

15th Workshop on MHD Stability Control & Joint US-Japan Workshop: "3-D Magnetic Field Effects in Control"

University of Wisconsin, Madison, USA. Nov 15-17 2010.

Agenda, v3, as of Nov 8th.

MONDAY: Research Room 1025, Engineering Centers Building, 1550 Engineering Dr.

From	To	Category	Speaker and title (and proposed chairs, tbc)
7:30	8:00	REGISTRATION	
8:00	8:10	Welcome	
			RMPs and the Edge: Chair: Richard Buttery
8:10	8:45	Invited	Oliver Schmitz (FZJ, Germany): Magnetic topology and plasma edge transport during RMP ELM control - status and puzzles
8:45	9:05	Contributed	Francesco Volpe UW Madison: Magnetic Barriers and their possible role in ELM control by resonant magnetic perturbations at DIII-D (on behalf of J. Kessler)
9:05	9:25	Contributed	Francesco Piras - CRPP Switz: "Snowflake" H mode in Tokamak Plasmas
9:25	9:45	Contributed	Vladimir Svidzinski FAR-TECH, Inc. USA: Edge parallel current drive in Tokamaks as a tool to stabilize plasma boundary
9:45	10:15	COFFEE	RMPs and 3-D: Chair: Francesco Volpe
10:15	10:50	Invited	K. Watanabe (NIFS, Japan) - LHD experiments relevant to Tokamak MHD control
10:50	11:10	Contributed	Lorenzo Frassinetti KTH Sweden Plasma braking due to resonant magnetic perturbations in EXTRAP T2R
11:10	11:30	Contributed	François Waelbroeck U.Texas Austin USA: RMP-driven transport in the pedestal
11:30	12:05	Invited	Chris Hegna (UW-Madison, USA) - 3D Ballooning Stability with RMPs
12:05	12:15	Photo	
12:15	13:35	LUNCH	3-D Effects on Stability: Chair: John Sarff
13:35	14:10	Invited	Anthony. Cooper (EPFL, Switzerland) - MHD equilibrium and stability of tokamaks and RFPs with 3D helical cores
14:10	14:30	Contributed	Alan Turnbull GA San Diego USA: On the Relation Between 3-D Equilibrium and Stability
14:30	14:50	Contributed	A. Sanpei, KIT, Japan - Initial results from 3-D MHD simulation studies for low-A RFP
14:50	15:10	Contributed	Brett Chapman UW-Madison USA Helical structures and improved confinement in the MST RFP
15:10	15:40	COFFEE	3-D Plasmas: Chair: Francois Waelbroeck
15:40	16:15	Invited	Sadao Masamune (Kyoto Inst. Tech., Japan) - 3D self-organization in RFPs with connections to stellarator MHD
16:15	16:35	Contributed	John Shmitt UW-Madison USA: Measurement, Reconstruction and Modeling of Equilibrium Currents in the HSX Stellarator
16:35	17:10	Invited	Paolo Piovesan (RFX, Italy) - 3D flows in helical RFP equilibria
17:10	17:30	Contributed	John Finn LANL USA Optimization Studies for Pulsed Poloidal Current Drive
17:30	18:30		Wisconsin Cheese and Beer Hour
18:30	19:15		Tours of HSX and Pegasus
20:00	late		Banquet

TUESDAY: Research Room 1025, Engineering Centers Building, 1550 Engineering Dr.

			RWM Physics: Chair: Jerry Navratil
8:20	8:55	Invited	Jack Berkery (Columbia Univ., USA) - Comparison of RWM Theory and Experiment
8:55	9:15	Contributed	Matthew Lanctot LLNL USA: Ideal MHD and Kinetic Effects on 3D tokamak equilibria
9:15	9:35	Contributed	Michio Okabayashi PPPL USA The off-axis fishbone-driven RWM
9:35	9:55	Contributed	Carlos Paz-Soldan UW-Madison USA: Stabilization of the line-tied resistive wall mode by a rotating conducting wall

