класса для уравнения теплопроводности	129
K. В. Бойко	Вырожденное линейное уравнение с несколькими дробными производными Герасимова–Капуто	130
M. В. Булатов, Е. В. Маркова	Коллокационно-вариационные подходы к решению интегральных уравнений Вольтерра I рода	131
В. В. Веденяпин, Н. Н. Фимин, В. М. Чечеткин	Вывод уравнений электродинамики и гравитации из принципа наименьшего действия Гильберта–Эйнштейна–Паули	132
В. Ф. Вильданова	Энтропийное решение для уравнения с сингулярным потенциалом в гиперболическом пространстве	134

Р. Ю. Воротников	Спектральные свойства дифференциально-разностных операторов на конечном интервале	135
Р. К. Гайдуков, В. Г. Данилов	Моделирование фазовых переходов в подвижных средах	136
А. Д. Годова, В. Е. Федоров	Интегро-дифференциальные уравнения с ограниченными операторами в банаховых пространствах и их приложения	137
В. Н. Денисов	О скорости стабилизации решения задачи Коши для параболического уравнения второго порядка с растущими старшими коэффициентами	138
Ю. А. Дубинский	О некоторых нелокальных задачах теории поля на плоскости	139
В. Г. Задорожний	Стохастическая модель боевых действий	141
В. В. Зайцев	Оценка воздействия неконтролируемых факторов на (квази)динамическую систему	141
Д. А. Загора	К задаче о нормальных колебаниях смеси двух жидкостей	142
Т. А. Захарова	Начальная задача для вырожденного квазилинейного уравнения с производными Герасимова–Капуто	143
М. Б. Зверева, М. И. Каменский	О математических моделях с нелинейным граничным условием	144
К. А. Калиева, Б. Б. Базарбай, Zh. Dong	О некоторых важных задачах теории параболических уравнений	145
Б. Е. Кангужин	Граничные обратные задачи для сингулярных возмущений оператора Лапласа	146
С. А. Кащенко, Д. О. Логинов	Бифуркация Андронова–Хопфа в логистическом уравнении с запаздыванием, диффузией и быстро осциллирующими коэффициентами	147
Л. М. Кожевникова, А. П. Кашникова	О решениях нелинейных эллиптических уравнений с L_1 -данными в неограниченных областях	148
Б. Д. Кошанов, А. П. Солдатов	О разрешимости обобщенной задачи Неймана для эллиптического уравнения высокого порядка в бесконечной области	149
Е. К. Куликов, А. А. Макаров	Об уточнении метода сплайн-коллокаций решения некоторых интегральных уравнений	151
Г. Г. Лазарева	Математическое моделирование вращения расплава под воздействием импульсных нагрузок	152
И. Ф. Леженина	Об оценке резольвенты одного оператора, порожденного дифференциальным уравнением второго порядка с нелокальными условиями	153

В. А. Лукьяненко	Анализ структур функционально-дифференциальных уравнений нелинейной оптики	154
Ф. Х. Мукминов	О существовании и единственности ренормализованного решения для эллиптического уравнения с мерозначным потенциалом	155
В. Е. Назайкинский	Эффективные квазиклассические асимптотики	156
С. П. Новиков	Нелинейные волны и солитоны	157
Е. В. Радкевич, О. А. Васильева, П. Захарченко	О неустойчивых состояниях равновесия двумерной системы Бродвелла	158
С. М. Ситник, А. А. Ариан, М. К. Кудоси, А.-К. Хаитхам	Операторы преобразования: некоторые современные результаты	160
Л. С. Соловарова, М. В. Булатов	Коллокационно-вариационный подход для решения дифференциально-алгебраических уравнений	161
Д. В. Трещев	Линеаризация с помощью функционального параметра	162
М. М. Туров	Квазилинейные уравнения с несколькими производными Римана—Лиувилля в секториальном случае	162
В. Е. Федоров, Н. В. Филин	Задача Коши для одного класса уравнений с распределенной дробной производной Герасимова—Капуто	163
М. В. Яшина, А. Г. Таташев	Спектр скоростей потоков на открытых и замкнутых цепочках как непрерывных или дискретных динамических системах	164