

3rd Announcement

Thank you for your interest in VORPAL and Tech-X Corporation. Tech-X Corporation will hold a **VORPAL User Group Meeting (VUGM)** during the upcoming APS Division of Plasma Physics meeting, being held at the Hyatt Regency Chicago on the Riverwalk from Nov 8 – 12. The VUGM will be held on Wednesday, November 10, from 12:30PM – 2:00PM in Skyway 265. **Lunch will be included.**

In order to ensure we provide enough food, and to make sure the hotel provides enough seating, please RSVP to Ed Kase (ekase@txcorp.com) no later than November 4. If you have already sent an RSVP, there is no need to send one again.

The agenda is:

12:30 – 12:40	Buffet Lunch is served
12:40 – 12:50	New VORPAL Features, Ed Kase, Tech-X Corporation
12:50 – 1:05	Numerical Simulation of Plasma Sputtering System with VORPAL, Chuandong (Sean) Zhou, Ph.D., Tech-X Corporation
1:05 – 1:20	Simulations of a Smith-Purcell Free-Electron Laser using VORPAL, Chris Prokop, Northern Illinois University
1:20 – 1:35	Simulations of plasma formation and sustainment in microwave plasma source, Ron Bravenec, Ph.D., Fourth State Research and Tokyo Electron America
1:35 – 1:45	VORPAL Composer Preview, David Smithe, Ph.D., Tech-X Corporation
1:45 – 2:00	Open Discussion

In addition staff from Tech-X will be presenting the following papers and posters:

Monday, November 8, 2010

Session BO7: Laser Plasma Electron Acceleration

Room: Columbus IJ

11:54 AM–12:06 PM

Abstract: BO7.00013 : Predictive design and interpretation of colliding pulse injected laser wakefield experiments

Authors: Estelle Cormier-Michel (Tech-X Corporation), Vahid H. Ranjbar (Tech-X Corporation), Ben M. Cowan (Tech-X Corporation), David L. Bruhwiler (Tech-X Corporation), Cameron G.R. Geddes (Lawrence Berkeley National Laboratory), Min Chen (Lawrence Berkeley National Laboratory), Benjamin Ribera (Lawrence Berkeley National Laboratory), Eric Esarey (Lawrence Berkeley National Laboratory), Carl B. Schroeder

(Lawrence Berkeley National Laboratory), Wim P. Leemans (Lawrence Berkeley National Laboratory)

Session CM11: Mini-Conference on Integrated, Multiphysics, High-performance Computations for Magnetic Fusion Research

Room: Columbus CD

2:50 PM–3:15 PM

Abstract: CM11.00003 : FACETS for Multiphysics, Whole-Fusion-Device Modeling

Author: J.R. Cary (Tech-X Corporation and U. Colorado)

Tuesday, November 9, 2010

Session GO7: Electron Sources and Terahertz Generation

Room: Columbus IJ

10:18 AM–10:30 AM

Abstract: GO7.00005 : Study on Low-Frequency Oscillations in a Gyrotron Using a 3D CFDTD PIC Method

Authors: M.C. Lin (Tech-X Corporation), D.N. Smithe (Tech-X Corporation)

Session GP9: Poster Session III: Laser and Beam-Driven Acceleration; DIII-D Tokamak I; General Tokamak; Field Reversed Configurations and Spheromaks; Mini-Conference: Integrated, Multiphysics, High-Performance Computations for Magnetic Fusion Research

Room: Riverside West

9:30 AM

Abstract: GP9.00010 : Fluid simulations of GeV scale laser plasma accelerator experiments

Authors: D.L. Bruhwiler (Tech-X Corporation), J.R. Cary (Tech-X Corporation), C.B. Schroeder (LBNL), E. Esarey (LBNL), B.M. Cowan (Tech-X Corporation), E. Cormier-Michel (Tech-X Corporation), C.G.R. Geddes (LBNL), W.P. Leemans (LBNL)

Abstract: GP9.00011 : Simulation of meter-scale laser wakefield stages using an envelope model

Authors: Benjamin Cowan (Tech-X Corporation), David Bruhwiler (Tech-X Corporation), Estelle Cormier-Michel (Tech-X Corporation), Cameron Geddes (Lawrence Berkeley National Laboratory), Eric Esarey (Lawrence Berkeley National Laboratory)

Abstract: GP9.00028 : Plasma Dynamics of Capillary Discharges for the BELLA project

Authors: Peter Stoltz (Tech-X Corporation), Ammar Hakim (Tech-X Corporation), John Loverich (Tech-X Corporation), David Fillmore (Tech-X Corporation), Jeffrey Johnson (Lawrence Berkeley National Laboratory), Cameron Geddes (Lawrence Berkeley National Laboratory), Eric Esarey (Lawrence Berkeley National Laboratory), Daniel Mittelberger (Lawrence Berkeley National Laboratory), Stepan Bulanov (Lawrence Berkeley National Laboratory), Anthony Gonsalves (Lawrence Berkeley National Laboratory), Wim Leemans (Lawrence Berkeley National Laboratory)