9:55	10:25	COFFEE	
TUESDAY (contd)			NTV mini-session: Chair: Andrew Cole
10:25	11:00	Invited	Andrew Cole (UW-Madison) - Neoclassical Toroidal Viscosity - Progress, Puzzles and Challenges
11:00	11:20	Contributed	Youwen Sun FZ Juelich Germany: Modeling of the Neoclassical Toroidal Plasma Viscosity in Tokamaks
11:20	11:40	Contributed	James Callen UW-Madison USA Effects of 3D Magnetic Perturbations on Toroidal Plasmas
11:40	12:00	Contributed	Jong-Kyu Park, PPPL USA: Analytic NTV calculations across the regimes and benchmark with FORTEC-3D drift-kinetic code simulation
12:00	12:20	Discussion	PANEL DISCUSSION ON NTV
12:20	13:40	LUNCH	RWM control I: Overview and feedback Chair: Michio Okabayashi
13:40	14:15	Invited	Manabu Takechi (JAEA, Japan) - RWM Stabilization with Active Control Coils
14:15	14:35	Contributed	Jeremy Hanson Columbia/ORISE USA: Feedback control of resistive wall mode stability using neutral beam injection heating.
14:35	14:55	Contributed	Andrew "Steve" Richardson LANL USA: Control of ideal and resistive magnetohydrodynamic modes in reversed field pinches with a resistive wall
14:55	15:15	Contributed	Lidia Piron IGI Padova Italy: Magnetic feedback optimization by including the dynamic response of the wall in RFX-mod and DIII-D
15:15	15:45	COFFEE	RWM control II: Advanced feedback and stability Chair: Jim Drake
15:45	16:20	Invited	Jon Menard (PPPL, USA) - Role of plasma edge in global stability and control
16:20	16:40	Contributed	David Maurer Columbia USA: New HBT-EP Multimode MHD Control System and Future Experimental Plans
16:40	17:00	Contributed	Erik Olofsson KTH Sweden: MIMO system identification of external plasma response for EXTRAP T2R
17:00	17:20	Contributed	Yongkyoon In FAR-TECH, Inc. USA: Magnetic feedback strategy near no-wall stability limit
17:20	17:40	Contributed	Steve Sabbagh Columbia USA: State space controller feedback
18:00	18:40		Tour of MST & RWM - open period 6-6:40pm
WEDNESDAY: Research Room 1025, Engineering Centers Building, 1550 Engineering Dr.			
Now same location as Tues			Disruptions, ITPA and Tearing: Chair: Rob La Haye
8:20	8:40	Contributed	Allen Boozer Columbia USA: Enhanced stability of neoclassical tearing modes from external magnetic perturbations
8:40	9:15	Invited	John Wesley (GA, USA) - Disruption Mitigation Challenges for ITER and Beyond
9:15	9:35	Contributed	Sergey Mirnov TRINITI Russia: Disruption Mitigation by Injection of Massive Be and Li Pellets
9:35	10:10	Invited	Val Izzo (UCSD, USA) - Theory and Modeling of Disruptions
10:10	10:30	Contributed	Shifan Mao UW-Madison USA: Statistical Survey of Mode Locking at DIII-D
10:30	10:50	Contributed	Edward Strait GA San Diego USA: Update on ITPA activities
10:50	11:20	COFFEE	Tearing Physics and Control: Chair: Sadao Masamune
11:20	11:55	Invited	Francesco Volpe (UW-Madison, USA) - Control of disruptive Locked Modes by Magnetic Perturbations and ECCD
11:55	12:15	Contributed	Federico Felici CRPP/EPFL Switzerland: Real-time control of tearing modes and current density profile on TCV
12:15	12:35	Contributed	Enzo Lazzaro from IFP-CNR Milan - New Aspects Of The Identification Of Magnetic Islands From ECE Signals And Control By ECCD (REMOTE)
12:35	12:55	Contributed	Richard Buttery GA San Diego US: Error Field Thresholds in H-mode Plasmas
12:55	13:15	Contributed	Robert La Haye GA San Diego USA: Modification of Sawteeth by Applied $m/n=1/1$ Fields Revisited
13:15	13:45	Committee & Closing	Including next meeting, and review of MHD WS organization