

2025 US-Japan FRC Workshop

Date: Nov. 21 – 22, 2025

Venue: UC Irvine campus, ISEB room 1010

Presentation: 25 min (including short Q&A) per talk

Friday, November 21, 2025

#	Time (PST)	Speaker	Title
	9:00 – 9:10	Opening Remarks – Hiroshi Gota	
Session 1: Chair – Hiroshi Gota			
1	9:10 – 9:35	Tomohiko Asai (Nihon U./ LINEA)	Self-Organized FRC Formation in a Mirror configuration and an Outlook toward p- ¹¹ B Based on FRC Geometry
2	9:35 – 10:00	Sean Dettrick (TAE)	Overview of Beam-Driven FRCs at TAE
3	10:00 – 10:25	John Slough (MSNW)	A Compact Fusion Reactor Based on the Staged Compression of an FRC
Coffee Break (20 min)			
Session 2: Chair – Sean Dettrick			
4	10:45 – 11:10	Elena Belova (PPPL)	Effects of beam ions on stability properties of kinetic FRCs
5	11:10 – 11:35	Loren Steinhauer (TAE)	Neoclassical hyperviscous current sustainment in FRCs
6	11:35 – 12:00	Eric Clark (Helion)	Hybrid Simulations of Adiabatically Compressed FRCs
Group Photo and Social Lunch* (75 min)			
Session 3: Chair – John Slough			
7	13:15 – 13:40	Christopher Galea (Princeton Satellite Systems)	High-Efficiency Plasma-Accommodating Radiofrequency Power Electronics for FRC Formation and Heating
8	13:40 – 14:05	Layla Mohsen (Princeton Satellite Systems)	Starfire: Compact Fusion for Power and Propulsion
9	14:05 – 14:30	Liam David (PPPL)	Coherent and Turbulent Instabilities in the PFRC-2
10	14:30 – 14:55	Daichi Kobayashi (Nihon U.)	Rapid damping of magnetic turbulence induced by collisional merging of field-reversed configurations
Coffee Break (20 min)			
Session 4: Chair – Yasuaki Kishimoto			
11	15:15 – 15:40	Hantao Ji (PPPL)	Introducing FLARE Facility for Experimental Study of FRC
12	15:40 – 16:05	Shota Ito (U. Tokyo)	PIC Simulation Study of Relaxation Process to an FRC plasma in Counter-helicity Merging Formation Scheme
13	16:05 – 16:30	Wenhao Wang (MIT)	A gyrokinetic simulation model for 2D equilibrium potential in FRC SOL
14	16:30 – 16:55	John Barrett (TAE)	Fueling Steady-State FRC Plasmas in C-2W
	16:55 – 17:00	First-day Closing	

* Lunch box will be provided to registered participants

Saturday, November 22, 2025

#	Time (PST)	Speaker	Title
Session 5: Chair – Michael Paluszek			
15	9:00 – 9:25	Tadafumi Matsumoto (TAE)	Compact Toroid Injection into C-2W FRC
16	9:25 – 9:50	Mizuki Sakamoto (U. Tsukuba)	Plasma Production and Heating with RF waves in GAMMA 10/PDX
17	9:50 – 10:15	Taichi Seki (LINEA/Nihon U.)	Development of a Compact Toroid Injection Fueling System for the GAMMA 10/PDX Device
Coffee Break (20 min)			
Session 6: Chair – Zhihong Lin			
18	10:35 – 11:00	Ryunosuke Kikuchi (Nihon U.)	Toroidal Spin-Up Dynamics in Field-Reversed Configurations via Field-Reversed Theta Pinch Method
19	11:00 – 11:25	Yasuaki Kishimoto (Kyoto U.)	Confinement of laser driven high energy density plasma based on structured medium
20	11:25 – 11:50	Ryutaro Matsui (Kyoto U.)	High-energy proton acceleration using nonlinear waves in high intensity laser matter interaction
Social Lunch* (70 min)			
Session 7: Chair – Loren Steinhauer			
21	13:00 – 13:25	Shuji Kamio (UCI/TAE)	Increased p- ¹¹ B fusion reaction rate through fast-ion acceleration by ICRF heating in LHD
22	13:25 – 13:50	Jacob Wood (TAE)	Implementation of a Lyman- α Diagnostic for Edge Neutral Characterization in C-2W
23	13:50 – 14:10	Satsuki Ishiwata (Nihon U.)	Comparison of Quasi-1D and Fully 2D Equilibrium Analyses under Varying Mirror-Field Strength
	14:10 – 15:00	Discussion and Closing Remarks – Tomohiko Asai / Loren Steinhauer	

* Lunch box will be provided to registered participants

Workshop website: <https://tae.com/2025-us-japan-frc-workshop/>

General contact: FRC2025@tae.com

