International Workshop on Scientific Computing

On The Occasion of Jun-Zhi Cui's 70TH Birthday

June 7-8, 2008

Institute of Computational Mathematics, Beijing

Program   &   Abstracts

Sponsors:

Institute of Computational Mathematics, AMSS, CAS

State Key Lab on Scientific and Engineering Computing, CAS

National Basic Research Program "High Performance Scientific Computation Research"

Scientific Committee:

Zhong-ci Shi (Chair, ICMSEC, CAS)

Qun Lin (ICMSEC, CAS)

Weinan E (Princeton Univ., USA)

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Xin-hua Wang (Zhejiang Univ.)

Long-an Ying (Peking Univ.)

De-hao Yu (ICMSEC, CAS)

Ya-xiang Yuan (ICMSEC, CAS)

Tian-xiao Zhou (ACTRI, Xi'an)

Invited Speakers:

Gang Bao (Michigan State Univ., USA)

Raymond Chan (The Chinese Univ. Hong Kong)

Jinru Chen (Nanjing Normal Univ.)

Qiang Du (Penn State Univ., USA & ICMSEC, CAS)

Weimin Han (Univ. of Iowa, USA)

Thomas Y. Hou (Caltech, USA)

Tong Li (Univ. of Iowa, USA)

Chi-kun Lin (National Chiao Tung Univ., Taiwan)

Mo Mu (Hong Kong Univ. of Sci. & Tech.)

Jie Ou-yang (Northwestern Polytechnical Univ.)

Chi-wang Shu (Brown Univ., USA)

Xue-cheng Tai (Nanyang Tech. Univ., Singapore & Univ. Bergen, Norway)

Tao Tang (Hong Kong Baptist Univ. &   ICMSEC, CAS)

Bin Wang (Inst. of Atmosphere, CAS)

Junping Wang (Colorado School of Mines & NSF, USA)

Larry Wang (Southern Polytechnic State Univ., USA)

Xiao-ping Wang (Hong Kong Univ. of Sci. and Tech.)

Yau-shu Wong(Univ. of   Alberta , Canada)

Ningning Yan (Inst. of Sys. Sci., CAS)

Linbo Zhang(ICMSEC, CAS)

Pingwen Zhang (Peking Univ.)

Shangyou Scott Zhang(Univ. of Delaware Newark , USA)

Zhiming Zhang (Wayne State Univ., USA & Hunan Normal Univ.)

Hong-kai Zhao (Univ. of California , Irvine , USA)

Jun Zou (The Chinese Univ. Hong Kong)

Organizing Committee:

Zhiming Chen (co-Chair, ICMSEC, CAS)

Aihui Zhou (co-Chair, ICMSEC, CAS)

Liqun Cao (Secretary, ICMSEC, CAS)

Zhongzi Bai (ICMSEC, CAS)

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Chi-wang Shu (Brown Univ., USA)

Tao Tang (Hong Kong Baptist Univ. & ICMSEC, CAS)

Bin Wang (Inst. of Atmosphere, CAS)

Jinchao Xu (Penn State Univ., USA)

Ningning Yan (Inst. of Sys. Sci., CAS)

Ya-xiang Yuan (ICMSEC, CAS)

Linbo Zhang (ICMSEC, CAS)

Friday, June 6, 2008

Registration desk opens

June 6, 14:00—18:00 and June 7, 7:30—08:20:

Venue：in the lobby of the Teaching Building （TB）of the Graduate

School of Chinese Academy of Sciences.

Conference Site：

in room S201 of the Teaching Building （TB） of the

Graduate School of Chinese Academy of Sciences.

For further information, please contact:

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Fax: 86-10- 62542285

18:00-19:30   Reception Dinner

Venue: On the fourth floor of Wu Ke Hotel

Saturday, June 7, 2008

Opening Ceremony   08:30-08:45

Chair: Zhiming Chen

Group photo   08:50-09:00

Invited Talks

Chair: Zhong-ci Shi

Chi-wang Shu   09:00-09:30

Multiscale Methods Based on the Discontinuous Galerkin Scheme

Thomas Y. Hou   09:30-10:00

Convergence of Multiscale Finite Element Methods for High-contrast

Elliptic Interface Problems

Coffee Break   10:00-10:30

Chair: Ben-yu Guo

Shangyou   Scott   Zhang   10:30-11:00

On the P1 Powell-Sabin Divergence-free Finite Element for the Stokes

Equations

Jun Zou   11:00-11:30

Some Recent Progresses on Inverse Obstacle Scattering Problems

Ningning Yan   11:30-12:00

Numerical Simulation for Optimal Control Problems Governed by Convection Dominated Diffusion Equations

Lunch   12:00-13:30

Venue: Wu Ke Hotel

Chair: Hou-de Han

Weimin Han   13:30-14:00

Mathematical Theory and Numerical Analysis for Bioluminescence Tomography

Zhiming Zhang   14:00-14:30

Recovery Type a Posteriori Error Estimates and Adaptive Algorithms

Mo Mu   14:30-15:00

Numerical Techniques for Decoupling Multi-physics Computation

Coffee Break   15:00-15:30

Chair: Kai-tai Li

Bin Wang   15:30-16:00

An Economical Approach to Four-dimensional Variational Data Assimilation

Larry Wang   16:00-16:30

White Noise Hypothesis for Uniform Quantization Errors

Jie Ou-yang   16:30-17:00

The Multi-scale Simulations of Complex Fluid

Banquet   18:00-20:00

Chair: Zhiming Chen / Aihui Zhou

Venue: You Yi Hotel

Sunday, June 8, 2008

Invited Talks

Chair: Qun Lin

Raymond Chan   08:30-09:00

Inpainting by Flexible Haar-Wavelet Shrinkage

Gang Bao   09:00-09:30

Computational Modeling of Optical Response from Excitons in a Nano

Optical Medium

Yau-shu Wong   09:30-10:00

Data-Driven Scientific Computing

Coffee Break   10:00-10:30

Chair: Long-an Ying

Junping Wang   10:30-11:00

On Interface Conditions and Numerical Methods for a Coupled   Fluid

Flow System

Hong-kai Zhao   11:00-11:30

Direct Imaging Algorithms for Extended Targets

Chi-kun Lin   11:30-12:00

On the Singular Limits of the Klein-Gordan Equation

Lunch   12:00-13:30

Venue: Wu Ke Hotel

Chair: Ren-hong Wang

Tao Tang   13:30-14:00

Spectral Methods for Volterra Integral Equations and Delay Equations

Qiang Du   14:00-14:30

Unstructured Meshes and Numerical PDEs

Xue-cheng Tai   14:30-15:00

Fast Numerical Methods for Interface Problems with Applications

to Image Processing and Inverse Problems

Coffee Break   15:00-15:30

Chair: Long-jun Shen

Pingwen Zhang   15:30-16:00

Dynamical Modeling Based on Energy Dissipation

Tong Li   16:00-16:30

Stability of Traveling Waves in Quasi-linear Hyperbolic Systems with

Relaxation and Diffusion

Xiao-ping Wang   16:30-17:00

Numerical Modeling of Current Induced Magnetic Reversal

Linbo Zhang   17:00-17:30

Parallel Coarsening of Adaptively Refined Tetrahedral Meshes Using Bisection

Dinner   18:00-20:00

Venue: Wu Ke Hotel