

CONTENTS

J. ALBRECHT, F. GOERISCH (CLAUSTHAL-ZELLERFELD) Untere Schranken für die Eigenwerte Stekloffscher Eigenwertaufgaben	9
H. AMANN (ZÜRICH) Solvability Properties of Semilinear Operator Equations ..	14
F. M. ARSCOTT (WINNIPEG) On the Solution of Indentation and Crack Problems in Linear Elasticity by Use of Higher Special Functions	21
O. AXELSSON (NIJMEGEN) On the Iterative Solution of Finite Element Systems of Equations	25
V. BARBU (IASI) Necessary Conditions for the Multiple Integral Problem and Elliptic Variational Inequalities	30
J. W. BEBERNES (BOULDER) Ignition for a Gaseous Thermal Reaction	34
H. BECKERT (LEIPZIG) The Solution of the Initial Value Problem for the General Dynamic Equations in Nonlinear Elasticity under Damping Conditions	37
L. M. BERKOVIĆ (KUIBYSHEV) Transformations and Factorisation of Ordinary Nonlinear Differential Equations	41
I. BIHARI (BUDAPEST) Oscillation of Bôcher's Pairs with Respect to Halflinear Second Order Differential Equations	45
M. BIROLI (MILANO) Homogenization for Variational and Quasi-Variational Inequalities	47
J. BLIEDTNER (FRANKFURT/MAIN) Integral Representations of Bounded Harmonic Functions	51
D. BOBROWSKI (POZNAN) On the Convergence of Solutions of Random Differential Equations	54
F. BREZZI (PAVIA) Numerical Imperfections near a Critical Point	58
J. BRILLA (BRATISLAVA) New Functional Spaces and Linear Nonstationary Problems of Mathematical Physics	64
R. CONTI (FIRENZE) Controllability of Linear Autonomous Processes	72
J. DESCLoux, J. RAPPAZ (LAUSANNE) Numerical Approximation of a Nonlinear Sturm-Liouville Problem on an Infinite Interval	81

O. DIEKMANN (AMSTERDAM)	
A Duality Principle for Delay Equations.....	84
W. N. EVERITT (DUNDEE)	
On the Transformation Theory of Ordinary Second-Order Linear Symmetric Differential Equations.....	87
M. FARKAS (BUDAPEST)	
Attractors of Systems under Bounded Perturbation	91
F. FAZEKAS (BUDAPEST)	
Matrix Analysis of Certain Dynamical Systems in Technics .	95
M. FEISTAUER (PRAGUE)	
On the Mathematical and Numerical Study of Non-Viscous Axially Symmetric Channel Flows	99
R. GABASOV, P. M. KIRILLOVA (MINSK)	
Конструктивная теория оптимизации дифференциальных систем	103
H. GAJEWSKI, K. ZACHARIAS (BERLIN)	
On an Initial-Value Problem for a Nonlinear Transport Equation in Polymer Chemistry	107
E. GIUSTI (PIRENZE)	
Basic Regularity of the Minima of Variational Integrals .	111
P. B. GOLOKVOŠČIUS (VILNIUS)	
Существование и построение периодических решений одной двухмерной нелинейной периодической системы дифференциальных уравнений	115
K. GRÖGER (BERLIN)	
Dissipation and Asymptotic Behavior of Some Reaction - Diffusion Systems	119
A. HALANAY, V. DRAGAN (BUCHAREST)	
Singular Perturbations with Several Parameters	123
J. HASLINGER (PRAGUE)	
Approximation of Contact Problems with Friction	127
I. HLAVÁČEK, J. NEČAS (PRAGUE)	
Optimization of the Domain in Elliptic Unilateral Boun- dary Value Problems by Finite Element Method	131
M. HOFFMEISTER, D. ULLRICH, B. DRESSLER (BERLIN)	
Three Applications of Differential Equations in Turbulence Research	136
A. HUTÁ (BRATISLAVA)	
Algorithm for Construction of Explicit n-Order Runge- Kutta Formulas for the Systems of Differential Equations of the 1st Order	140
A. F. IZE (SAO PAULO)	
On a Fixed Point Index Method for the Analysis of the Asymptotic Behavior and Boundary Value Problems of Process and Semidynamical Systems	145
W. JÄGER (HEIDELBERG)	
A Diffusion Reaction System Modelling Spatial Patterns ..	155