Abstract: GP9.00132 : Latest results from coupled core-edge simulations of pedestal buildup in the DIII-D tokamak using the FACETS code

Authors: Ammar Hakim (Tech-X Corporation), Alexander Pletzer (Tech-X Corporation), Robert Budny (Princeton Plasma Physics Laboratory), John Cary (Tech-X Corporation), Richard Groebner (General Atomics), Scott Kruger (Tech-X Corporation), Thomas Rognlien (Lawrence Livermore National Laboratory), Srinath Vadlamani (Tech-X Corporation)

Abstract: GP9.00134 : Implicit core-edge coupling in FACETS

Authors: Johan Carlsson (Tech-X Corporation), John Cary (Tech-X Corporation)

Abstract: GP9.00138 : First results of coupled IPS/NIMROD/GENRAY simulations

Authors: Thomas Jenkins (Tech-X Corporation), S.E. Kruger (Tech-X Corporation), E.D. Held (Utah State), R.W. Harvey (CompX), W.R. Elwasif (ORNL), D.D. Schnack (UW-Madison)

Abstract: GP9.00143 : A comparison of data interoperability approaches of fusion codes with application to synthetic diagnostics

Authors: Scott Kruger (Tech-X Corporation), S. Shasharina (Tech-X Corporation), S. Vadlamani (Tech-X Corporation), D. McCune (PPPL), C. Holland (UCSD), T.G. Jenkins (Tech-X Corporation), J. Candy (General Atomics), J.R. Cary (Tech-X Corporation), A. Hakim (Tech-X Corporation), M. Miah (Tech-X Corporation), A. Pletzer (Tech-X Corporation)

Session JP9: Poster Session IV: Education and Outreach; Undergraduate and High School Research; Heating and Current Drive; Fast Ignition and High Intensity Laser Plasma Interaction
Room: Riverside West

2:00 PM

Abstract: JP9.00086 : Geometry and Modeling of Single ITER Antenna Module

Authors: David Smithe (Tech-X Corporation), Travis Austin (Tech-X Corporation), Dan Karipides (Tech-X Corporation), Chet Nieter (Tech-X Corporation), Christine Roark (Tech-X Corporation)

Abstract: JP9.00087 : Simulations of ICRF Heating of Tokamak Core Plasma using Delta-f Particles

Authors: Travis Austin (Tech-X Corporation), David Smithe (Tech-X Corporation), Scott Sides (Tech-X Corporation), C.D. Zhou (Tech-X Corporation)

Thursday, November 11, 2010

Session UP9: Poster Session VIII: Plasma Technology and Other Fusion; DIII-D Tokamak II; Stellarators; Magneto-Inertial Fusion; Beams and Coherent Radiation

Room: Riverside West

2:00 PM

Abstract: UP9.00117 : Idealized modeling of merging plasma jets in two dimensions using Nautilus

Authors: John Loverich (Tech-X Corporation), Ammar Hakim (Tech-X Corporation)

Abstract: UP9.00125 : Laser-driven magnetic flux compression simulation with Nautilus

Authors: C.D. Zhou (Tech-X Corporation), J. Loverich (Tech-X Corporation), A. Hakim (Tech-X Corporation)

Also, Tech-X collaborators and customers will be presenting the following papers and posters:

Monday, November 8, 2010

Session BO7: Laser Plasma Electron Acceleration

Room: Columbus IJ

11:42 AM–11:54 AM

Abstract: BO7.00012 : Colliding Pulse Injection Control and X-Ray Sources

Authors: C.G.R. Geddes (LBNL), Y. Balva (LBNL), M. Battaglia (LBNL), M. Chen (LBNL), E.H. Esarey (LBNL), T.S. Kim (LBNL), N.H. Matlis, (LBNL), D.E. Mittelberger (LBNL), K. Nakamura (LBNL), G.R. Plateau (LBNL), L. Rabely (LBNL), C.B. Schroeder (LBNL), W.P. Leemans (LBNL), D.B. Thorn (GSI), T. Stoecklker (GSI), D.L. Bruhwiler (Tech-X Corporation), E. Cormier-Michel (Tech-X Corporation), B. Cowan (Tech-X Corporation), J.R. Cary (Tech-X Corporation)

Tuesday, November 9, 2010

Session BP9: Poster Session I: MHD, Two-Fluid, Chaos, and Nonlinear Interactions; NSTX Spherical Torus; Magnetic Confinement Simulation and Modeling; MHD Equilibrium, Stability, and Energetic Particle Effects

