19th MHD Stability Control Workshop: Fundamental understanding of plasma response to 3D fields & MHD stability control						
	8:00	Registration	David Maurer			
	8:30	Welcome & Announcements	Matthew Lanctot	Chair		
			Dr. Zhanjiang Liu	Associate Provost and Associate Vice President for Research, Auburn University		
			Matthew Lanctot	Agenda		
			David Maurer	Local announcements		
No.	**Day/ Start Time**	**Session Title**	**Presenter Name/Chair**	**Affiliation**	**Device/Theory**	**Topic(s)**
1		Impact of 3D Plasma Response on 2D Shape Control	Matthew Lanctot			
	8:50		Ian Chapman	EURATOM/CCFE	MAST	3D plasma boundary deformations and plasma position control in the presence of 3d fields
	9:25		Hiroaki Tsutsui	Tokyo Insitutute of Technology		A Small Tokamak with Saddle Coils for Passive Stabilization of Positional Instabilities --- Construction and First Experiment ---
	9:45		Stefano Munaretto	UW-Madison	MST	Control of 3D equilibria with a 3D RMP in MST
	10:20	Coffee break				
2		3D Model Validation	Akio Sanpei			
	10:50		Edward Strait	GA	DIII-D, C-MOD, NSTX	Validation of 3D plasma response models
	11:25		Allan Reiman	PPPL	Theory	A Cross-Benchmarking and Validation Initiative for Tokamak 3D Equilibrium Calculations
	11:45		Andreas Wingen	ORNL	DIII-D	Impact of plasma response on RMP ELM suppression in DIII-D
	12:05	Lunch				
3		Fast ion transport in 3D configurations	Go Matsunaga			
	13:05		Gerrit Kramer	PPPL	NSTX, SPIRAL	Fast ion transport and modification of Alfven activity in NSTX using 3D fields
	13:40		David Pfefferle	EPFL/CRPP	Theory	Fast ion transport in 3D saturated MHD configurations
	14:00		Nik Logan	PPPL	IPEC-PENT	Neoclassical toroidal viscosity in perturbed equilibria with general tokamak geometry
	14:35		Daniele Brunetti	CRPP-EPFL		Fast growing instabilities and nonlinear saturated states in hybrid tokamak and RFP plasmas
	14:55	Coffee break				
4		3D Plasma Response & Kinetic Effects	Alan Turnbull			
	15:25		Jack Berkery	Columbia	NSTX/MISK	Kinetic resistive wall mode stability evaluation and physics insight application in NSTX
	15:45		Josef Kamleitner	EPFL/CRPP	TCV	Suprathermal electron dynamics and MHD instabilities in a tokamak
	16:20		Junya Shiraishi	JAEA	Theory	Extension of kinetic-MHD model to include toroidal rotation shear effect and its application to stability analysis of resistive wall modes
	16:55		Zhirui Wang	PPPL	MARS-K	The role of drift kinetic effects and fluid flow on the plasma response in high-beta tokamak experiments
	17:30	Panel discussion	Alan Turnbull (Facilitator)		Plasma response validation in the wall stabilized regime	
	18:00	Close				
	18:30	Cash bar				
	19:15	Banquet				
				Day 2		
5		3D Field Interactions with Kink and Tearing Modes	Gerald Navratil			
	8:00		Sadao Masamune	Kyoto	RELAX	RFP plasma response to 3-D external field in RELAX
	8:20		Chiara Piron	RFX	RFX	Coupling of externally applied 3D fields with internal MHD, with focus on sawteeth and their control
	8:55		Zane Taylor	ORAU	DIII-D	Control of the Hybrid Scenario in DIII-D
	9:15		Dylan Brennan	PPPL	Theory	Control of resistive wall modes with tearing layers, rotation, and finite beta in full MHD
	9:50	Coffee break				
6		3D fields for ELM & Disruption Avoidance	Sadao Masamune			
	10:20		Satoshi Ohdachi	NIFS	LHD	MHD instabilities and its suppression by the RMP in the Large Helical Device
