# Workshop and Summer School on Kinetic Theory and Related Applications

## Conference Room Ⅰ, CSRC  07/04-07/06

| Day 1:  July 04, 2021 |
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| 8:30-9:00   Openning & Photo |
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| Time | Host | Speaker | Title |
|---|---|---|---|
| 9：00−9：40 | Ruo Li | Zhao-Li Guo (HUST) | Discrete unified gas-kinetic scheme for nano-confined strongly inhomogeneous fluid flows |
| 9：40−10：20 | | Yan Xu (USTC) | High order structure-preserving arbitrary Lagrangian-Eulerian discontinuous Galerkin methods for the Euler equations under gravitational fields |
| 10：20−10：50 | Tea Break | | |
| 10：50−11：30 | Jian-Guo Huang | Li Wang (UMN) Online | An asymptotic preserving method for Levy Fokker Planck equation with fractional diffusion limit |
| 11：30−12：10 | | Guang-Hui Hu (UM) Online | On quality simulation of compressible fluid dynamics in complex domain |
| 12：10−13：40 | Lunch | | |
| 13：40−14：20 | Yan Xu | Jie Shen (Purdue) Online | Highly efficient and accurate bound/positivity preserving  schemes for nonlinear dissipative systems |
| 14：20−15：00 | | Kai-Liang Wu (SUS Tec) Online | Explore Provably Bound-Preserving Numerical Methods for Relativistic MHD Equations |
| 15：00−15：30 | Tea Break | | |
| 15：30−16：10 | Peng Song | Jian-Guo Huang (SJTU) | A Sparse Grid Discrete Ordinate Discontinuous Galerkin Method for the Radiative Transfer Equation |
| 16：10−16：50 | | Ji-Wei Zhang (WHU) | A coarse-graining framework for spiking neuronal networks, from local low-order moments to large-scale spatiotemporal activities |
| 16：50−17：30 | | Yi-Chen Yang (PKU) | Resolving the Knudsen Layer by High Order Moment Methods |

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| Day2: July 05, 2021 | | | |
|---|---|---|---|
| 8：30−9：10 | Zhao-Li Guo | Jian-Xian Qiu (XMU) | Multi-resolution HWENO schemes for hyperbolic conservation laws |
| 9：10−9：50 | | Hua-Zhong Tang (PKU) | Second-order accurate BGK schemes for the special relativistic hydrodynamics with the Synge equation of state |
| 9：50−10：30 | | Zhong-Hua Qiao (PolyU) | A Novel Lattice Boltzmann Model for Fourth Order Nonlinear Partial Differential equations |
| 10:30-11:00 | Tea Break | | |
| 11:00-11:40 | Jian-Xian Qiu | Wen-An Yong (THU) | Learning hyperbolic moment-closure models for the radiative transfer equation |
| 11:40-12:20 | | Chang Liu (IAPCM) | Recent Progress on Efficient Multiscale Numerical Methods for Kinetic Equations |
| 12:20-13:40 | Lunch | | |
| 13：40−14：20 | Hua-Zhong Tang | Kun Xu (HKUST) Online | Unified gas-kinetic schemes with applications |
| 14：20−15：00 | | Zhen-Ning Cai (NUS) Online | Entropic schemes for the Boltzmann equation |
| 15：00−15：30 | Tea Break | | |
| 15：30−16：10 | Zhong-Hua Qiao | Min Tang (SJTU) | An online/offline forward solver for stationary inverse transport equation with large data sets |
| 16：10−16：50 | | Lei Li (SJTU) | The mean field limit of random batch interacting particle systems |
| 16：50−17：30 | | Zheng-Yi Li (PKU) | Invariance preserving moment closure method for Boltzmann equations |

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## Conference Room Ⅰ, CSRC  07/04-07/06

| Day3:  July 06, 2021 | | | |
|---|---|---|---|
| 8:30–9:10 | Min Tang | Shi Jin (SJTU) | TBA |
| 9:10–9:50 | | Tao Xiong (XMU) | High order asymptotic preserving nodal DG schemes for nonlinear gray radiative transfer equations |
| 9:50-10:30 | Tea Break | | |
| 10:30–11:10 | Shi Jin | Yan-Li Wang (CSRC) | Self-adaptive collision opertaror for Boltzmann equation |
| 11:10–11:50 | | Chang Yang (HIT) | Preserving the accuracy of numerical methods discretizing anisotropic elliptic problems |