

Plasma Physics Seminar Archive

Date	Speaker	Talk Title
2018-2019		
Monday, June 17, 2019 2:00PM	Yogesh Gianchandani (University of Michigan, Ann Arbor)	Microfabricated devices for vacuum and gas phase environments
Wednesday, June 12, 2019 3:30PM	Seth Dorfman (Space Sciences Institute & UCLA)	Investigations of Fundamental Plasma Physics in LAPD: Alfvén Wave Parametric Instabilities / Plasma and Radio Wave Generation by Electron Beams
Thursday, May 30, 2019 12:30PM	Feng Chu (University of Iowa)	Determining Metastable Ion Lifetime and History Using Wave-Particle Interaction and Laser-Induced Fluorescence
Thursday, May 16, 2019 12:30PM	Byonghoon Seo (Caltech)	MHD-driven plasma jets relevant to thermonuclear fusion, MHD instability, and magnetic reconnection
Thursday, May 9, 2019 12:30PM	Noah Hurst (UCSD)	Dynamics of electron plasma vortices subject to external strain flows
Monday, April 29, 2019 2:30PM	Masayuki Ono (PPPL)	Opportunities and Challenges of Plasma Waves for Magnetic Fusion
Thursday, March 21, 2019 10:00AM PSTI Seminar	Dennis Whyte (Director, MIT Plasma Science & Fusion Center)	Small, modular & economically attractive fusion enabled by high-field superconductors
Tuesday, March 12, 2019 11:00AM	Eric S. Clark (Modern Electron)	Introduction to Thermionic Energy Conversion
Thursday, March 7, 2019 1:30PM	Scott Hsu (Director, ARPA-E Fusion Research Program, U.S. Department of Energy)	Fusion concept exploration and basic plasma shock research on the Plasma Liner Experiment at Los Alamos
Wednesday, November 14, 2018 2:00PM	Renaud Gueroult (Universite de Toulouse, France)	Rotating plasma for separation - Shocks and magnetosonic soliton dynamics
Wednesday, September 26, 2018 1:00PM	Clive Michael (Australian National University)	Influence of magnetic configuration and RF heating on turbulence and confinement in the H1 Helic and MAGPIE linear device
Monday, July 23, 2018 1:40PM	Leon Ofman (CUA/NASA GSFC)	Fast EUV Waves in the Solar Corona: Observations and Models
Thursday, July 12, 2018 1:00PM	Dennis Papadopoulos (University of Maryland)	Saving the planet from killer electrons
2017-2018		
Monday, June 11, 2018 1:00PM	Hyeon Park (Ulsan National Institute of Science and Technology, Korea)	Validation of "Full Rennection Model" of the Sawtooth Crash
Thursday, May 17, 2018 1:00PM PSTI Seminar	Tammy Ma (National Ignition Facility, LLNL)	Creating a Star on Earth: Status of Ignition Experiments at the NIF
Thursday, May 1, 2018 1:00PM	Saskia Mordijck (The College of William and Mary)	Particle transport from the bottom up
Wednesday, March 14, 2018 2:00PM	Professor Gunsu S. Yun (Pohang University of Science and Technology, POSTECH)	Ion cyclotron harmonic waves in the boundary of magnetized toroidal plasma
Wednesday, February 21, 2018 2:00PM	Xiangrong "Sean" Fu (New Mexico Consortium, Los Alamos)	Parametric Decay Instability and Dissipation of Low-frequency Alfvén Waves in Low-beta Turbulent Plasmas
2016-2017		
Friday, May 19, 2017 1:00 PM	Gregory Howes (University of Iowa)	Understanding Turbulent Heating in Space and Astrophysical Plasmas
Friday, April 21, 2017 1:00 PM	Shawn Tang (UCLA)	Parametric investigation of compressional and global Alfvén eigenmode instability and effect on thermal confinement in NSTX-U
Thursday, January 12, 2017 2:00 PM	Matthew Gomez (Sandia National Laboratories)	Pulsed-Power-Driven Magneto-Inertial Fusion Research on the Z Facility