	10:55		Carlos Paz-Soldan	GA	DIII-D	Multi-mode plasma response approaching and entering ELM suppression
	11:15		Steve Sabbagh	CU	NSTX	Physical Characteristics of Neoclassical Toroidal Viscosity in Tokamaks for Rotation Control and the Evaluation of Plasma Response
	11:35		David Ennis	AU	CTH	Passive stabilization of MHD instability using stellarator rotational transform on CTH
	12:10		Daisuke Shiraki	ORNL	DIII-D	3D aspects of disruption mitigation by massive gas and shattered pellet injection
	12:30	Lunch				

7		**Using Internal Coils for MHD Control: A History**	**Rob La Haye**			
	13:30		T.C. Hender and A.W. Morris (Rob La Haye)	CCFE	DITE	DITE: Developing design for JET in-vessel saddle coils
	13:50		Rob La Haye		JET	JET: 8 in-vessel saddle coils
	14:10		Peter Denner	Juelich	TEXTOR	Application of 3D fields on TEXTOR using the DED
	14:30		Qian Peng	Columbia	HBT-EP	Internal coils for RWM Control on HBT-EP
	14:50		Dmitri Orlov	GA	DIII-D	Physics motivation and operational experience with internal 3D coils in DIII-D
	15:10	**Coffee break**				
	15:30		V. Igochine	IPP	AUG	Internal coils on AUG
	15:50		Bo Rao	HUST	J-TEXT	Internal coils for magnetic island control on J-TEXT
	16:10		Go Matsunaga	JAEA	JT-60SA	In-vessel coils for MHD control on JT-60SA
	16:35		Samual Lazerson	PPPL	STELLOPT	Numerical optimization of three dimensional coils for NSTX-U
	16:55		Yuri Gribov (Lanctot)	ITER	ITER	ITER In-vessel coils
	17:15	**Panel discussion**	Rob La Haye	Discuss the relevance of the extensive amount of ongoing control research that relies on internal control coils given that such coils will not be available in a demonstration reactor		
	17:45	**Close**				
	18:00	**Tour of CTH, MDPX, Alexis (located nearby)**				
			Day 3 (half-day)			
8		**3D Effects & Control of High Beta Plasmas**	**Michio Okabayashi**			
	8:00		Valentin Igochine	IPP	AUG	Identification and possible extension of the beta limit in ASDEX Upgrade
	8:35		Josh King	GA	DIII-D	Non-rigid plasma response in high beta DIII-D discharges
	8:55		Kazuo Toi	NIFS	LHD	Suppression of Pressure Driven Modes in LHD Plasmas with Edge Magnetic Hill Region and Effects of Externally Applied RMPs
	9:30		Jeremy Hanson	Columbia	DIII-D	Stability Limits in High Performance, Negative Central Shear Discharges
	9:50		Erik Olofsson	Columbia	DIII-D	Phase control of locked modes
	10:10	**Coffee break**				
9		**Modeling of 3D Plasma Response**	**Andrew Cole**			
	10:40		Ezekial Unterberg	ORNL	DIII-D	The Effects of Changes in the 3D Equilibrium Properties in Interpretation of Soft X-ray Images during RMP Application in DIII-D H-mode Discharges
	11:00		Kimin Kim	PPPL	Theory	Ideal plasma shielding and amplification of magnetic field line splitting in perturbed tokamaks
10		**RWM feedback control in RFPs**	**Matthew Lanctot**			
	11:20		Akio Sanpei	Kyoto	RELAX	Properties of the equilibrium and the eddy current distribution in the vacuum vessel in a low-aspect-ratio RFP RELAX
	11:40		Lorenzo Frassinetti	KTH	EXTRAP-2TR	Experimental study on the physical mechanism related to the hysteresis of the TM locking-unlocking process to an external field in EXTRAP T2R.
	12:00		Agung Chris Setiadi	KTH	EXTRAP-T2R	Applied MHD Control at EXTRAP T2R
			Conclude			
	12:25	**Discussion of 2015 Theme and Place**				
	1:00	**Close**				
	1:45	**Next Groome shuttle to Atlanta airport**				