2011 International Workshop on Numerical Methods and Modelling for Compressible Multimaterial Flows and Mixing

Program Schedule

Organized by

Institute of Applied Physics and Computational Mathematics (IAPCM)

Beijing Computational Science Research Center (CSRC)

Key Laboratory of Computational Physics (LCP)

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Each oversea invited talk has five to ten minutes for questions, and each domestic talk has five minutes for questions.
Chairman: Shuanghu Wang(王双虎)
Contacts: Baolin Tian(田保林) 13120433930, Guoxi Ni（倪国喜）, Shanshan Zhu(朱珊珊), Junxia Wei(魏军侠)13691271672

Program Schedule

Monday morning, September 12, 2011，Building B Floor 8, Great Hall

8:15-8:45	**Opening Remarks, Photo　　Chairman　Shuanghu Wang(王双虎)　IAPCM**
Chairman	**Song Jiang(江松)**　IAPCM
8:45-9:45am	**James Glimm,** Stony Brook University, USA **Computational Tools for LES Turbulent Mixing and Combustion**
9:45-10:45am	**D. Drikakis,** Cranfield University, UK **High-Resolution Eulerian Methods for Multi-Component Turbulent Mixing Simulations**
10:45-11:05am	**Coffee Break**
Chairman	**Zeyao Mo(莫则尧)**　IAPCM
11:05-11:45am	**Shiyi Chen(陈十一)** Peking University, China **Multiscale Modeling of Compressible Turbulence**

Monday afternoon, September 12, 2011, Building B Floor 8, Great Hall

Chairman	**Weizhu Bao (包维柱)**　CSRC
2:00-3:00pm	**Snezhana Abarzhi,** University of Chicago, USA **Turbulent Mixing and Beyond: problems, concepts, solutions**
3:00-3:40pm	**David Emerson**, Daresbury Laboratory, Science and Technology Facilities Council, UK **A parallel high-order compact-TVD method for high-speed viscous flow on CPUs and GPUs**
3:40-4:20pm	**Xinliang Li(李新亮)**, Institute of Mechanics, Chinese Academy of Sciences, China **Direct numerical simulation and modeling of compressible turbulent flow**
4:20-4:40pm	**Coffee Break**
Chairman	**Xinliang Li(李新亮)** Institute of Mechanics, Chinese Academy of Sciences
4:40-5:20pm	**Feng Xiao(肖锋),** Institute of Mechanics, Chinese Academy of Sciences, China **A general multi-constraint flux reconstruction formulation for high order scheme**
5:20-6:00pm	**Xiaojun Gu,** Daresbury Laboratory, Science and Technology Facilities Council, UK **A strategy for capturing non-equilibrium phenomena in gaseous transport**
6:00-6:20pm	**Liping He(贺丽萍),** Tianjin University, China **Primary Breakup of Round Non-Newtonian Liquid Turbulent Jet**

Tuesday morning, September 13, 2011, Building B Floor 8, Great Hall

Chairman	**Shuanghu Wang(王双虎)** IAPCM
8:30-9:30am	**E.F. Toro,** Laboratory of Applied Mathematics, University of Trento, Italy **Recent developments on schemes for compressible flow I: first order monotone schemes**
9:30-10:30am	**Zhi-Jian Wang,** Iowa State University, USA **The Development of Adaptive High-Order CFD Methods and Their Applications**
10:30-10:50am	**Coffee Break**
Chairman	**Feng Xiao(肖锋)** Institute of Mechanics, Chinese Academy of Sciences
10:50-11:30am	**Yuxin Ren(任玉新),** Tsinghua University, China **Multidimensional limiters for high order numerical schemes on unstructured grids**
11:30-12:10am	**Jianxian Qiu(邱建贤),** Xiamen University, China **Hybrid weighted essentially non-oscillatory scheme with different indicators**

Tuesday afternoon, September 13, 2011, Building B Floor 8, Great Hall

Chairman	**Jiequan Li(李杰权)** Beijing Normal University
2:00-3:00pm	**Remi Abgrall,** Team Bacchus and Institut de Mathématiques INRIA and Université Bordeaux I, France **A simple and flexible approach to uncertainty quantification applied to non linear and flow problems**
3:00-4:00pm	**I-Shih Liu**, Universidade Federal do Rio de Janeiro, Brasil **Constitutive theories of material models**
4:00-4:20pm	**Coffee Break**
Chairman	**Yuxin Ren(任玉新)** Tsinghua University
4:20-5:00pm	**Jiequan Li(李杰权),** Beijing Normal University, China **Understanding of numerical oscillations in terms of modified equation**
5:00-5:40pm	**Cheng Wang(王成),** Beijing Institute of Technology, China **High resolution numerical investigation of detonation and its interaction with metal medium**
5:40-6:00pm	**Juan Cheng(成娟),** Institute of Applied Physics and Computational Mathematics(IAPCM), China **The conservative and symmetrical cell-centered Lagrangian scheme in 2D cylindrical coordinates for compressible fluid flows**
6:00-6:20 pm	**Baolin Tian(田保林)，** Institute of Applied Physics and Computational Mathematics(IAPCM), China **A Five-Equation Model Based Global ALE Method for Compressible Multifluid Fluids**