Room: Riverside West

9:30 AM

Abstract: BP9.00134 : Error-Field and Resistive Wall Coupling in NIMROD

Authors: A.L. Montgomery (University of Wisconsin, Madison), C.C. Hegna (University of Wisconsin, Madison), C.R. Sovinec (University of Wisconsin, Madison), A.J. Cole (University of Wisconsin, Madison), S.E. Kruger (Tech-X Corporation)

Session GP9: Poster Session III: Laser and Beam-Driven Acceleration; DIII-D Tokamak I; General Tokamak; Field Reversed Configurations and Spheromaks; Mini-Conference: Integrated, Multiphysics, High-Performance Computations for Magnetic Fusion Research

Room: Riverside West

9:30 AM

Abstract: GP9.00012 : Modeling laser wakefield accelerators in a Lorentz boosted frame

Authors: Jean-Luc Vay (Lawrence Berkeley National Laboratory), Cameron Geddes (Lawrence Berkeley National Laboratory), Estelle Cormier-Michel (Tech-X Corporation), David Grote (Lawrence Livermore National Laboratory)

Abstract: GP9.00027 : Simulations of Slow Capillary Discharges for BELLA

Authors: Jeffrey Johnson (Lawrence Berkeley National Lab), Phillip Colella (Lawrence Berkeley National Lab), Cameron Geddes (Lawrence Berkeley National Lab), Eric Esarey (Lawrence Berkeley National Lab), Wim Leemans (Lawrence Berkeley National Lab), Daniel Mittelberger (U.C. Berkeley), Stepan Bulanov (U.C. Berkeley), Peter Stoltz (Tech-X Corporation)

Session JO4: MFE Simulation and Modeling

Room: Grand Ballroom A

2:12 PM–2:24 PM

Abstract: JO4.00002 : Analysis Tools for Fusion Simulations

Authors: Allen Sanderson (SCI Institute, Univ. of Utah), Scott Kruger (Tech-X Corporation), Joshua Breslau (PPPL), Stephane Ethier (PPPL)

Session JP9: Poster Session IV: Education and Outreach; Undergraduate and High School Research; Heating and Current Drive; Fast Ignition and High Intensity Laser Plasma Interaction

Room: Riverside West

2:00 PM

Abstract: JP9.00089 : First Order Corrections to the Plasma Conductivity Tensor for Wave Heating Simulations with AORSA

Authors: E.F. Jaeger (XCEL Engineering Inc.), L.A. Berry (Oak Ridge National Laboratory), D.L. Green (Oak Ridge National Laboratory), D.N. Smithe (Tech-X Corporation)

Abstract: JP9.00091 : PIC simulations of interaction between ICRF waves and edge plasma

Authors: Nong Xiang (University of Colorado at Boulder and Inst. of Plasma Physics, CAS), John R. Cary (University of Colorado at Boulder and Tech-X Corporation), David Smithe (Tech-X Corporation), Travis Austin (Tech-X Corporation)

Thursday, November 11, 2010

Session TP9: Poster Session VII: Basic Plasma Physics: Turbulence, Simulations, Flows, Sheaths, and Shocks; C-Mod Tokamak; Turbulence and Transport; Mini-Conference: Solar Wind

Turbulence

Room: Riverside West

9:30 AM

Abstract: TP9.00113 : Benchmark of NIMROD kinetic electron closures with the NEO code

Authors: Eric Held (Utah State University), Scott Kruger (Tech-X Corporation), Emily Belli (General Atomics), James Callen (Wisconsin)

**Session UP9: Poster Session VIII: Plasma Technology and Other Fusion; DIII-D Tokamak II;
Stellarators; Magneto-Inertial Fusion; Beams and Coherent Radiation**

Room: Riverside West

2:00 PM

Abstract: UP9.00095 : Investigation of equilibrium plasma beta limits in 3-D magnetic topologies

Authors: M.G. Schlutt (University of Wisconsin), C.C. Hegna (University of Wisconsin), C.R. Sovinec (University of Wisconsin), E. Held (Utah State University), S. Kruger (Tech-X Corporation)

Abstract: UP9.00159 : Simulations of Ion Beam Heated Targets on NDCX II

Authors: J.J. Barnard (LLNL), A. Friedman (LLNL), L.J. Perkins (LLNL), F.M. Bieniosek (LBNL), M.J. Hay (LBNL), E. Henestroza (LBNL), B.G. Logan (LBNL), R.M. More (LBNL), P.A. Ni (LBNL), S.F. Ng (LBNL), S.S. Yu (LBNL), S.A. Veitser (Tech-X Corporation)

Friday, November 12, 2010

Session XP9: Poster Session IX: Supplemental and Post-Deadline Posters

Room: Riverside West

9:30 AM

Abstract: XP9.00045 : Modeling Vacuum Arcs

Authors: J. Norem (ANL), Z. Insepov (ANL), Th. Proslie (ANL), D. Huang (IIT), S. Mahalingam (Tech-X Corporation), S. Veitser (Tech-X Corporation)