

Second Announcement of the

15TH WORKSHOP ON MHD STABILITY CONTROL: "US-Japan Workshop on 3D Magnetic Field Effects in MHD Control"

November 15-17, 2010

**University of Wisconsin, Madison, WI, USA
(Monday 8:00 AM to Wednesday 1:30 PM)**

An MHD Control Workshop with the theme "3D Magnetic Field Effects in MHD Control" will be held at the University of Wisconsin, Madison, on November 15-17, following the 2010 APS-DPP Annual Meeting in Chicago, Illinois (November 8-12). This is the 15th in series and is organized jointly by Columbia University, General Atomics, Princeton Plasma Physics Laboratory, the University of Texas Austin, and the University of Wisconsin-Madison.

Location: Pyle Center, University of Wisconsin Campus, Madison

Conference web site: <http://fusion.gat.com/conferences/mhd10/>.

Theme: 3D Magnetic Field Effects in MHD Control

This workshop will highlight the role of non-axisymmetric magnetic fields for control of MHD stability to achieve high performance fusion plasmas. The application of 3D magnetic field offers control of important elements of equilibrium, stability, and transport. The use of active 3D fields to stabilize global instabilities and to correct magnetic field errors is an established tool for achieving high beta configurations. 3D fields also affect transport and plasma momentum, shown important for the control of ELMs, resistive wall modes, and optimized stellarator configurations. The multiple potential benefits from 3D fields encourages the identification of synergistic control strategies (and inherent conflicts) using a minimal set of 3D field actuators suited to a fusion reactor environment.

The format will be similar to previous workshops, including invited talks (30-40 minutes) and contributed talks (20-25 minutes). Some invited talks may be of a review nature.

Topics of interest will include, but not be limited to:

- Control of Edge Localized Modes (ELMs)
- Control of Neoclassical Tearing Modes (NTMs)
- Control of Resistive Wall Modes (RWMs)
- Control of Sawteeth
- Disruption Avoidance and Mitigation
- Helical Systems
- Reversed Field Pinches (RFPs)

This year a special session will be dedicated to Neoclassical Toroidal Viscosity (NTV).

Publication

Both invited and contributed speakers are encouraged to prepare a journal paper for submission to *Plasma Physics and Controlled Fusion* by November 30, 2010. Papers will undergo the usual PPCF refereeing process. Accepted papers will appear in a special issue of the journal.

Pre-registration

Pre-registration forms, available on the conference website, are due by July 30, 2010.

Conference fee

\$60, payable in cash or check at the registration desk on the first day of conference.

Hotel Information:

A block of rooms has been reserved for November 14-18, 2010 at the
Double Tree Hotel
525 W. Johnson St., Madison, WI,
Tel: +1-608-251-5511.

Special room rate of \$99/night available until October 9 or until the group block is sold-out, whichever comes first. For reservations, follow the link from the conference web site.

Employees of U.S. national laboratories might be eligible for a federal rate, possibly lower than the conference rate. Please check with the hotel and with your institution.

WARNING: due to a football game, hotels in Madison will be busy and 2-3 times more expensive than usual in the week-end immediately preceding the workshop (November 12-14). Workshop attendants who will also attend the APS-DPP meeting in Chicago (November 8-12), might consider prolonging their stay in Chicago until Sunday.

Reception and Conference Dinner

Wisconsin cheese, wine and beer will be served in a small reception at the Pyle Center on Monday, November 15, from 5 to 6p.m. The reception is included in the conference fee.

A conference dinner will be held at the Italian restaurant-pizzeria Café Port' Alba on Monday, November 15, from 8 to 9.30p.m. The fee for the conference dinner is \$30 and can be paid in cash or check at the conference registration desk.

Program Committee:

Richard Buttery (General Atomics, *chair*)
Robert La Haye (General Atomics)
Piero Martin (RFX-mod)
Gerald Navratil (Columbia University)
Michio Okabayashi (PPPL)

T. Ozeki (JAEA Naka)
John Sarff (Univ. Wisconsin)
François Waelbroeck (Univ. Texas)
K. Yamazaki (Nagoya University)

Local Organizers: Francesco Volpe and John Sarff

Previous workshops in this series:

- 14 PPPL, Nov.9-11, 2009, "Assuring successful MHD control in ITER"
(<https://fusion.gat.com/conferences/mhd09/>)
- 13 University of Texas, Austin, Nov.23-25, 2008, workshop on MHD stability control: "US-Japan Workshop on MHD Control, Magnetic Islands and Rotation"
(<http://fusion.gat.com/conferences/mhd08/>)
- 12 Columbia University, Nov.11-13, 2007, "Improved MHD Control Configurations"
(<http://fusion.gat.com/conferences/stability07/>)
- 11 PPPL, Nov.6-8, 2006, "Active MHD Control in ITER"
(<http://fusion.gat.com/conferences/mhd06/>)
- 10 University of Wisconsin-Madison, Oct.31-Nov.2, 2005
"Active Control of MHD Stability: Progress in Kink and Tearing Mode Control"
(<http://plasma.physics.wisc.edu/MHD05/>)
- 9 PPPL, Nov.21-23, 2004, "Back to Basics"
(<http://fusion.gat.com/conferences/mhd04/>)
- 8 University of Texas - Austin, Nov.3-5, 2003,
"Extension to the Burning Plasma Regime"
(<http://fusion.gat.com/conferences/mhd03/>)
- 7 Columbia University, Nov.18-20, 2002, "Extension of Performance"
(<http://www.apam.columbia.edu/fusion/MHDControl2002/>)
- 6 General Atomics, Nov.5-7, 2001, "Control of MHD Stability by Rotation"
- 5 PPPL, 30 Oct - 1 Nov 2000
Workshop on Innovative MHD Control in Magnetic Fusion Plasmas
- 4 University of Washington, Nov.21-23, 1999
Workshop on Active MHD Mode Control in Innovative Confinement Concepts
- 3 General Atomics, Nov.22-24, 1998
Workshop on Active Control of MHD Modes in Toroidal Devices
- 2 Columbia University, Nov.23-25, 1997
Workshop on Control of MHD Modes in Tokamaks with Non-axisymmetric Coils
- 1 PPPL, Dec.11-13, 1996
Workshop on Feedback Stabilization of MHD Instabilities