

Program ~ The Exploratory Plasma and Fusion Research Workshop (EPR)

August 1-4, 2017

Pinnacle Hotel Vancouver Harbourfront, Vancouver, British Columbia

Tuesday, August 1

8:45		Welcome and Opening Remarks ~ Harbourfront Ballroom I Christofer Mowry (General Fusion, CEO); Brett Chapman (EPR, Chair)
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Accelerating Low-Cost Plasma Heating and Assembly

Session Chair: Mike Brown

9:00	Manjit Kaur	Magnetothermodynamics of fusion targets
9:30	Seo Byonghoon	Investigation of magnetized target fusion adiabatic compression and heating using collision of an MHD-driven jet with a target cloud
10:00	Paul Bellan	Hard X-rays observed associated with magnetic reconnection of the collisional plasma jet produced by a coaxial magnetized plasma gun (spheromak gun)
10:30	Break	
11:00	Brian Nelson	Progress on Scaling the Sheared-Flow Stabilized Z-Pinch: The Fusion Z-Pinch Experiment "FuZE"
11:30	Harry Mclean	A Reactor Development Scenario for the FUZE Shear-flow Stabilized Z-pinch

Lunch 12:00-1:30 (on your own)

3D, reconstruction, neutron production, heating and trapping with rf

Session Chair: Hiroshi Gota

1:30	Heinrich Laqua	The first operation phase of the Wendelstein7-X stellarator and its near future scientific program
2:00	Cihan Ackay	A Brief History of the Electrostatically Driven Helical Plasma State at Tibbar Plasma Technologies
2:30	Chris Hansen	Reconstruction of axisymmetric plasma equilibria with 3D eddy currents
3:00	Break	
3:30	Cary Forest	A High Field GDT Neutron Factory for Academic and Industrial Applications
4:00	Andrew Seltzman	Observation of Electron Bernstein Wave Heating in the RFP
4:30	Nathaniel Hicks	Trapping Quasi-neutral Plasma with RF Multipole Structures

Wednesday, August 2

Improved confinement, shocks, fueling and alternate fuel

Session Chair: Dick Majeski

9:00	Dennis Boyle	Analysis of low recycling discharges with improved confinement and a hot edge in the Lithium Tokamak Experiment
9:30	Zichuan Xing	Ion energy balance in enhanced-confinement reversed-field pinch plasmas
10:00	Thomas Weber	Laboratory stagnation of supersonic magnetized plasma flows
10:30	Break	
11:00	Chijin Xiao	Compact Torus Injection experiments on the STOR-M Tokamak
11:30	Robert Bourque	Methane Targets for Inertial Fusion

Lunch 12:00-1:30 (on your own)

Advanced startup

Session Chair: Harry McLean

1:30	Paolo Micozzi	Obtainment of the Phase I full performances in PROTO-SPHERA and future perspectives of the experiment
2:00	Fatima Ebrahimi	Three-dimensional plasmoid-mediated reconnection in tokamaks
2:30	Justin Perry	Non-solenoidal Tokamak Startup and Near-Unity Toroidal Beta Using High-Field-Side Local Helicity Injection on the Pegasus ST
3:00	Break	
3:00-5:00	Poster Session I	Ballroom II/III
6:00-7:00	Reception	Tuscany Room; <i>cash bar</i>
7:00	Banquet	Tuscany Room; Speaker(s): tbd

Thursday, August 3

Compression experiment and modeling

Session Chair: Brian Nelson

9:00	Michel Laberge	Plasma compression experiments at General Fusion
9:30	William Young	Temperature Measurements in Compressed and Uncompressed SPECTOR Plasmas at General Fusion
10:00	Peter O'Shea	Passive MHD Spectroscopy For Augmenting Magnetic Reconstructions on Spherical Tokamak Plasmas at General Fusion
10:30	Break	
11:00	Merritt Reynolds	MHD simulation of plasma compression experiments
11:30	Stephen Howard	Physics objectives of PI3 spherical tokamak program

Lunch 12:00-1:30 (on your own)

1:30-3:30	Poster Session II	Ballroom II/III
2:30	Break	
3:45-6:30	General Fusion Lab Tour	<i>Transportation provided; depart hotel at 3:45; arrive back at hotel at approximately 6:30</i>

Friday, August 4

Spheromak, FRC

Session Chair: Michel Laberge

9:00	Aaron Hossack	Sustainment of stable spheromaks and recent results from HIT-SI3
9:30	Kyle Morgan	Results of zero and finite beta simulations of the HIT-SI3 experiment using the NIMROD code
10:00	Derek Sutherland	Compact, spheromak-based pilot plants for the demonstration of net-gain fusion power
10:30	Break	
11:00	Hiroshi Gota	C-2U and C-2W Field-Reversed Configuration Experiments
11:30	Daniel Fulton	Development of a First-Principles Simulation Model of Turbulent Transport in Field-Reversed Configuration Plasmas

Workshop Adjourns 12:00