Wednesday December 11, 2002

19:00  Welcome Reception  
Lam Woo International Conference Center  
End of Reception

Thursday December 12, 2002

8:30  Registration, Coffee/Tea  
WLB203

9:00  Opening Ceremony  
Chair: Tao Tang (HKBU)  
Professor C. F. Ng, President, HKBU  
Professor Fred Hickernell, Director of JRIAM  
Professor Chi-Wang Shu, Co-organizer

9:25  Photo

Plenary Session A:  
Chair: Guillermo Sapiro (Minnesota)

9:40  Daniel D Joseph (University of Minnesota)  
Floating Particles

10:30  Dimitri Vvedensky (Imperial College, United Kingdom)  
Stochastic Differential Equations for Driven Lattice Systems

11:20  Coffee Break

Contributed Talk Session A:  
Chair: Jun Zou (CUHK)

11:40  Guowei Wei (Michigan State University)  
A Local Spectral Method for Scientific Computing

12:00  Fred J. Hickernell (Hong Kong Baptist University)  
Trigonometric Spectral Methods on Lattices

12:20  Lunch

Plenary Session B:  
Chair: Zhong-Ci Shi (Chinese Academy of Sciences)

2:00  Chia-Kun Chu (Columbia University)  
A Revisit of Mixed Elliptic-Hyperbolic Equations

2:50  Endre Süli (University of Oxford, United Kingdom)  
hp-Adaptive Finite Element Approximation of Partial Differential Equations with Nonnegative Characteristic Form

3:40  Coffee Break

Contributed Talk Session B:  
Chair: Xu-Dong Liu (UCSB)

4:00  Kun Xu (Hong Kong University of Science and Technology)  
Gas-kinetic Schemes for Fluid Simulations

4:20  Ning Zhao (Nanjing University of Aeronautics and Astronautics, China)  
Applications of Ghost Fluid Methods to Instabilities of Fluid Interfaces and Synthetic Jet

4:40  Antonio Marquina (University of Valencia, Spain)  
Capturing Material Interfaces with High Order Conservative Methods

5:00  Weijun Tang (Institute of Applied Physics and Computational Mathematics, China)  
Simulation of Fluid Interface Instability

5:20  Dong Li (Princeton University)  
Chebyshev Spectral Methods on Lattices

5:40  Zhongyi Huang (Tsinghua University, China)  
Atomistic-Continuum Method for the Simulation of Crystalline Materials

6:30  Dinner (Refrew Seafood Restaurant, Baptist University Campus)
Friday December 13, 2002

8:40  Coffee/Tea  
WLB203

Plenary Session C:  
Chair: David Gottlieb (Brown)

9:00  Fanghua Lin (Courant Institute, NYU)  
*Multi-Energy Levels and Time Scales for Coupled Schrodinger Dynamics*

9:50  Yann Brennier (CNRS Nice and Universite Paris 6, France)  
*Extended Optimal Transportation Theory*

10:40  Coffee Break

Contributed Talk Session C:  
Chair: Xiao-Ping Wang (HKUST)

11:00  I-Liang Chern (National Taiwan University, Taiwan)  
*Acceleration Methods for Total Variation-based Image Restoration*

11:20  Ola Marius Lysaker (University of Bergen, Norway)  
*Noise Removal Using Fourth-Order Partial Differential Equations with Applications to Medical Magnetic Resonance Images in Space and Time*

11:40  Guojun Liao (University of Texas)  
*An Adaptive Moving Mesh Algorithm for Finite Elements*

12:00  Justin Wan (University of Waterloo, Canada)  
*Essentially Nonoscillatory Multigrid Time Stepping Schemes*

12:20  Boris N. Azerenok (Computing Center of Russian Academy of Sciences, Russia)  
*Adaptive Mesh Redistribution Method in Hyperbolic Problems of Gas Dynamics*

12:40  Lunch

Plenary Session D:  
Chair: Jian-Guo Liu (Maryland)

2:10  Zhong-Ci Shi (Chinese Academy of Sciences, China)  
*Some Low Order Quadrilateral Reissner-Mindlin Plate Elements*

3:00  Guillermo Sapiro (University of Minnesota)  
*Image Inpainting and Camouflage: Do Not Believe What You See*

3:50  Coffee Break

Contributed Talk Session D:  
Chair: Xiaonan Wu (HKBU)

4:10  Huaxiong Huang (York University, Canada)  
*Motion of Liquid Drops on a Solid Surface*

