CONTENTS

PLENARY LECTURES

Eduard FEIREISL — Asymptotic analysis of compressible, viscous and heat conducting fluids	1
Robert L. PEGO — Nonlinear dynamics of three solvable aggrega- tion models	35
Invited Talks	
Chao-Nien CHEN and Hung-Jen TSAI — Some recent progress on standing waves of FitzHugh–Nagumo system	63
Hiroyasu FUJIWARA and Tatsuo IGUCHI — A shallow water approx- imation for water waves over a moving bottom	77
Nakao HAYASHI and Pavel I. NAUMKIN — Quadratic nonlinear Klein–Gordon equation in 2d, Cauchy problem	89
Song JIANG — Existence of weak solutions to the three-dimensional steady compressible Navier–Stokes equations for any specific heat ratio $\gamma > 1$	101
Shigeaki KOIKE — On the ABP maximum principle for L^p -viscosity solutions of fully nonlinear PDE	113
Kenji NISHIHARA — Diffusion phenomenon of solutions to the Cauchy problem for the damped wave equation	y 125
TakaoOhta — Self-propelled dynamics of deformable domain in excitable reaction diffusion systems	137
Jun-ichi SEGATA — Long time behavior of solutions to non-linear Schrödinger equations with higher order dispersion	151
Organized Sessions	
Yasuhito MIYAMOTO — Stable patterns and Morse index one solutions	165
Futoshi TAKAHASHI — Blow up points and the Morse indices of solutions to the Liouville equation: inhomogeneous case	175
Goro Akagi and Ryuji Kajikiya — Stability analysis of asymp- totic profiles for fast diffusion equations	183

Shinya OKABE — The gradient flow for the modified one-dimensional Willmore functional defined on planar curves with infinite length	193
Atsushi ANMA and Kunimochi SAKAMOTO — Destabilization of uniform steady states in linear diffusion systems with nonlinear boundary conditions	201
Peter VAN HEIJSTER, Tasso J. KAPER and Cynthia A. BRADHAM — A note on a reaction-diffusion model describing the bone morphogen protein gradient in Drosophila embryonic pattern- ing	209
Mitsuru Shibayama — Minimax approach to the n -body problem	221
Kazuyuki YAGASAKI — Analytic and algebraic conditions for bi- furcations of homoclinic orbits in reversible systems	229
Yoshikazu GIGA, Qing LIU and Hiroyoshi MITAKE — Large-time asymptotics for Hamilton–Jacobi equations with noncoercive Hamiltonians appearing in crystal growth	235
Hideki MURAKAWA — Numerical solution of nonlinear cross-diffusion systems by a linear scheme	1 243
Shigetoshi YAZAKI — A numerical scheme for the Hele-Shaw flow with a time-dependent gap by a curvature adjusted method	253
Jeongwhan CHOI, Dal-Soo LEE, Sangho OH, Shu-Ming SUN and Sung-Im WHANG — Mathematical, numerical and experimen- tal study of solitary waves	263
Masaya MAEDA and Satoshi MASAKI — A survey on nonlinear Schrödinger equation with growing nonlocal nonlinearity	273
Hideo Kubo — On the exterior problem for nonlinear wave equa- tions with small initial data	281
Makoto NAKAMURA — On the solutions for nonlinear wave equa- tions with localized dissipations in exterior domains	289
Yoshihiro UEDA, Renjun DUAN and Shuichi KAWASHIMA — Large time behavior of solutions to symmetric hyperbolic systems with non-symmetric relaxation	295
Jens WIRTH — Diffusion phenomena for partially dissipative hyperbolic systems	303

Tomoyuki KAKEHI — Schrödinger equations on compact symmetric spaces and Gauss sums	311
Mitsuru SUGIMOTO — A vector fields approach to smoothing and decaying estimates for equations in anisotropic media	319
Renjun DUAN, Shuichi KAWASHIMA and Yoshihiro UEDA — Dissi- pative structure of the coupled kinetic-fluid models	327
Yasunori MAEKAWA — Remark on C_0 -semigroups with scaling invariance	337
Shu WANG, Yuehong FENG and Xin LI — Existence of global smooth solutions to the Cauchy problem of bipolar Navier– Stokes–Maxwell system	347
Contributed Talks	
Thomas Bellsky — Allen–Cahn equation as a long-time modula- tion to a reaction-diffusion system	359
Jan BŘEZINA — On decay properties of the linearized compress- ible Navier–Stokes equations around time-periodic flows in an infinite layer	369
Priyanjana M. N. DHARMAWARDANE, Tohru NAKAMURA and Shuich KAWASHIMA — Decay estimates of solutions for nonlinear vis- coelastic systems	i 377
Daniele GARRISI — Orbitally stable standing-wave solutions to a coupled non-linear Klein–Gordon equation	387
Song JIANG, Qiangchang JU and Fucai LI — Low Mach number limit for the compressible non-isentropic magnetohydrodynamic equations	399
Yukio KAN-ON — On the bifurcation structure of radially symmetric positive stationary solutions for a competition-diffusion system	409
Keiichi KATO, Masaharu KOBAYASHI and Shingo ITO — Wave front set defined by wave packet transform and its application	417
Takayuki KOBAYASHI and Takayuki KUBO — Weighted estimate of Stokes semigroup in unbounded domains	427
Chunhua LI — Further decay results on the system of NLS equa- tions in lower order Sobolev spaces	437

Masaya MAEDA — Stability of ground states of NLS with fourth order dispersion	445
Haruya MIZUTANI — Strichartz estimates for Schrödinger equations with variable coefficients and unbounded potentials	453
Yūki NAITO — A remark on self-similar solutions for a semilinear heat equation with critical Sobolev exponent	461
Makoto NARITA — On spherically symmetric gravitational collapse in the Einstein–Gauss–Bonnet theory	469
Kei NISHI, Yasumasa NISHIURA and Takashi TERAMOTO — Be- haviors of a front-back pulse arising in a bistable medium with jump-type heterogeneity	479
Shinya NISHIBATA, Masashi OHNAWA and Masahiro SUZUKI — The mathematical justification of the Bohm criterion in plasma physics	489
Mamoru OKAMOTO — Well-posedness of the Cauchy problem for the Maxwell–Dirac system in one space dimension	497
Hiroshi TAKEDA and Shuji YOSHIKAWA — On the decay property of solutions to the Cauchy problem of the semilinear beam equation with weak damping for large initial data	507
Morimichi UMEHARA — Global existence of the spherically symmetric flow of a self-gravitating viscous gas	515
Chi-Ru YANG and Ting-Hui YANG — Existence of traveling wave solution in a diffusive predator-prey model with Holling type-III functional response	523
-	