

**Opening Ceremony of Fusion
Simulation Center**

&

**4th International Workshop on
Fusion Theory and Simulation**

Scientific Program

October 20-22, 2010

Beijing, China



北大聚变模拟中心

Fusion Simulation Center, Peking University

The focus of this joint meeting will be the physics of magnetic fusion plasmas and other topics of current interest in space and laboratory plasmas. Participants will exchange through extensive discussions of their recent research, and explore the future direction in plasma/fusion experiment, theory, and simulation.

Sponsors

Fusion Simulation Center, Peking University
Institute for Fusion Theory and Simulation, Zhejiang University
Center for Magnetic Fusion Theory, Chinese Academy of Sciences
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Attachments:

- I: Participants
- II: Agenda
- III: Attendee Guide

Participants:

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Tuesday 10/19/2010		
14:00-20:30	Registration&Reception	Location: Global Village, PKU
Wednesday 10/20/2010 Location: Auditorium of KIAA, Campus of PKU		
Morning		
Session WM1 <i>Chaired by</i> Prof. Jiaqi Dong		
8:30-8:40	Welcome Remarks	
Session WM2 <i>Chaired by</i> Prof. Jiaqi Dong		
8:40-9:10	Guo-yong Fu (PPPL) Energetic Particle-driven Geodesic Acoustic Mode: Theory and Simulation	
9:10-9:35	Xin Wang (IFTS) Kinetic thermal ions effects on Alfvénic fluctuations in tokamak plasmas	
9:35-10:00	Hua-sen Zhang (FSC-PKU/UCI) Gyrokinetic particle simulation of beta-induced Alfvén eigenmode	
10:00-10:30	Coffee Break	
Session WM3 <i>Chaired by</i> Prof. Xueqiao Xu		
10:30-11:00	Kenji Imadera (Kyoto University) Global profile relaxation and entropy dynamics in turbulent plasmas with an Eulerian gyrokinetic simulation	
11:00-11:25	Zhi-hong Lin (FSC-PKU/UCI) Gyrokinetic simulation of kinetic effects on Alfvén wave	
11:25-11:50	Animesh Kuley (Indian Institute of Technology Delhi) Lower hybrid destabilization of trapped electron modes in tokamak and its consequences for anomalous diffusion	
11:50-12:10	Feng Liu (SWIP) Gyrokinetic Simulation of Turbulence Driven GAM in Edge Plasmas of HL-2ATokmak	
12:10-14:00	Lunch Location: Chang Chun Yuan	

Afternoon	
Session WA1 <i>Chaired by</i> Prof. Chijie Xiao	
14:00-14:25	Chi-jie Xiao (PKU) Satellite observations of wave modes in the reconnection diffusion region
14:25-14:50	Hui-rong Yan (KIAA-PKU) Cosmic Ray Transport in MHD Turbulence
14:50-15:15	Wei Kong (NKU/ Auburn University) GeFi simulation of current-sheet driven instability
15:15-15:30	Jia-qi Wang (PKU) Simulation on Modelling loop-top X-ray source and reconnection outflows in solar flares with intense lasers
15:30-16:00	Coffee Break
Session WA2 <i>Chaired by</i> Prof. Zhe Gao	
16:00-16:30	Alan Turnbull (General Atomics) Ideal and Resistive MHD Numerical Tools for Fusion Applications
16:30-17:00	Zheng-xiong Wang (DLUT) MHD simulation of double tearing mode in tokamak plasmas
17:00-17:30	Zhong-tian Wang (SWIP) Relativistic Quasi-linear Description of Three-dimensional Diffusion
17:30-18:00	Yi-an Lei (PKU) Current status and work plan of FSC
18:00-20:00	Dinner He Restaurant, @Zhongguangyuan Global village, PKU

Thursday 10/21/2010

Location: Campus of PKU

Morning

Session TM1 *Chaired by Prof. Nong Xiang*

8:30-9:00	Wei-Xing Wang (PPPL) Gyrokinetic turbulence driven plasma transport in multiple channels and comparison with tokamak experiments
9:00-9:30	Yi-ping Chen (ASIPP) Simulation of SOL/Divertor plasmas towards detachment operation on EAST tokamak
9:30-10:00	Yuan Huang (SWIP) Preliminary results of H-mode experiments on HL-2A tokamak"
10:00-10:30	Coffee Break

Session TM2 *Chaired by Prof. Zhiwei Ma*

10:30-11:00	M.A. Lieberman (University of California, Berkeley) Adventures in 2D PIC Simulations of Electronegative Discharges: Double Layer Formation and Wave Phenomena
11:00-11:20	Wen-yang Zhang (ASIPP) Experimental study of micro-instabilities on HT-7 tokamak
11:20-11:40	Yong Shen (SWIP) Simulation study of MHD instabilities and operational beta limit on HL-2A tokamak device
11:40-12:00	Song-fen Liu (Nankai University) Toroidal kinetic ITG-mode study in reversed-field pinch plasmas
12:00-14:00	Lunch Location: Chang Chun Yuan

