

NATIONAL
ACADEMY
OF SCIENCES
OF UKRAINE

PIDSTRYHACH
INSTITUTE OF
APPLIED PROBLEMS
OF MECHANICS AND
MATHEMATICS

MATHEMATICAL METHODS and PHYSICOMECHANICAL FIELDS

SCIENTIFIC JOURNAL

FOUNDED IN 1975

Vol. 53, No. 2

L'viv 2010

CONTENTS

<i>Mykytyuk I. V.</i> . Invariant Kähler structures on the cotangent bundles of reductive spaces	7
<i>Popov G. Ya.</i> . Principles of theory of two-dimensional infinite systems of algebraic equations	17
<i>Slonevsky R. V., Stolyarchuk R. R.</i> . Local error estimation of fractional-rational multistep methods with variable step of integration	28
<i>Osadchuk V. A., Banakhelych Yu. V.</i> . Estimation of admissibility of ring crack-type defects in zone of welded field joints of main pipelines	37
<i>Pasternak Ia. M., Sulym H. T.</i> . Dual boundary element method for the problems of thin inclusions theory	46
<i>Litvin O. V., Popov V. G.</i> . Study on effect of type of defect and conditions of its interaction with the matrix on scattered wave field by it under antiplane strain	58
<i>Prokopovych I. B.</i> . General approach to mathematical models for nondestructive stress testing. I. Methodological and physical substantiation and kinematic model	68
<i>Maksymuk A. V., Shcherbyna N. N.</i> . Contact interaction of cylindrical shells with different length	76
<i>Monastyrskyy B. Ye., Mykytyn M. M.</i> . Axially symmetric problem on local separation of elastic half-space from rigid base due to point source of cooling	84

<i>Kirichok I. F., Karnaukhova T. V.</i> Influence of boundary conditions and temperature of dissipative heating on active damping of forced axisymmetric bending vibrations of circular viscoelastic plates by piezoelectric sensors and actuators	94
<i>Hachkevych O. R., Humenchuk O. B., Gajek M.</i> Thermomechanical behavior of semitransparent solids with cavities at thermal radiation	108
<i>Kushnir R. M., Nykolyshyn M. M., Zhydyk U. V., Flyachok V. M.</i> Modeling of thermoelastic processes in a heterogeneous anisotropic shells with initial deformations	122
<i>Popovych V. S., Gorechko N. A.</i> Calculation procedure for nonstationary temperature stresses in thermosensitive half-space	137
<i>Yevtushenko A. A., Kuciej M.</i> Heat transfer during sliding of a plane-parallel layer on foundation	147
<i>Fil'shtinskii L. A., Mukomel T. V., Kirichok T. A.</i> Solution of a three-dimensional boundary-value problem for fractional differential heat conduction equation	156
NEW ITEMS AND INFORMATION	
<i>To the 80-th birth anniversary of Nina Opanasivna Virchenko</i>	161