CONTENTS

Nonlinear partial differential equations conference
By Klaus Schmitt ........................................... 213

An invariance principle for a class of monotone systems and
application to degenerate parabolic equations
By N.D. Alikakos and P.W. Bates ....................... 215

Resolving singular nonlinear equations
By E.L. Allgower and K. Böhmer ....................... 225

On the simplicity and uniqueness of positive eigenvalues admitting
positive eigenfunctions for weakly coupled elliptic systems
By Robert Steven Cantrell ....................... 269

On the geometry of level sets of positive solutions of semilinear
elliptic equations
By Chris Cosner and Klaus Schmitt ............... 277

On superlinear elliptic problems with nonlinearities interacting
only with higher eigenvalues
By Djairo G. De Figueiredo ....................... 287

Necessary and sufficient conditions for multiparameter bifurcation
By Jorge Ize ............................................. 305

Structure parameters in rotating Couette-Poiseuille channel flow
By George H. Knightly and D. Sather ............... 339

On spurious numerical solutions for nonlinear eigenvalue problems
By Hendrick J. Kuiper ............................... 357

Multi-grid continuation and spurious solutions for nonlinear
eigenvalue problems
By H. D. Mittleman ................................. 387

On the collapse of the resonance structure in a three-parameter
family of coupled oscillators
By Hans G. Othmer and Masaji Watanabe ........ 403

Newton flows for real equations
By Heinz-Otto Peitgen, Michael Prüfer
and Klaus Schmitt ...................................... 433
Inflow boundary conditions for steady flow of viscoelastic fluids
with differential constitutive laws
By Michael Renardy ............................... 445

Instabilities in steady flows of two fluids
By Yuriko Renardy ................................. 455

Bounded and almost periodic solutions of semi-linear parabolic equations
By James R. Ward, Jr. ............................. 479

Absence of eigenvalues of the acoustic propagator in deformed wave guides
By R. Weder ....................................... 495