N. N. JANENKO, N. A. LARKIN, V. A. NOVIKOV (NOVOSIBIRSK) О некоторых новых классах уравнений математической физики ..	159
O. JOHN, J. NEČAS, J. STARÁ (PRAGUE) On the Regularity for 2nd Order Nonlinear Elliptic Systems	165
J. KAČUR (BRATISLAVA) On a Degenerate Parabolic Boundary Value Problem	169
I. T. KIGURADZE (TBILISI) On Some Singular Boundary Value Problems for Ordinary Differential Equations	174
H. W. KNOBLOCH, B. AULBACH (WÜRZBURG) The Role of Center Manifolds in Ordinary Differential Equations	179
R. KODNÁR (BRATISLAVA) On One System of Nonlinear Equations	190
J. KOPÁČEK (PRAGUE) On the Behaviour of the Generalized Solution of the Bi- harmonic Equation in two Dimensions Near Singular Point of the Boundary	194
J. KRÁL (PRAGUE) Potential Flows	198
S. N. KRUŽHKOV (MOSCOW) Chauchy's Problem in the Large for Nonlinear Hyperbolic Equations and for the Korteweg-De Vries Equation	205
M. KUČERA (PRAGUE) Bifurcation Problems for Variational Inequalities	209
J. KURZWEIL (PRAGUE) A Tribute to Bernard Bolzano	212
T. KUSANO (HIROSHIMA) Oscillation Theory of Higher-Order Ordinary and Functional Differential Equations with Forcing Terms	218
A. LASOTA (KATOWICE) Stable, Chaotic and Optimal Solutions of first Order Partial Differential Equations Related with the Cell Kinetics	222
A. LEVIN (JAROSLAVL) Факторизация и непонижение осцилляции на окружности	226
V. LOVICAR (PRAGUE) Free Vibrations for the Equation $u_{tt} - u_{xx} + f(u) = 0$ with f Sublinear	228
J. LCVIŠEK (BRATISLAVA) Duality Methods in the Theory of Optimal Control	231
C. L. MALIKOV (DUSHANBE) Совместность системы линейных обыкновенных дифференциальных уравнений с переменными коэффициентами ...	235

I. MAREK, V. JANOVSKÝ, J. NEUBERG (PRAGUE)	
Maxwell's Equations with Incident Wave as a field Source ..	237
V. N. MASLENNIKOVA, M. E. BOGOVSKY (MOSCOW)	
On the Approximation of Solenoidal and Potential Vector Fields	241
J. MAWHIN (LOUVAIN-LA-NEUVE)	
The Periodic Boundary Value Problem for Some Second Order Ordinary Differential Equations	256
M. MEDVEĎ (BRATISLAVA)	
Generic Bifurcations of Vector Fields with a Singularity of Codimension 3	260
E. V. MEISTER (DARMSTADT)	
Generalized Sommerfeld Half-Plane Problems	264
I. NETUKA (PRAGUE)	
Monotone Extensions of Operators and the First Boundary Value Problem	268
F. NEUMAN (BRNO)	
Linear Differential Equations - Global Theory	272
J. NEUSTUPA (PRAGUE)	
The Dimension of a Set of Singularities of Weak Solutions to the Navier-Stokes Equations	276
NGUYEN THANH BANG (HANOI/WARSAW)	
Multiple Picard's Method for the Stiff Nonlinear Two-Point Boundary Value Problems	280
O. A. OLEINIK (MOSCOW)	
Homogenization of Differential Operators	284
J. POLÁŠEK, K. KOZEL, M. VAVŘINCOVÁ (PRAGUE)	
Mathematische Methoden zur Berechnung der Transonischen Umströmung von dünnen Profilen	288
K. REKTORYS (PRAGUE)	
The Method of Discretization in Time and Partial Differential Equations	293
V. S. SARKISYAN (JEREVAN)	
On the Method of the Solution of Elasticity Theory Problem for the Inhomogeneous and Anisotropic Body	297
I. V. SKRYPNIK (DONEZK)	
Нелинейные эллиптические граничные задачи в областях с мелкозернистой границей	301
K. SMITALOVÁ (BRATISLAVA)	
On Chaos in Difference and Differential-Difference Equations	310
A. G. SVEŠŇNIKOV (MOSCOW)	
Наполнен метод Галеркина в задачах математической физики... ..	314

V. ŠEDA (BRATISLAVA)	
On a Nonlinear Perturbation of a Self-Adjoint Boundary Value Problem	318
Ľ. ŠLAHOR (BRATISLAVA)	
Bifurcation in Mathematical Models of Social and Economic Interaction	324
M. ŠVEC (BRATISLAVA)	
Integral and Asymptotic Equivalence of two Systems of Differential Equations	329
J. TAUFER (PRAGUE)	
On the Transfer of Conditions as Applied to Solving Two-Dimensional Boundary Value Problems	339
W. TÖRNIG (DARMSTADT)	
Monoton konvergente Iterationsprozesse zur Lösung diskretisierter nichtlinearer Randwertprobleme	344
W. VELTE (WÜRZBURG)	
Bounds for Eigenvalues of Differential Equations	348
I. VRKOČ (PRAGUE)	
Strongly Maximal Matrix Functions in Regions Containing Stable Solutions	352
W. WEINELT (KARL-MARX-STADT)	
Convergence Properties of the Finite Difference Method for Solving Variational Inequalities	356
W. L. WENDLAND (DARMSTADT)	
On Boundary Element Methods for Solving Elliptic Boundary Value Problems	360
G. WILDENHAIN (ROSTOCK)	
About the Representation of Solutions of Linear Elliptic Equations of Arbitrary Order	366
Y. YAMADA (NAGOYA)	
On Some Semilinear Volterra Diffusion Equations Arising in Ecology	370
I. E. ZINO (LENINGRAD)	
Методы возмущений в теории теплопроводности	374
M. ZLÁMAL (BRNO)	
Galerkin-Finite Element Solution of Nonlinear Evolution Problems	378
A. ŽENIŠEK (BRNO)	
Finite Element Methods for Linear Coupled Thermoelasticity	387
DIRECTORY OF THE INVITED MATHEMATICIANS	391