

7th APTWG International Conference Program

(ver. 6 June 1, 2017)

Monday, June 5, 2017

9:30		-	10:00		Registration	
10:00		-	10:15		Opening session	
			N. Sugiyama (Nagoya Univ.)		Opening address	
Logistics						
Special talk						
10:15		-	11:15		Chair T.-H. Watanabe (Nagoya Univ.)	
10:15	-	11:15	D-ST1	Y. Kimura (Nagoya Univ.)	45+15	Interaction of vortices and waves in stably stratified turbulence
11:15		-	11:30		Group photo	
11:30		-	13:00		Lunch	
Working group session (A)				Leader: D. F. Kong (ASIPP), M. Kobayashi (NIFS)		
13:00		-	14:20		Chair S. Inagaki (Kyushu Univ.)	
13:00	-	13:50	A-PL1	F. D. Halpern (GA)	40+10	What is a blob?
13:50	-	14:20	A-OV1	K. Itoh (Chubu Univ.)	23+7	Fuelling Fuels Turbulence
14:20		-	14:50		Coffee Break	
14:50		-	15:50		Chair X. Gao (ASIPP)	
14:50	-	15:10	A-O1	K. Miki (QST)	13+7	First-Principle Simulations of Inward Particle Transport in the Inversed-density-gradient
15:10	-	15:30	A-O2	M. K. Han (DLUT)	13+7	Turbulent Particle Transport in Transport Barriers
15:30	-	15:50	A-D1	M. Kobayashi (NIFS)	20	Discussion
15:50		-	16:00		Coffee Break	
16:00		-	18:00		Poster Session (A, D)	

Tuesday, June 6, 2017

			Working group session (C) Leader: Y. Kosuga (Kyushu Univ.) and L. M. Yu (SWIP)			
9:30	-	10:50	Chair J. Q. Dong (SWIP)			
9:30	-	10:20	C-PL1	I. Cziegler (Univ. of York)	40+10	On the presence of GAM-ZF competition en route to tokamak turbulence transitions
10:20	-	10:50	C-OV1	P. H. Diamond (UCSD)	23+7	Mode Competition, Saturation Mechanisms and Spatial Patterns in Multiscale Turbulence
10:50	-	11:20	Coffee Break			
11:20	-	12:30	Chair W. C. Lee (NFRI)			
11:20	-	11:40	C-O1	K. Ida (NIFS)	13+7	Transition from MHD mode to tongue deformation before the collapse events in LHD
11:40	-	11:55	C-O2	Z. -Z. Ren (DLUT)	10+5	Energetic particle modes of $q=1$ high order harmonics in tokamak plasmas with monotonic weak magnetic shear
11:55	-	12:10	C-O3	A. Bierwage (QST)	10+5	Energetic-Ion-Driven Instabilities and Transport: Simulation Methods, Benchmark, Validation and Predictions
12:10	-	12:30	C-D1	Y. Kosuga (Kyushu Univ.)	20	Discussion

12:30	-	14:00	Lunch			
			Working group session (B) Leader: T. Fujita (Nagoya Univ.), Y . C. Ghim (KAIST)			
14:00	-	15:40	Chair T. S. Hahm (SNU)			
14:00	-	14:20	B-O1	M. Nakata (NIFS)	13+7	Flux-driven global transport simulations based on joint approach with gyrokinetic and transport solvers
14:20	-	14:40	B-O2	T. Kobayashi (NIFS)	13+7	Turbulent particle flux suppression by radial electric field non-uniformity at edge transport barrier in JFT-2M tokamak
14:40	-	15:00	B-O3	H. Du (ASIPP)	13+7	Preliminary plasma core transport analysis of optimized internal inductance steady-state H-mode discharges in EAST
15:00	-	15:20	B-O4	M. J. Choi (NFRI)	13+7	Electron thermal fluctuation and transport in the ITB and L-mode plasmas without the large scale MHD instabilities
15:20	-	15:40	B-D1	Y. C. Ghim (KAIST)	20	Discussion
15:40	-	16:00	Coffee Break			
16:00	-	18:00	Poster Session (B, C)			
18:30	-	Conference Dinner				

Working group session (D)					Leader: W. H. Ko (NFRI) and M. Leconte (NFRI)	
9:30	-	10:40	Chair K. Ida (NIFS)			
9:30	-	10:20	D-PL1	C. Chrystal (GA)	40+10	The Influence of Plasma Rotation on Burning Plasma Performance in Tokamaks
10:20	-	10:40	D-O1	K. Imadera (Kyoto Univ.)	13+7	ITB formation by toroidal momentum injection in flux-driven gyrokinetic turbulence
10:40	-	11:10	Coffee Break			
11:10	-	12:30	Chair H. Sugama (NIFS)			
11:10	-	11:30	D-O2	T. Tokuzawa (NIFS)	13+7	Observation of solitary and mono-cycle shaped flow structure associated with the TESPEL injection
11:30	-	11:50	D-O3	S. Matsuoka (JAEA)	13+7	Finite orbit width effect on the neoclassical toroidal viscosity in the superbanana-plateau regime
11:50	-	12:10	D-O4	W. H. Ko (NFRI)	13+7	Empirical investigation of spontaneous rotation under co- and counter-NBI heated H-mode plasma in KSTAR
12:10	-	12:30	D-D1	M. Leconte (NFRI)	20	Discussion
12:30	-	14:00	Lunch			
Guest talk						
14:00	-	14:30	Chair K. Ida (NIFS)			
			B-GT1	G. M. Staebler (GA)	23+7	Research Topics of the 2017 Joint US-EU Transport Task Force Workshop
14:30	-	14:45	Coffee Break			
14:45	-	17:15	Young research forum			
Leader: S. Maeyama (Nagoya Univ.), T. Zhang (ASIPP), and M. J. Choi (NFRI)						
Committee meeting						

