

# Contents

Preface	
J Anderson	
The effects of convection on reaction-diffusion equations	1
G Auchmuty	
Minimax results and differential inclusions	6
R C Brown and D B Hinton	
Finding good upper bounds for the best constant in a generalized Hardy Littlewood inequality	11
T A Burton	
Admissible controls in a PDE of Lurie type	16
C Y Chan and D T Fung	
Quenching for coupled parabolic problems	29
C Y Chan and L Ke	
Existence of solutions and critical lengths for time-periodic semilinear parabolic problems	34
C Y Chan and K K Nip	
Quenching for semilinear Euler-Poisson-Darboux equations	39
R Estrada	
Series of Dirac delta functions	44
H Gingold and V Trutzer	
The large time pointwise behaviour of linear degenerate hyperbolic systems	49
J-P Gossez	
Nonresonance in some semilinear Neumann problems	54
Q Du, M Gunzburger and J Peterson	
On the Ginzburg-Landau equations of superconductivity	58

J H Kim and K S Ha Comparison theorems for solutions of one dimensional stochastic differential and integral equations of Ito's type	63
P W Hammer Applications of quasilinearization to parameter identification in partial differential equations	68
D W Brewer and T L Herdman A parameter dependence problem in neutral functional differential equations	74
J H Jaroma, V Lj Kocic and G Ladas Global asymptotic stability of a second-order difference equation	80
B S Lalli and B G Zhang Existence of nonoscillatory solutions for odd order neutral equations	85
Y Latushkin Exact Lyapunov exponents and exponentially separated cocycles	91
U Ledzewicz-Kowalewska Optimality conditions for abnormal optimal control problems with additional equality constraints	96
X B Lin Exponential dichotomy and stability of long periodic solutions in predator-prey models with diffusion	101
A Lunardi Stability of travelling waves in free boundary parabolic problems arising as combustion models	106
A N Lyberopoulos On the $\omega$ -limit set of solutions of scalar balance laws on $S^1$	111
M Maesumi Triple-shock elementary waves for two-phase incompressible flow in porous media	116
G N Hile and C Matawa Existence and uniqueness of solutions to quasilinear elliptic equations	121
A Fonda and J Mawhin An iterative method for the solvability of semilinear equations in Hilbert spaces and applications	126

P S Milojevic Nonlinear Fredholm theory and applications	133
V H Moll and A L Fogelson Activation waves and threshold phenomena in platelet aggregation	153
J Berkovits and V Mustonen On the asymptotic bifurcation for a class of wave equations with sublinear nonlinearity	159
O A Oleinik Some mathematical problems of elasticity and Korn's inequalities	163
C D Pagani, M Verri and A Zaretti On a problem of seakeeping	180
E Avgerinos and N S Papageorgiou Optimal control and relaxation of nonlinear evolution equations	185
F Rothe A priori estimates for nonlinear Poisson equations and phase plane analysis of the Emden-Fowler equation	192
B Ruf Butterflies in banach space and forced secondary bifurcation	201
N G Medhin and M Sambandham Numerical treatment of random integro-differential equations	206
R Saxton Finite time boundary blowup for a degenerate, quasilinear Cauchy problem	212
S Shao and H K Cheng The Maxwell transfer equations: modification of Grad's system, I	216
P X Sheng Fixed point theorems and topological degrees	221
M W Smiley On the asymptotic behavior of nonautonomous dissipative abstract differential equations	226
T Svobodny and F Ahmed A numerical method for control of a distributed parameter equation	231

<b>T J Tabara</b> <b>On an existence problem for the boundary value problem of a second order linear differential equation with polynomial coefficients</b>	<b>236</b>
<b>L Lin, B Temple and J Wang</b> <b>On the convergence of Glimm's method and Godunov's method when wave speeds coincide</b>	<b>241</b>
<b>C Vargas and M Zuluaga</b> <b>On a nonlinear Dirichlet problem type at resonance and bifurcation</b>	<b>248</b>
<b>J Vosmansky</b> <b>Zeros of solutions of linear differential equations as continuous functions of the parameter <math>k</math></b>	<b>253</b>
<b>H Warchall</b> <b>Induced lacunas in multiple-time initial value problems and unbounded domain simulation</b>	<b>258</b>
<b>G Harris, W Hudson and B Zinner</b> <b>Existence of wavefronts for the discrete Fishers equation</b>	<b>265</b>