US TTF 2018 Workshop Schedule

Monday May 7

17:30-19:30 **Registration** (Shell Room)

Tuesday May 8

8:00-11:30 Plenary Session (Mission Bay Ballroom AB)

7:30 **Registration** (Mission Bay Ballroom Foyer)

8:00-8:30 Opening

8:30-9:30 **Transport Issues During Tokamak Disruptions**

Chair: Gary Staebler

8:30-9:00 Xianzhu Tang

Transport issues in disruption modeling for mitigation design

9:00-9:30 Discussion

9:30-10:00 Refreshment break (Mission Bay Ballroom A)

10:00-11:30 **The Role of Transport in ELM Suppression**

Chair: Dmitri Orlov

10:00-10:30 Keith Burrell

Role of Extra Edge Transport in Stationary, Quiescent H-mode Operation in DIII-D

10:30-11:00 Yang Ye

Stationary ELM-free H mode and edge coherent mode performance in EAST

11:00-11:30 Theodore Golfinopoulos

Mode Structure, Coherence, and Locality of Edge Modes on Alcator C-Mod

11:30-13:30 Lunch break

13:30-15:30 **Working Group Sessions**

Predict First Methods Working Group (Mission Bay Ballroom AB)

Chair: Chris Holland

13:30-13:50 Francesca Poli

Optimization of ramp-up current evolution for improved access and sustainment of stable steady-state operation

13:50-14:10 Pablo Rodriguez Fernandez
Prediction of Cold-Pulse Dynamics in Tokamak Plasmas using Quasilinear Turbulent Transport Models

14:10-14:30 Payam Vaezi
Input Parameter and Temporal Uncertainty Quantification in Plasma Turbulence Validation Studies

14:30-15:30 Discussion

Runaway Electron Transport Working Group (Shell Room)

Chair: Troy Carter

13:30-13:45 Alex Tinguely
Spatiotemporal dynamics of runaway electrons in Alcator C-Mod

13:45-14:00 Chris McDevitt
Spatial Transport of Runaway Electrons

14:00-14:15 Zehua Guo
Control of runaway electron energy using externally injected whistler waves

14:15-14:30 Don Spong
Simulation of the runaway electron collisional transport in tokamaks with pellet suppression and instability effects

14:30-15:30 Discussion

15:30-16:00 Refreshment break (Mission Bay Ballroom A)

16:00-18:00 **Transport Toolbox Working Group** (Mission Bay Ballroom AB)

Presenters: Brian Grierson, Sterling Smith, Orso Meneghini

19:00-21:00 **Banquet** (William D. Evans Dockside)

Wednesday May 9

8:30-11:30 Plenary Session (Mission Bay Ballroom AB)

8:30-9:30 **Testing Reduced Models of Energetic Particle Transport**

Chair: Mario Podesta

8:30-9:00 Eric Bass

Prediction of alpha and neutral-beam ion profiles in ITER scenarios

9:00-9:30 Laszlo Bardoczi

Test and Validation of TRANSP "Kick"-Model Predictive Capability of Neoclassical Tearing Mode Induced Fast Ion Transport in ITER Relevant DIII-D Plasmas

9:30-10:00 Refreshment break (Mission Bay Ballroom A)

10:00-11:30 **Electromagnetic Effects in High Beta Plasmas**

Chair: Gary Staebler

10:00-10:30 Zach Williams

Multi-scale Interactions Between Tearing and Microscale Turbulence

10:30-11:00 Juan Ruiz Ruiz

Two synthetic diagnostics for quantitative comparisons between gyrokinetic simulation and experimental spectra of electron scale turbulence in NSTX plasmas.

11:00-11:30 Jie Chen

Measurement of internal magnetic fluctuations by Faraday Effect polarimetry on DIII-D

11:30-13:30 Lunch break

13:30-15:30 **Working Group Sessions**

Energetic Particles Working Group (Shell Room)

Chair: Mario Podesta

13:30-13:45 Xiaodi Du
Measurements of Energetic Particle Flow in Phase Space induced by Wave- Particle Interactions

13:45-14:00 Bill Heidbrink
The phase-space dependence of fast-ion interaction with tearing modes

14:00-14:30 Discussion: Experimental activities

14:30-14:45 Nikolai Gorelenkov
A Quasi-linear modeling of fast ion relaxation due to Alfvénic instabilities