Wednesday morning, September 14, 2011, Building B Floor 8, Great Hall

Chairman	**Pingwen Zhang(张平文)** Peking University
8:30-9:30am	**James Glimm,** Stony Brook University, USA **LES for Turbulent Mixing and Combustion: Verification, Validation and Uncertainty Quantification**
9:30-10:30am	**D. Drikakis,** Cranfield University ,UK **Engineering Turbulence Modelling of Compressible Turbulent Mixing**
10:30-10:50am	**Coffee Break**
Chairwoman	**Guiping Zhao(赵桂萍)** NSFC
10:50-11:30am	**Pingwen Zhang(张平文)** School of Mathematical Sciences, Peking University, China **Mathematical Theory and Simulation of Liquid Crystal**
11:30-12:10am	**Dekang Mao(茅德康),** Shanghai University, China **Conservative front-tracking method for 2D Euler system**

Wednesday afternoon, September 14, 2011, Building B Floor 8, Great Hall

Chairman	**Tiegang Liu(刘铁刚)** Beihang University
2:00-3:00pm	**Remi Abgrall,** Team Bacchus and Institut de Mathématiques INRIA and Université Bordeaux I, France **High order methods in FCD using unstructured hybrid meshes for Euler and Navier Stokes equations.**
3:00-4:00pm	**I-Shih Liu,** Universidade Federal do Rio de Janeiro, Brasil **Mathematical modeling of large deformation in salt tectonics**
4:00-4:20pm	**Coffee Break**
Chairman	**Dekang Mao(茅德康)** Shanghai University
4:20-5:20pm	**Keh-Ming Shyue,** Department of Mathematics, National Taiwan University **Volume of fluid methods for compressible multiphase flow I: Adaptive moving grid approach**
5:20-6:00pm	**Bin Chen(陈斌),** Xi'an Jiaotong University, China **Eulerian and Lagrangian methods for the simulation of multiphase flow in complex domain**
6:00-6:20pm	**Junbo Cheng (程军波)** Institute of Applied Physics and Computational Mathematics, China **A conservative Lagrangian ADER scheme**

Thursday morning, September 15, 2011, Building B Floor 8, Great Hall

Chairman	**Xijun Yu(蔚喜军)** IAPCM
8:30-9:30am	**Tao Tang** Hong Kong Baptist University, Kowloon Tong, Hong Kong **A general moving mesh framework in 3D and its application for simulating the mixture of multi-phase flows**
9:30-10:30am	**Keh-Ming Shyue** Department of Mathematics, National Taiwan University **Volume of fluid methods for compressible multiphase flow II: Eulerian interface sharpening approach**
10:30-10:50am	**Coffee Break**
Chairman	**Jianxian Qiu(邱建贤)** Xiamen University
10:50-11:50am	**E.F. Toro,** Laboratory of Applied Mathematics, University of Trento, Italy **Recent developments on schemes for compressible flow II:High order non-linear schemes and applications**
11:50-12:10am	**Guoxi Ni(倪国喜)**Institute of Applied Physics and Computational Mathematics, China **Moving mesh method for multimaterial flow**

Thursday afternoon, September 15, 2011, Building B Floor 8, Great Hall

Chairman	**Ruo Li (李若)** Peking University
2:00-3:00pm	**Snezhana Abarzhi,** University of Chicago, USA **Dynamics of unstable fluid interface: conservation laws and group theory**
3:00-4:00pm	**Zhi-Jian Wang,** Iowa State University, USA **Quadrature Based Moment Method for Dispersed-Phase Systems**
4:00-4:20pm	**Coffee Break**
Chairman	**Baolin Tian(田保林)** IAPCM
4:20-5:00pm	**Ruo Li (李若)** Peking University, China **A Multi-Phase Flow Simulation Based on Eulerian Framework**
5:00-5:40pm	**Jinsong Bai(柏劲松),** Institute of Fluid Physics, CAEP，China **Equation of state and Riemann solver for mixture**
5:40-6:00pm	**Zupeng Jia(贾祖朋),** Institute of Applied Physics and Computational Mathematics, China **A new three-dimensional multi-material ALE method on unstructured grids based on MOF interface reconstruction for compressible fluid dynamics**
6:00-6:15pm	**Closing remark Chairman Shuanghu Wang(王双虎)**