Afternoon	
Session TA1 <i>Chaired by Prof. Yian Lei</i>	
14:00-14:30	Zhi-wei Ma (IFTS-ZJU) Linear and nonlinear evolution of resistive wall mode
14:30-14:50	Hang-yu Zhou (SWIP) Investigation on Total Bremsstrahlung Radiation in High-Density Operation of the Large Helical Device Based on Visible Bremsstrahlung Profile Measurement
14:50-15:10	Guo-ya Sun (Xiamen University) Gyrokinetic particle simulation of ideal and kinetic ballooning modes
15:10-15:30	Hong-peng Qu (SWIP) PIC Simulation of the Neoclassical Tearing Mode Threshold
15:30-16:00	Coffee Break
Session TA2 <i>Chaired by Prof. Hong Qin</i>	
16:00-16:30	Zhe Gao (Tsinghua University) Flow drive by the pinch effect of resonant trapped electrons with rf injection
16:30-17:00	Nong Xiang (ASIPP) Simulations of nonlinear interactions between plasma and RF waves
17:00-17:25	Wen-lu Zhang (USTC) Gyrokinetic Simulations of Energetic Particle Turbulence and Transport
17:25-17:50	Zhi Yu (ASIPP) G-Gauge kinetic particle simulation of ICRF waves
17:50-18:15	Yunbo Dong (SWIP) Analysis of sawtooth control by Electron-Cyclotron Current Drive on HL-2A
18:15-20:00	Banquet Location: Zhi Li Hui Guan

Friday 10/22/2010

Morning

Session FM1 *Chaired by Prof. Xiaogang Wang*

8:30-9:00	Opening Remarks
9:00-9:30	Xiantu He (IAPCM)
9:30-10:00	Yuanxi Wan (IPP) Status and Challenges of ITER project
10:00-10:15	Zhihong Lin (FSC,PKU/UCI)
10:15-10:30	Group Photo & Coffee Break

Session FM2 *Chaired by Prof. Jiaqi Dong*

10:30-11:00	Xuru Duan (SWIP) Recent Physics Progress on HL-2A
11:00-11:30	Baonian Wan (USTC) Present Status and Near Future Research Focus on EAST
11:30-12:00	Waltz, Ronald E. (General Atomics) Reviewing the physical basis of the TGLF transport model
12:00-12:30	Liu Chen (IFTS-ZJU/UCI) Theoretical Studies of Geodesic Acoustic Modes in Tokamak Plasmas
12:30-14:00	Lunch Location: Chang Chun Yuan

Afternoon	
Session FA1 <i>Chaired by Prof. Liu Chen</i>	
14:00-14:30	Jiaqi Dong (IFTS-ZJU/SWIP) Experimental study of zonal flow and GAM in edge plasmas of HL-2A tokamak
14:30-15:00	Tomo-Hiko Watanabe (NIFS, Japan) Present status of gyrokinetic simulation researches at NIFS
15:00-15:30	Jiquan Li (Kyoto University) Gyro-fluid simulation of cross-scale dynamo generation in multi-scale MHD and micro-turbulence
15:30-16:00	Coffee Break
Session FA2 <i>Chaired by Prof. Guoyong Fu</i>	
16:00-16:30	Hong Qin (USTC) The second simplest physics problem
16:30-17:00	Xueqiao Xu (Lawrence Livermore National Laboratory) Nonlinear Simulations of Peeling-Ballooning modes □ in ITER H-mode scenario
17:00-17:30	Yueqiang Liu (UKAEA Culham, UK) Macroscopic stability and plasma response in tokamaks
17:30-18:00	Xiaogang Wang (PKU) Sawtooth driven neoclassical tearing modes in HL-2A
18:00-20:00	Dinner He Restaurant, @Zhongguangyuan Global village, PKU

Conference Location:

The conference will be held at the Campus of Peking University, **the Auditorium of KIAA**. The building is located inside the scenic and tranquil Langrunyuan, a part of the Old Summer Palace which was the summer resort of the Empress Dowager Cixi. The late Qing Dynasty style architecture, characterized by a big roof and columns in Chinese red. is set against the beautiful Weiming Lake, providing great views of Peking university.

Accommodation

The Symposium hotel is Zhongguanyuan Global Village PKU. It's only 5-minute walk to East Gate of Peking University.

Zhongguanyuan Global Village PKU（北京大学中关村新园）

(RMB 320/night for standard one-bed rooms including breakfast)

Address: East Gate of Peking University, ChengFu Road ,HaidianDistrict,Beijing
(地址：北京大学东门外成府路西口北京大学中关村新园)

Tel: +86 1062752288

Website: <http://www.pkugv.com>

Transportation:

1. Taxi: at the cost of about 100-120RMB to the hotel from the Beijing International Airport

Guide to the Taxi Driver:

请带我到北京大学中关村新园：北京大学东门外成府路西口南侧，方正大厦往东 100 米

Take me to the Zhongguanyuan Global village PKU

2. Subway: The subway is a good way to quickly get around the city and is well-signed in English for travelers. However, be warned that during rush hour trains can be extremely crowded. The subway system shuts down around midnight, and opens again around 5 AM.

The subway station is East Gate of Peking University, Line 4

Map of Peking University



Please refer to this map for the location of Hotel and Peking University.

