

Agenda of 17th Numerical Experiment of Tokamak (NEXT) Meeting

University of Tokyo, Kashiwa, Japan, 15-16 March 2012

15th March

(Large lecture room 2C0, the 2nd floor of Transdisciplinary Sciences Building)

9:00 - 9:20 Registration

9:20 - 9:30 Welcome M. Yagi (Japan Atomic Energy Agency)

Magnetohydrodynamics

9:30 - 10:15 Tokamak snake MHD equilibrium states

W. A. Cooper (Ecole Polytechnique Federale de Lausanne)

10:15 - 11:00 MHD stability analysis via matching method including finite Larmor radius effect

M. Furukawa (University of Tokyo)

11:00 - 11:15 Break

Computer science

11:15 - 12:00 Simulation study of energetic particle driven instabilities using the IFERC-CSC computer

Y. Todo (National Institute for Fusion Science)

12:00 - 13:15 Lunch

Computer science

13:15 - 14:00 High performance computing technology toward exascale simulation

T. Boku (University of Tsukuba)

14:00 - 14:20 Break

14:20 - 17:00 Poster session

(Multi-purpose room 1C3, the ground floor of Transdisciplinary Sciences Building)

18:30 - Banquet

16th March

(Large lecture room 2C0, the 2nd floor of Transdisciplinary Sciences Building)

Transport

9:00 - 9:25 Neoclassical toroidal viscosity calculations in tokamaks using a delta-f Monte Carlo simulation

S. Satake (National Institute for Fusion Science)

9:25 - 9:50 Spatio-temporal evolution of L→I→H transitions

K. Miki (National Fusion Research Institute)

9:50 - 10:15 Ballistic propagation of turbulence front in tokamak edge plasmas

S. Sugita (Kyushu University)

10:15-10:35 Break

Magnetic islands and reconnection

10:35 - 11:00 Magnetic island evolution in hot ion plasmas

A. Ishizawa (National Institute for Fusion Science)

11:00 - 11:25 Analytical and numerical studies on acceleration phase of collisionless magnetic reconnection

M. Hirota (Japan Atomic Energy Agency)

11:25 - 12:00 Discussion and summary

M. Yagi (Japan Atomic Energy Agency)

Poster Session (Multi-purpose room 1C3, the ground floor of Transdisciplinary Sciences Building)

1. Numerical MHD analysis of LHD plasma with magnetic axis swing
NIFS K. Ichiguchi
2. MHD simulation of multi-pulsed helicity injection in high-q ST plasmas
Japan Coast Guard Academy T. Kanki
3. Nonconforming vector finite element method for fully-implicit resistive MHD simulations
RIST Y. Kagei
4. MHD simulation on pellet injection in torus plasmas
NIFS R. Ishizaki
5. Development of resistive wall mode analysis code for rotating plasmas
JAEA J. Shiraishi
6. Hamiltonian structure and current singularities in two-dimensional RMHD
University of Tokyo Y. Kaneko
7. VisualStart: GUI-aided unified initialization tool for hybrid (MHD + particle) simulations
JAEA A. Bierwage
8. Nonlinear collision effect on energetic alpha particle confinement
Kyoto Univ. Y. Masaoka
9. Collisionality dependence of a shielding factor of a beam driven current
JAEA M. Honda
10. Multiscale modeling of radiation damage in materials
JAEA Y. Watanabe
11. 2D full wave analysis of wave structure by TASK/WF2
Kyoto Univ. Y. Maruyama
12. Simulation study of electron cyclotron current drive in helical plasmas
Kyoto Univ. Y. Moriya
13. Renovation of diffusive transport code TASK/TR
Kyoto Univ. T. Ikari
14. Simulation of two-dimensional transport in tokamak plasmas
Kyoto Univ. H. Seto
15. Simulation study of L/H transition with self-consistent integrated modelling of core and SOL/divertor transport
JAEA M. Yagi
16. Radial electric field formation and its effect on the electron thermal transport in LHD high Te plasmas
NIFS S. Matsuoka
17. Gyrokinetic simulation studies on turbulence, zonal flows and transport in helical plasmas
NIFS M. Nunami
18. Entropy transfer process and plasma turbulent transport in non-axisymmetric systems
NIFS T. H. Watanabe
19. Entropy balance in electromagnetic gyrokinetic simulations
Tokyo Institute of Technology S. Maeyama
20. On the gyrokinetic model in the long wavelength regime
JAEA N. Miyato

21. Development of multi-species model in local gyrokinetic turbulence simulations
JAEA M. Nakata
22. Optimization of GT5D code on peta-scale machines
JAEA Y. Idomura
23. Current status of the IFERC-CSC
JAEA Y. Ishii