The Second International Workshop on Development and Application of High-Order Numerical Methods

Conference Venue: Room 105, School of Mathematical Sciences, Xiamen University

• Saturday afternoon, May 18th, 2013
  – 3:00 pm - 10:00 pm, Registration, Xiamen Peony Wanpeng Hotel
  – 6:30 pm, Reception dinner, Xiamen Peony Wanpeng Hotel

• Sunday morning, May 19th, 2013
  – 8:00 am, pick up at Hotel to School of Mathematical Sciences, Xiamen University
  – 8:30 am - 9:00 am Open ceremony and photo
  – 9:00 am - 9:30 am
    Discontinuous Galerkin method for hyperbolic equations with singularities, Chi-Wang Shu, Brown University
  – 9:30 am - 10:00 am
    The high order positivity-preserving Lagrangian schemes for multi-material compressible flow, Juan Cheng, Institute of Applied Physics and Computational Mathematics
  – 10:00 am - 10:30 am
    Tea break
  – 10:30 am - 11:00 am
    Local discontinuous Galerkin (LDG) method for coupled flow and reactive transport problems, Hui Guo, China University of Petroleum
  – 11:00 am - 11:30 am
    The applications of h-adaptive Cartesian grid RKDG method for complex geometry and strong shock/obstacle interactions, Jianming Liu, Xiamen University and Jiangsu Normal University
11:30 am - 12:00 pm
Error analysis of the semi-discrete local discontinuous Galerkin method for semiconductor device simulation models, YunXian Liu, Shandong University

12:00 pm - 1:20 pm Lunch at Da Feng Yuan

Sunday afternoon, May 19th, 2013

1:30 pm - 2:00 pm
Maximum-principle-satisfying high order Direct DG method for convection diffusion equations, Jue Yan, Iowa State University

2:00 pm - 2:30 pm
Well-balanced WENO schemes for two-layer shallow water equations, Gang Li, Qingdao University

2:30 pm - 3:00 pm
Computationally efficient positions-dependent Smoothness Increasing Accuracy Conserving (SIAC) filtering for discontinuous Galerkin approximations to nonlinear hyperbolic conservation laws, Jennifer K. Ryan, University of East Anglia, United Kingdom

3:00 pm - 3:30 pm
Investigations on High resolution Numerical Simulation of Explosion and Impact Problems, Cheng Wang, Beijing Institute of Technology

3:30 pm - 4:00 pm
Tea break

4:00 pm - 4:30 pm
Energy analysis of the Runge-Kutta discontinuous Galerkin method for linear problems, Qiang Zhang, Nanjing University

4:30 pm - 5:00 pm
An interface treating method for gas-water compressible and incompressible flows, Chunwu Wang, Nanjing University of Aeronautics and Astronautics
5:00 pm - 5:30 pm
High order finite difference methods with subcell resolution for stiff multispecies detonation capturing, Wei Wang, Florida International University

• 6:30 pm Dinner in Yifulou in main campus of Xiamen University.

• Monday morning, May 20th, 2013

  – 8:00 am, pick up at Hotel to School of Mathematical Sciences, Xiamen University
  – 8:30 am - 9:00 am
  A modified Baer-Nunziato models for the simulation of interfaces between different compressible fluids, Qiang Wu, University of Science and Technology of China
  – 9:00 am - 9:30 am
  Spectral method for Degasperis-Procesi equation, Yinhua Xia, University of Science and Technology of China
  – 9:30 am - 10:00 am
  High-order compact schemes for the KdV and time fractional KdV equations, Shusen Xie, Ocean University of China
  – 10:00 am - 10:30 am
  Tea break
  – 10:30 am - 11:00 am
  Energy conserving discontinuous Galerkin methods for the wave propagation problems, Yulong Xing, University of Tennessee
  – 11:00 am - 11:30 am
  A dissipation-rate reserving DG method for wave catching-up phenomena in a nonlinearly elastic composite bar, Yan Xu, University of Science and Technology of China
  – 11:30 am - 12:00 pm
  Parametrized maximum principle flux limiters for high order schemes solving hyperbolic conservation laws, Zhengfu Xu, Michigan Tech University
• 12:00 pm- 1:20 pm Lunch at Da Feng Yuan
• 1:20 pm depart from School of Mathematical Sciences for city tour (Gulangyu).
• 6:30 pm Banquet in Peony Wanpeng Hotel

**Tuesday morning, May 21st, 2013**

- 8:30 am, pick up at Hotel to School of Mathematical Sciences, Xiamen University
- 9:00 am - 9:30 am
  *High-order asymptotic preserving discontinuous Galerkin schemes to discrete-velocity kinetic equations in a diffusive regime*, Jingmei Qiu, University of Houston
- 9:30 am - 10:00 am
  *A moving mesh WENO method for one-dimensional conservation laws*, Xiaobo Yang, Nanjing University
- 10:00 am - 10:30 am
  *A new class of central compact schemes with spectral-like resolution I: Linear schemes*, Shuhai Zhang, China Aerodynamics Research and Development Center
- 10:30 am - 11:00 am
  Tea break
- 11:00 am - 11:30 am
  *High order numerical methods with linear computational complexity for solving steady state problems of hyperbolic PDEs*, Yongtao Zhang, University of Notre Dame
- 11:30 am - 12:00 pm
  *RKDG methods with WENO type limiters and conservative interfacial procedure for one-dimensional compressible multi-medium flow simulations*, Jun Zhu, Nanjing University of Aeronautics and Astronautics
- 12:00 pm - 12:30 pm
  *An h-adaptive RKDG method with troubled-cell indicators for hyperbolic conservation laws*, Hongqiang Zhu, Nanjing University of Posts and Telecommunications
• 12:30 pm - 1:30 pm Lunch at Da Feng Yuan
• 2:00 pm - 6:00 pm Research discussion