14:45-15:00 Zhihong Lin
Verification and Validation of Integrated Simulation of Energetic Particles in Toroidal Plasmas

15:00-15:30 Discussion: Theory and modeling activities

Boundary Physics Working Group (Mission Bay Ballroom AB)

Chair: Ilon Joseph

13:30-13:45 Nami Li
Simulations of divertor heat flux widths using BOUT++ transport code with drifts

13:45-14:00 Defeng Kong
E_r×B shear effect on cross phase mitigates ELM at high collisionality

14:00-14:15 Lothar Schmitz
L-H Transition Trigger Physics in ITER-Similar Plasmas with Applied n=3 Magnetic Perturbations

14:15-14:30 Ben Zhu
Up-down symmetry breaking and the density pinch in global tokamak edge simulations

14:30-15:30 Discussion

15:30-16:00 Refreshment break (Mission Bay Ballroom A)

16:00-18:00 **Poster Session A** (Mission Bay Ballroom A)

Thursday May 10

8:30-11:30 Plenary Session (Mission Bay Ballroom AB)

8:30-9:30 **Pedestal and Scrape off Layer Turbulence**

Chair: Phil Snyder

8:30-9:00 Calvin Lau

Cross-Separatrix Simulations of Turbulent Transport in the Field-Reversed Configuration

9:00-9:30 Troy Carter

Interaction between high-power ICRF waves and drift-wave turbulence in LAPD

9:30-10:00 Refreshment break (Mission Bay Ballroom A)

10:00-11:30 **Pedestal and Scrape off Layer Turbulence**

Chair: Phil Snyder

10:00-10:30 Federico Halpern

Physics of the narrow heat-flux feature: Theory, simulations, and comparison with experimental data

10:30-11:00 Xueqiao Xu

Modeling Tokamak Pedestal and Scrape off Layer Turbulence

11:00-11:30 Discussion

11:30-13:30 Lunch break

13:30-15:30 **Working Group Sessions**

3D Fields Working Group (Shell Room)

Chair: Dmitri Orlov

13:30-13:45 George McKee
Dynamics of Pedestal Turbulence, ExB shear and zonal flow evolution during RMP application on DIII-D

13:45-14:00 Guanghai Hu
Non-axisymmetric edge coherent mode with applied 3D fields in EAST

14:00-14:15 Sam Taimourzadeh
Roles of RMP-induced Changes of Radial Electric Fields in ELM Suppression

14:15-14:30 Benjamin Faber
Exploring geometry dependence of saturation in stellarator turbulence

14:30-15:30 Discussion

Pedestal Working Group (Mission Bay Ballroom AB)

Chair: Phil Snyder

13:30-13:50 Zheng Yan
Turbulence and Sheared Flow Structures Behind the Isotopic and q95 Dependence of the L-H Power Threshold at DIII-D

13.50-14:10 David Newman
Controlling the Cross-phase: A mechanism for the I-mode and other enhanced confinement regimes?

14:10-14:30 Takashi Nishizawa
Measurements of Impurity Particle Transport Associated with Drift-Wave Turbulence in a Toroidal Plasma

14:30-15:30 Discussion

15:30-16:00 Refreshment break (Mission Bay Ballroom A)

16:00-18:00 **Poster Session B** (Mission Bay Ballroom A)

Friday May 11

8:30-11:30 Plenary Session (Mission Bay Ballroom AB)

8:30-9:30 **Particle and Impurity Transport in the Pedestal**

Chair: Nathan Howard

8:30-9:00 Livia Casali

The impact of impurities on pedestal and global confinement in high-Z and low-Z wall tokamaks

9:00-9:30 Emily Belli

Critical role of sonic rotation on ion and impurity transport

9:30-10:00 Refreshment break (Mission Bay Ballroom A)

10:00-11:30 **Validating Models of Momentum Transport**

Chair: Brian Grierson

10:00-10:30 Maria Filomena Nave

Experiments and Modeling of Intrinsic Rotation in JET Plasmas

10:30-11:00 Timothy Stoltzfus-Dueck

Towards Quantitative First-Principles Models for Intrinsic Rotation in Axisymmetric Devices

11:00-11:30 Discussion

11:30-11:45 Student Prizes for Best Posters

11:45-12:00 Introduction of new TTF Chair Chris Holland