Committee meeting

Thursday, June 8, 2017

Summary Session				
9:30	-	11:10	Chair T.-H. Watanabe (Nagoya Univ.)	
9:30	-	9:55	T. Ido (NIFS)	25 C. Mode competition in turbulence and MHD driven by energetic particle
9:55	-	10:20	T. Fujita (Nagoya Univ.)	25 B. Model reduction and experiments for validation
10:20	-	10:45	D. F. Kong (ASIPP)	25 A. Turbulence and Blob at the boundary of magnetic topology (Edge and SOL)
10:45	-	11:10	W. H. Ko (NFRI)	25 D. Mechanism determining plasma flows and their impact on transport and MHD
11:10	-	11:40	Poster Prize Ceremony	

7th APTWG Poster Sessions Program

Poster Session (A, D)

A. Turbulence and Blob at the boundary of magnetic topology (Edge and SOL)

D. Mechanism determining plasma flows and their impact on transport and MHD

Poster Board ID	Presentation ID	Presenter	Title
1	A-PL1	F. D. Halpern (GA)	What is a blob?
2	A-OV1	K. Itoh (Chubu Univ.)	Fuelling Fuels Turbulence
3	A-O1	K. Miki (QST)	First-Principle Simulations of Inward Particle Transport in the Inversed-density-gradient
4	A-O2	M. K. Han (DLUT)	Turbulent Particle Transport in Transport Barriers
5	A-P1	D. F. Kong (ASIPP)	Impact of pedestal plasma density and E_r on linear and nonlinear edge-localized mode simulations using BOUT++
6	A-P2	T. Ming (ASIPP)	Vacuum ultraviolet imaging of the edge plasma on EAST
7	A-P7	H. Tanaka (Nagoya Univ.)	Capture of the enhanced cross-field transport localized in the recombining linear plasma
8	A-P8	T. T. Tran (NFRI)	Turbulence Characterization in 2D Forced Drift Wave-Zonal Flow Systems
9	A-P9	Y. W. Cho (SNU)	Study of Ion Thermal Internal Transport Barrier Formation in Reversed Shear Plasmas : Role of Localized Heating
10	A-P10	B. Y. Zhang (Kyushu Univ.)	Measurement of electron density profile and turbulence with comb microwave reflectometer in linear magnetized plasma
11	A-P11	S. Inagaki (Kyushu Univ.)	Axial momentum transport driven by turbulence in linear magnetized plasma
12	A-P12	J. Q. Dong (SWIP)	Observation of Streamer as a Trigger for ELMs on HL-2A Tokamak
13	A-P13	C. Moon (IPP)	Nonlinear Interaction between Low-Frequency Fluctuations and Turbulence in the Scrape-Off Layer of ASDEX Upgrade
14	A-P14	M. Kobayashi (NIFS)	Divertor detachment in LHD with edge stochastic layer and comparison with 3D numerical simulations
15	A-P15	H. Hasegawa (NIFS)	Particle-in-cell simulation of non-diffusive plasma transport in scrape-off layer
16	D-PL1	C. Chrystal (GA)	The Influence of Plasma Rotation on Burning Plasma Performance in Tokamaks
17	D-O1	K. Imadera (Kyoto Univ.)	ITB formation by toroidal momentum injection in flux-driven gyrokinetic turbulence
18	D-O2	T. Tokuzawa (NIFS)	Observation of solitary and mono-cycle shaped flow structure associated with the TESPEL injection
19	D-O3	S. Matsuoka (JAEA)	Finite orbit width effect on the neoclassical toroidal viscosity in the superbanana-plateau regime
20	D-O4	W. H. Ko (NFRI)	Empirical investigation of spontaneous rotation under co- and counter-NBI heated H-mode plasma in KSTAR
21	D-P3	M. Leconte (NFRI)	Helical electric potential modulation via Zonal-Flow coupling to Resonant Magnetic Perturbations
22	D-P4	Y. Kosuga (Kyushu Univ.)	How turbulence fronts induce plasma spin-up
23	D-P5	O. Yamagishi (NIFS)	Residual zonal flows with finite radial wavenumber revisited, and effects of initial parallel flow and electromagnetic potentials in tokamaks
24	D-P6	S. Yi (NFRI)	Effects of parallel flow fluctuation on zonal flow generation: A gyrokinetic simulation study

