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CONTEMPORARY MATHEMATICS

Volume 17

Nonlinear Partial Differential Equations

Joel A. Smoller, Editor

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TABLE OF CONTENTS

Preface ix

Papers Submitted

Part I

Theoretical problems and numerical results for nonlinear conservation laws
J. GLIMM 1

Quasilinear hyperbolic partial differential equations and the mathematical theory of shock waves
T. P. LIU 9

Analytical solutions of the Helmholtz equations
C. BARDOS 21

Large time regularity of viscous surface waves
J. T. BEALE 31

Shock waves and the Boltzmann equation
R. CAFLISCH AND B. NICOLAENKO 35

Formation of singularities for nonlinear hyperbolic partial differential equations
K. S. CHENG 45

Conservation laws
R. DiPERNA 57

Recent results for hyperbolic conservation laws
J. GREENBERG 61

On the smoothing of initial discontinuities and the development of singularities in certain quasilinear hyperbolic equations
D. HOFF 67

Non-strictly hyperbolic systems of conservation laws: formation of singularities
B. KEYFITZ AND H. KRANZER 77

On the variable sign penalty approximation of the Navier-Stokes equations
H. KHESHGI AND M. LUSKIN 91

Initial boundary value problems for the equations of motion of compressible viscous fluids
A. MATSUMURA AND T. NISHIDA 109

Convergence of finite difference approximations to nonlinear hyperbolic systems
T. NISHIDA AND J. SMOLLER 117

Linearized stability of extreme shock profiles for systems of conservation laws with viscosity
R. PEGO 125

On some "viscous" perturbations of quasi-linear first order hyperbolic systems arising in biology
M. RASCLE 133

Systems of conservation laws with coinciding shock and rarefaction curves
B. TEMPLE 143

Computational synergetics and mathematical innovation: waves and vortices
N. J. ZABUSKY 153

Part II

Reaction and diffusion in carbon combustion
N. AMUNDSON 165

Bifurcation for colinear solutions to a reaction-diffusion system
D. BARROW AND P. BATES 179

Travelling wave solutions to reaction-diffusion systems modeling combustion
H. BERESTYCKI, B. NICOLAENKO AND B. SCHEURER 189

Stable equilibria with variable diffusion
M. CHIPOT AND J. HALE 209

Diffusion and the predator-prey interaction: steady-state with flux at the boundaries
E. CONWAY 215

Asymptotic flow theory with complex chemistry
P. FIFE AND B. NICOLAENKO 235

Strongly nonlinear detonations
R. GARDNER 257

Differential equations and convergence almost everywhere in strongly monotone semiflows
M. HIRSCH 267

Some ideas in the proof that the Fitz-Hugh-Nagumo pulse is stable
C. JONES 287

Diffusion induced chaos
J. KEENER 293

Monotone and oscillatory equilibrium solutions of a problem arising in population genetics
H. KURLAND 323

Some convection diffusion equations arising in population dynamics
M. MIMURA 343

Finite-dimensional attracting manifolds in reaction-diffusion equations
X. MORA 353

Travelling wave solutions of multi-stable reaction-diffusion equations
D. TERMAN 361

Part III

Creation and breaking of self-duality symmetry - a modern aspect of calculus of variations
M. BERGER 379

Multiple solutions for a problem in buoyancy induced flow
S. HASTINGS AND N. KAZARINOFF 395

Frequency plateaus in a chain of weakly coupled oscillators
N. KOPELL 401

A system of nonlinear pde's arising in the optimal control of stochastic systems with switching costs
S. BELBAS AND S. LENHART 405

L^1 stability of travelling waves with applications to convective porous media flow
S. OSHER AND J. RALSTON 409

A one variable map analysis of bursting in the Belousov-Zhabotinskii reaction
J. RINZEL AND W. TROY 411

Stable and unstable states of nonlinear wave equations
W. STRAUSS 429

Equilibrium states of an elastic conductor in a magnetic field: a paradigm of bifurcation theory
P. WOLFE 443

PREFACE

This is the volume of the proceedings of a conference on Nonlinear Partial Differential Equations, which took place from June 20 - 26, 1982, at the University of New Hampshire in Durham, New Hampshire. The conference was sponsored by the American Mathematical Society, and was funded by the National Science Foundation.

There were 67 participants, of which 16 people gave 1 hour talks, 17 people gave 1/2 hour talks and there were 11 informal 1/2 hour evening talks. In addition there was an informal session on computational and numerical aspects of shock waves.

The theme of the conference was on time-dependent nonlinear partial differential equations; in particular, the majority of the speakers lectured either on shock waves or reaction-diffusion equations and related areas. The first day speakers were asked to give an overview of their field: to describe the main results, and the open problems.

Perhaps the most interesting feature of this conference was the constant interplay between analysis, topology and computational methods.

I would like to thank the members of the organizing committee, consisting of C. Conley, P. Fife, T. P. Liu for their help and constant encouragement.

I am extremely grateful to Carole Kohanski for doing a superb job of making the arrangements, and for being so helpful (and cheerful!) throughout the week.

Joel Smoller