4:30  De-Kang Mao (Shanghai University, China)  
*Towards Front-Tracking Based on Conservation in Two Space Dimensions, Tracking Fronts on Cartesian Grid*

4:50  Francesc Arandiga (University of Valencia, Spain)  
*Zooming into an Image with ENO Interpolation*

5:10  Susana Serna (University of Valencia, Spain)  
*Power ENO Methods: A Fifth Order Accurate Weighted Power ENO Method*

5:30  Chi-Tien Lin (Providence University, Taiwan)  
*Revisit Convex ENO Schemes*

6:00  Bus to Kowloon Club, Tsim Sha Tsui

6:30  Drink session (harbour view)

7:30  Conference Banquet at Kowloon Club, Tsim Sha Tsui
8:40 Coffee/Tea

**Plenary Session E:**

Chair: Fred Hickernell (HKBU)

9:00 Tony Chan (UCLA)

*PDE and Wavelet Techniques for Image Compression*

9:50 Zhouping Xin (The Chinese University of Hong Kong)

*Shock Wave for Supersonic Flow Past a Perturbed Cone*

10:40 Coffee Break

**Contributed Talk Session E:**

Chair: Michael Ng (HKU)

11:00 Jun Zou (The Chinese University of Hong Kong)

*Some Iterative Solutions of Saddle-point and Saddle-point Like Systems*

11:20 Xiao-Ping Wang (Hong Kong University of Science and Technology)

*On Moving Contact Line Hydrodynamics of Immiscible Fluid*

11:40 Hua Chen (Wuhan University, China)

*On the Simplified Keller-Segel System Modelling Chemotaxis*

12:00 Wei-Cheng Wang (National Tsing Hua University, Taiwan)

*A Jump Condition Capturing Scheme for Elliptic Interface Problems*

12:20 Rosa Donat (University of Valencia, Spain)

*Shock-Vortex Interaction at High Mach Numbers*

12:40 Lunch

**Plenary Session F:**

Chair: Hongkai Zhao (UC Irvine)

2:10 Yoshikazu Giga (Hokkaido University, Japan)

*A Level Set Approach for Solutions with Shocks of Order Preserving Evolution Equations*

3:00 Roland Glowinski (University of Houston)

*Numerical Methods for the Solution of a System of Eikonal Equations with Dirichlet Boundary Conditions*

3:50 Coffee Break

**Contributed Talk Session F:**

Chair: Weiwei Sun (CityU)

4:10 Chong Sze Tong (Hong Kong Baptist University)

*Advances in Snake Algorithms*

4:30 Steve Bryson (NASA Ames Research Center)

*High-Order Semi-Discrete Central-Upwind Schemes for Multi-Dimensional Hamilton-Jacobi Equations*

4:50 Vicente F. Candela (University of Valencia, Spain)

*How Accurate can we Compute the Length of Level Curves?*

5:10 Yu-Xin Ren (Tsinghua University, China)

*A Shock Instability Free FDS Scheme Based on Rotated Riemann Solvers*

5:30 Shu Wang (Vienna University, Austria)

*Quasineutral Limit of Euler-Poisson System with and without Viscosity*
Plenary Session G: Chair: Bjorn Engquist (Princeton/UCLA)
9:00 David Gottlieb (Brown University)
Special Methods for Discontinues Problems
9:50 Takashi Yabe (Tokyo Institute of Technology, Japan)
Universal Solver CIP for All Phases of Matter
10:40 Coffee Break
Contributed Talk Session G: Chair: Zhen-Huan Teng (Peking)
11:00 Jian-Guo Liu (University of Maryland)
Energy and Helicity Preserving Scheme
11:20 Steve Ruuth (Simon Fraser University, Canada)
Recent Advances in Strong-Stability-Preserving Runge-Kutta Methods
11:40 Wai-Sun Don (Brown University)
Spectral Convergence of Mapped Chebyshev Methods
12:00 Xu-Dong Liu (University of California, Santa Barbara)
A Numerical Method for Solving Variable Coefficient Elliptic Equation with Interfaces
12:30 Lunch
Plenary Session H: Chair: Shiu-Yuen Cheng (HKUST)
2:00 Barry Merriman (UCLA)
A Mathematician’s Perspective on Molecular Biology
2:50 Bjorn Engquist (UCLA & Princeton, USA)
Heterogeneous Multiscale Methods
3:40 Closing Session Chair: Chi-Wang Shu (Brown)