AMS-HKMS Meeting 2000

(A special session of the Amer. Math. Soc. / Hong Kong math. Soc. joint meeting)

13-16 December 2000, Baptist University of Hong Kong

Special Session on:

Theoretical and Numerical Aspects of Nonlinear Conservation Laws

Special session organizers:

Tao Tang
Hong Kong Baptist University

Zhouping Xin
Chinese University of Hong Kong
& New York University

December 13

2:00-2:30 **Grafton Hui**, HKUST
On contact overheating and other computational difficulties of shock-capturing methods

2:30-3:00 **Gerald Warnecke**, Magdeberg, Germany
Convergence theory for relaxation schemes

3:00-3:30 **Hailiang Liu**, UCLA
Critical thresholds phenomena in a class of Euler-Poisson equations of fluid dynamics and plasma physics

3:30-3:45 Break

3:45-4:15 **Hideo Kawarada**, Chiba U, Japan
Multi-phase flow with reaction

4:15-4:45 **Danping Yang**, Shandong U, China
Quasi-least-squares mixed finite element scheme based on a discrete minus one inner project for steady flow with heat transfer

4:45-5:15 **Peter Pang**, NUS, Singapore
Nonlinear Schroedinger equations and conservation laws

December 15

11:15-11:45 **Chi-Wang Shu**, Brown
Finite volume WENO schemes and the treatment of negative weights

11:45-12:15 **T. Tang**, HKBU
Moving mesh method based on harmonic maps and its application to hyperbolic conservation laws

December 14

11:15-11:45 **Rolf Jeltsch**, ETH Zurich
An Explicit divergence-free upwindig method for the MHD-equations

11:45-12:15 **Kun Xu**, HKUST
Gas-kinetic schemes for flow simulations

2:00-2:30 **Robin Young**, U of Massachusetts at Amherst
Wave Interactions in Nonlinear Elastic Strings

2:30-3:00 **I-Liang Chern**, National Taiwan U
Long time behaviors of solutions of relaxation hyperbolic systems with non-equilibrium far-field states

3:00-3:30 **S.-H. Yu**, City U
Construction of Shock Profiles

3:30-3:35 Break

3:45-4:15 **Tong Yang**, City U
Some recent results on compressible flow with vacuum

4:15-4:45 **Weicheng Wang**, National Tsinghua U
Energy and helicity preserving schemes for hydrodynamic and magnetohydrodynamic flows with coordinate symmetry

4:45-5:15 **Chi-Tien Lin**, Providence Univ, Taiwan
New nonstaggered, nonoscillatory, high resolution central schemes for conservation laws