25	D-P7	Y. Nagashima (Kyushu Univ.)	Impact of end-plate biasing on plasma fluctuations in PANTA
26	C-P7	K. Nagaoka (NIFS)	Control and measurement of distribution function of fast ions for deeper understanding of nonlinear interaction of fast ions and Alfvén eigenmodes

Poster Session (B, C)

B. Model reduction and experiments for validation

C. Mode competition in turbulence and MHD driven by energetic particle

Poster Board ID	Presentation ID	Presenter	Title
1	B-O1	M. Nakata (NIFS)	Flux-driven global transport simulations based on joint approach with gyrokinetic and transport solvers
2	B-O2	T. Kobayashi (NIFS)	Turbulent particle flux suppression by radial electric field non-uniformity at edge transport barrier in JFT-2M tokamak
3	B-O3	H. Du (ASIPP)	Preliminary plasma core transport analysis of optimized internal inductance steady-state H-mode discharges in EAST
4	B-O4	M. J. Choi (NFRI)	Electron thermal fluctuation and transport in the ITB and L-mode plasmas without the large scale MHD instabilities
5	B-P1	X. Gao (ASIPP)	Optimization for long pulse high beta-N operation on EAST
6	B-P2	S. Ding (ASIPP)	Gyrokinetic Simulations on the Optimized Internal Inductance Steady-State Plasmas on EAST
7	B-P3	S. Toda (NIFS)	Reduced transport models for the dynamical simulation by the gyro-kinetic analysis with kinetic electrons in helical plasmas
8	B-P4	T. S. Hahm (SNU)	Turbulence Spreading and Transport Events in Tokamak Plasmas
9	B-P5	E. Narita (QST)	Gyrokinetic modeling of the quasilinear particle flux
10	B-P6	J. -W. Kim (KAIST)	Correlation between nonlinear time of pressure fluctuations and Kubo number of stochastic magnetic fields in BOUT++ simulation
11	B-P7	A. Ishizawa (Kyoto Univ.)	Turbulent transport in LHD and Heliotron J plasmas
12	B-P8	W. Lee (NFRI)	Comparative study of characteristics of ion-gyroscale fluctuations between measurements and gyrokinetic simulations in KSTAR
13	B-P9	P. H. Diamond (UCSD)	Turbulence Bistability-a Mechanism for Avalanching and Heat Flux Hysteresis
14	B-P10	M. Nunami (NIFS)	Microinstability and Turbulent Transport of Multi-ion-species Plasmas in Helical System
15	B-P11	F. Kin (Kyushu Univ.)	Extraction of nonlinear waveform in turbulent plasma
16	B-P12	K. Nishioka (Nagoya Univ.)	Stability and error analysis of a moment extract approach to the toroidal gyro kinetic simulation with finite collision effect
17	B-P13	G. M. Staebler (GA)	The Predict First Initiative
18	C-PL1	I. Cziegler (Univ. of York)	On the presence of GAM-ZF competition en route to tokamak turbulence transitions
19	C-OV1	P. H. Diamond (UCSD)	Mode Competition, Saturation Mechanisms and Spatial Patterns in Multiscale Turbulence
20	C-O1	K. Ida (NIFS)	Transition from MHD mode to tongue deformation before the collapse events in LHD

21	C-O2	Z. -Z. Ren (DLUT)	Energetic particle modes of $q=1$ high order harmonics in tokamak plasmas with monotonic weak magnetic shear
22	C-O3	A. Bierwage (QST)	Energetic-Ion-Driven Instabilities and Transport: Simulation Methods, Benchmark, Validation and Predictions
23	C-P1	T. Zhang (ASIPP)	Observation of reverse-sheared Alfvén eigenmodes (RSAEs) in ELMy H-mode plasma on EAST tokamak
24	C-P2	H. Ren (USTC)	Energetic particle driven geodesic acoustic mode in a toroidally rotating tokamak plasma
25	C-P4	M. Sasaki (Kyushu Univ.)	Enhancement and suppression of turbulence by energetic-particle-driven geodesic acoustic modes
26	C-P5	S. -I. Itoh (Kyushu Univ.)	Hydrogen Isotope Effect on Confinement
27	C-P6	N. Kasuya (Kyushu Univ.)	Turbulence Simulation Taking Account of Inhomogeneity of Neutral Density in Linear Devices
29	C-P8	S. Maeyama (Nagoya Univ.)	Effects of electron-scale turbulence on micro-tearing modes
30	C-P9	T. Akiyama (NIFS)	RF radiation as an indicator of fast ion loss by instabilities
31	C-P10	T. Miura (Nagoya Univ.)	Entropy transfer function and zonal flow shearing in ion temperature gradient turbulence
32	C-P11	Y. Todo (NIFS)	Zonal flows and geodesic acoustic modes in the evolution of energetic particle driven instabilities
33	C-P12	T. Ido (NIFS)	Energetic particle-driven GAM in deuterium plasma in LHD
34	D-P10	H. Sugama (NIFS)	Gyrokinetic formulation to derive conservation laws for collisional and turbulent transport of particles, energy, and toroidal momentum