

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