Modelling and Numerical Simulation of Non-Equilibrium Processes Part 2 Workshop

(24–28 January 2022)

*Registration is required for this program.

Venue

Virtual: The details and link will be sent to you before the program commences after registration has been processed.

ORGANIZING COMMITTEE

Co-Chairs

Zhenning Cai
National University of Singapore

Ruo Li
Peking University

Yanli Wang
Beijing Computational Science Research Center

For more information: Click here

Modelling and Numerical Simulation of Non-Equilibrium Processes Part 2 Workshop (24–28 January 2022)

All times are indicated in GMT+8.
For time zones conversion: Click Here

GMT Time Reference				
Greenwich Mean Time United Kingdom (GMT+0)	Canada USA (GMT -5)	France Germany (GMT +1)	India (GMT +5:30)	China Singapore (GMT +8)
0000	1900	0100	0530	0800
0700	0200	0800	1230	1500
0800	0300	0900	1330	1600
***(GMT -5) is the day before the stated date of the morning talk (GMT+8).**				

Monday, 24 Jan 2022		
Time* (GMT +8)	**Title**	**Speaker**
1555–1600	Opening Remarks	Zhenning Cai National University of Singapore, Singapore
1600	Session Chair: Yanli Wang (Beijing Computational Science Research Center)	
1600–1700	Structure-preserving artificial neural networks for moment closures	Martin Frank Karlsruhe Institute of Technology, Germany
1700–1800	High order numerical methods for a hybrid kinetic/fluid plasma model	Nicolas Crouseilles National Institute for Research in Digital Science and Technology (INRIA), France
1800	*Group Photo*	Zoom
1800–1900	A fast Fourier spectral method for the non-cutoff Boltzmann equation	Kunlun Qi The Chinese University of Hong Kong, China

Tuesday, 25 Jan 2022		
Time* (GMT +8)	**Title**	**Speaker**
1600	Session Chair: Zhenning Cai (National University of Singapore)	
1600–1700	Mesoscopic Boltzmann model equations for thermally perfect gases	Luc Mieussens Université de Bordeaux, France
1700–1800	Efficient deterministic numerical scheme to solve BGK and Boltzmann equation in 7D	Raphaël Loubère Université de Bordeaux, France
1800–1900	Approximation of the bi-temperature Euler system in 2 space dimensions	Stéphane Brull Université de Bordeaux, France

Wednesday, 26 Jan 2022		
Time* (GMT +8)	**Title**	**Speaker**
0800	Session Chair: Yanli Wang (Beijing Computational Science Research Center)	
0800–0900	Low-rank method for radiation transport calculations	Ryan McClarren University of Notre Dame, USA
0900–1000	A conservative adaptive low rank high order tensor approach for nonlinear Vlasov equations	Jingmei Qiu University of Delaware, USA
1000–1100	Asymptotic numerical scheme and reduced order model for the radiative transfer equation	Zhichao Peng Michigen State University, USA

Thursday, 27 Jan 2022		
Time* (GMT +8)	**Title**	**Speaker**
1500	Session Chair: Ruo Li (Peking University)	
1500–1600	On projective integration scheme for single and multiple species gases	Thomas Rey Université de Lille, France
1600–1700	Multiscale numerical methods for kinetic equations and the applications in transport problems	Chang Liu Institute of Applied Physics and Computational Mathematics, China
1700	*Group Photo*	Zoom
1700–1800	Construction and analysis of the projective closures	Teddy Pichard École Polytechnique, France

Friday, 28 Jan 2022		
Time* (GMT +8)	**Title**	**Speaker**
1600	Session Chair: Zhenning Cai (National University of Singapore)	
1600–1700	High order finite volume (FV) and discontinuous Galerkin (DG) schemes with IMEX time stepping for the Boltzmann model on unstructured meshes	Walter Boscheri University of Ferrara, Italy
1700–1800	GSIS: a fast-converging and asymptotic-preserving numerical scheme for the non-equilibrium gas dynamics	Lei Wu Southern University of Science and Technology, China
1800–1900	Finite element discretizations for moment equations in kinetic gas theory	Manuel Torrilhon RWTH Aachen University, Germany