

Frontiers of Plasma Science Town Meeting

Self-Organization Subpanel Wednesday, August

12th, 2015

Time is Eastern Day saving Time (EDT)	Title of the talk	Speaker
11:00-11:20	Thoughts on Report Writing	Ronald C. Davidson
11:20-11:40	Magnetospheric Reconnection Explored in the Laboratory	Jan Egedal
11:40-12:00	The next magnetic reconnection frontier: realistic, first-principles kinetic simulations of reconnection in large 3D systems with and without radiation	Dmitri Uzdensky
12:00-12:20	Need for Momentum Injection and Core Fueling in Reactor Grade Fusion Plasmas	Roger Raman
12:20-12:40	IOTA: An engine to advance plasma science of intense charged particle beams	Swapn Chattopadhyay
12:40-1:00	break	
1:00-1:20	break	
1:20-1:40	Self-organization of Microplasmas in Cathode Boundary Layer Discharges in Noble Gases and Gas mixtures	Wei-Dong Zhu
1:40-2:00	Predictive Simulation of Pattern Formation and Self-Organization in Plasmas	Juan Pablo Trelles
2:00-2:20	Self-Organization of low temperature Hall plasmas with ExB drift via turbulence, anomalous transport and structures	Andrei Smolyakov
2:20-2:40	Back to the Future: How a plasma mode might change the electric power grid	Timothy J. Sommerer
2:40-3:00	break	
3:00-3:20	Status of probe diagnostics and collisionless phenomena in low pressure discharges	Valery Godyak
3:20-3:40	Plasma Sources for Nanomaterials and Nanodevices	Yevgeny Raitses, Mohan Sankaran
3:40-4:00	Plasmas, particulates, and plasma-facing surfaces at high magnetic fields	Carlos Romero-Talamas
4:00-4:20	Control of heating dynamics and distribution functions in technological plasmas	Julian Schulze

4:20-4:40	break	
4:40-5:00	Critical next-step experiments regarding instability enhanced friction and sheath formation in both unmagnetized and magnetized systems	Noah Hershkowitz
5:00-5:20	Major Scientific Challenges and Opportunities in Understanding Magnetic Reconnection and Related Explosive Phenomena in Self-Organizing Plasmas	Masaaki Yamada