NATIONAL ACADEMY
OF SCIENCES OF
UKRAINE

PIDSTRYHACH
INSTITUTE
OF APPLIED
PROBLEMS OF
MECHANICS AND
MATHEMATICS

APPLIED PROBLEMS OF MECHANICS AND MATHEMATICS

SCIENTIFIC PROCEEDINGS

FOUNDED IN 2003

Issue 7 Lviv 2009

CONTENTS

Ptashnyk B. Yo., Repetylo S. M. Boundary-value problem with mixed conditions for equations with pseudodifferential operators with analytical symbols	7
Andrusyak R. V., Kyrylych V. M., Peliushkevych O. V. The problem for singular hyperbolic system in angular domain	15
Kmit I. Ya. On regularizers for first-order one-dimensional hyperbolic systems	23
Khmeljovskiy M. G., Tsymbal V. M. Periodic problems for singularly perturbed parabolic equations of the second order	36
Zagorodnyuk A. V., Kravtsiv V. V. Specrum of algebra of block-symmetrical analytical functions	47
Solomko A. V., Sharyn S. V. Operator Fourier-Laplace transformation of convolution algebra of Roumieu ultradistributions	55
Lopushansky A. O. Nonlinear operator equations in complex interpolation scales	63
Vasyunyk I. S., Zabavsky B. V. Stable rang adequate DUO-Bezout ring and generalized	69
Shavarovskii B. Z. On the similarity of matrix polynomials of simple structure	74
Dzhaliuk N. S. The association of factorizations of block triangular matrices and of their diagonal blocks over commutative principal ideal domains	82
Malojid-Glebova M. O. About the torsion-theoretical spectrum of left invariant ring and weakly-multiplication and pure- multiplication modules	87
Gatalevych A. I. Commutative at zero clean rings	95

Zelisko H. V., Kysil T. M. Simple commutative in zero ring of elementary	
divizors is 2-simple	
Melnyk I. O. On differentially multiplication modules	
Zdomska L. M. Hasse principle for Severi-Brauer varieties over pseudoglobal fields	
Kit H. S., Sushko O. P. Effect of heat source for stress state of the body v	with
thermally insulated circular crack	
Holubets T. V., Terletskii R. F. Evaluating of delectic losses in the porous humided medium based on Wentzel-Kramers-Brillouin approximat at microwave emission	tion
Matus V. V., Kunets' Ya. I. Scattering of flexural waves by through rigid inclusion in semi-infinite thin plate	
Marchuk M. V. Pakosh V. S. Lesyk O. F. Influence of inertia of normal el on basic natural frequency square plate pliable to transversal shear	
Antonenko N. M., Velichko I. G. The modeling of the bound-failure crack-filler on the boder of the multilayer package and the half-plane	
Harmatiy H. Yu. Thermo-stressed state of thermosensitive space with a spherical cavity under convective heat exchange with environment of time-varying temperature	
Lozynskyy Yu. Ya., Tokovyy Yu. V. Displacements-tractions relations on longer sides of an elastic strip	the
Opanasovych V. K., Bassa N. M. Thermoelastic state of plate with heat in cracks on circle arcs with taking into account the complete smooth contact of the crack faces	L
Peleshchak R. M., Bachynski I. Y., Doroshenko M. V., Gal Y. M. Nonlinea model of the potential distribution in the nanoheterosystem with a quantum dot for Poisson-Fermi-Dirac equation	
Pyanylo Ya. Simulation of the substitution of gases in porous media	
Nykolyshyn T. M. Transversally-isotropic cylindrical shell with a system of surface cracks in elastic medium	of
CHRONICLE AND INFORMATION	