Thursday, December 1, 2016 2:00 PM	Michael Campanell (LLNL)	New Predictions for the Sheath and Presheath Distributions Above Strongly Emitting Surfaces
Tuesday, November 8, 2016 2:30 PM	Professor Baonian Wan, Director (Institute of Plasma Physics, Chinese Academy of Sciences (ASIPP) Hefei, China)	Overview of the EAST Tokamak and Plasma Research at ASIPP
Friday, October 21, 2016 2:00 PM	Giovanni Rossi (UCLA) Tom Neiser (UCLA) Ziyan (Zoe) Zhu (UCLA)	<ul style="list-style-type: none"> • Electromagnetic turbulence and transport in increased β LAPD Plasmas • Multi-scale Simulations of DIII-D near-edge L-mode plasmas • Evidence for Chaotic Edge Turbulence in the Alcator C-Mod Tokamak
Friday, October 14, 2016 1:00 PM	Jonathan (Jono) Squire (Caltech)	A stringent limit on the amplitude of Alfvénic perturbations in high-beta low-collisionality plasmas
Tuesday, September 6, 2016 2:00 PM	Jongsoo Yoo (PPPL)	Laboratory studies of reconnection at the magnetopause
Thursday, August 18, 2016 1:00 PM	David Schaffner (Bryn Mawr)	Turbulence and Fusion at the Tri-Co: Plasma Research at Bryn Mawr and Swarthmore College
2015-2016		
Friday, June 3, 2016 1:00 PM	Kshitish Barada (UCLA)	Measurement of Local, Internal Magnetic Fluctuations via Cross Polarization Scattering in the DIII-D Tokamak
Friday, May 13, 2016 1:00 PM	Laszlo Bardoczi (UCLA)	Multi-field/-scale Interactions of Turbulence with Neoclassical Tearing Modes and Impact on Plasma Confinement in the DIII-D Tokamak
Friday, April 29, 2016 1:00 PM	Christian Fronsdal (UCLA)	How to analyze certain experiments
Thursday, February 11, 2016 2:30 PM	Walter Guttenfelder (Princeton Plasma Physics Laboratory)	Challenges and plans for transport research in the NSTX-Upgrade spherical tokamak
Friday, January 29, 2016 2:00 PM	Richard Magee and Artem Smirnov (Tri Alpha Energy, Inc.)	C-2-Upgrade Field Reversed Configuration Experiment
Friday, January 22, 2016 2:00 PM	Nathan Howard (MIT Plasma Science and Fusion Center)	Understanding Turbulence in Tokamak Plasmas Using Dedicated Experiments and Validated Gyrokinetic Simulations
Friday, December 11, 2015 2:00 PM	Christopher Chen (Imperial College, London)	Recent Results from the Solar Wind: Turbulent Residual Energy and Pressure Anisotropy Instabilities
Thursday, December 3, 2015 2:00 PM	Maria Elena Innocenti (University of Leuven, Belgium)	The Multi Domain method, a semi-implicit adaptive method for fully kinetic Particle In Cell simulations
Thursday, November 12, 2015 1:00 PM	Alejandro Bañón Navarro (UCLA) Tom Neiser (UCLA)	<ul style="list-style-type: none"> • Gyrokinetic studies of core turbulence features in ASDEX Upgrade: Can gyrokinetic simulations match the fluctuation measurements? • Electron dominated transport regimes in the near-edge tokamak plasma
Tuesday, November 10, 2015 11:00 AM	Bart Van Compernelle (UCLA) Xin An (UCLA)	<ul style="list-style-type: none"> • Laboratory studies of avalanches in magnetized plasmas • Excitation of chirping whistler waves in a laboratory plasma
Thursday, October 8, 2015 2:00 PM	Martin Weidl (Max-Planck-Institut für Plasmaphysik)	Charged-particle propagation in the interstellar medium
Monday, September 28, 2015 1:00 PM	Snezhana I. Abarzhi (Carnegie Mellon University)	Rayleigh-Taylor instability and interfacial mixing
Thursday, September 24, 2015 1:00 PM	David Hatch (UT Austin)	The fate of the H-mode: ITER and beyond
2014-2015		
Thursday, June 11, 2015 1:00 PM	Geert Verdoolaege (Ghent University)	Probabilistic modeling of stochastic plasma phenomena using information geometry
Tuesday, May 26, 2015 1:00 PM	Tuomas Koskela (Aalto University, Helsinki)	Modelling the JET H-mode pedestal plasma with gyrokinetic PIC codes
Thursday, May 21, 2015 1:00 PM	Marco Velli (UCLA)	MHD turbulence in the solar wind
Thursday, May 7, 2015	Prof. Ghassan Antar	Controlling Turbulence by RF Waves

1:00 PM	(American University of Beirut)	
Thursday, April 30, 2015 1:00 PM	Yevgen Kazakov (LPP, Royal Military Academy of Belgium)	On resonant ICRF absorption in plasmas with three ion species: a promising new tool for fast ion generation and bulk plasma heating
Thursday, April 23, 2015 1:00 PM	Richard Sydora (University of Alberta, Canada)	Nonlinear Convective Processes in Magnetized Temperature Filaments: Gyrokinetic Modeling and Experiments
Thursday, April 9, 2015 1:00 PM	M. J. Pueschel (University of Wisconsin-Madison)	Recent Advances in the Theoretical Understanding of Finite-Beta Tokamak Turbulence
Thursday, March 12, 2015 1:00 PM	Rima Hajjar (UC San Diego)	On Aluminum Impurity Transport and Ablation Cloud Shielding Effects of Tungsten Dust in Edge Plasmas
Friday, February 27, 2015 1:00 PM	Dr. Serena Dalena (Associate Editor, Physical Review Letters)	Successful Letters in Physical Review Letters: An Editor's Perspective
Thursday, February 26, 2015 1:00 PM	Daniel Told (UCLA)	A gyrokinetic study of dissipation in plasma turbulence
Friday, February 20, 2015 1:00 PM	Alejandro Bañón Navarro (UCLA)	Turbulence in ASDEX Upgrade: Can GENE simulations match the measurements?
Friday, December 12, 2014 1:00 PM	Lothar Schmitz (UCLA)	First Direct Evidence of Turbulence-Driven Ion Flow Triggering the L- to H-Mode Transition
Friday, December 5, 2014 1:00 PM	Jaeyoung Park (EMC2 Fusion Development Corp.)	Polywell Fusion – Electric Fusion in a Magnetic Cusp
Friday, November 14, 2014 12:30 PM	Masayuki Ono (NSTX-U Project Director, Princeton Plasma Physics Laboratory)	NSTX Upgrade for establishing physics and technology basis for FNSF
Thursday, October 23, 2014 1:00 PM	Derek Schaeffer (UCLA)	Generation of Collisionless Shocks by a Laser-Driven Magnetic Piston
Friday, October 17, 2014 1:00 PM	Seth Dorfman (UCLA)	Laboratory Studies of Nonlinear Interactions Relevant to Alfvén Wave Decay Instabilities
Wednesday, October 15, 2014 2:30 PM	Alex Paterson (LAM Research)	Time-modulated Plasma Etching for Next Generation Devices
2013-2014		
Friday, May 23, 2014 1:00 PM	Frank Jenko (Max Planck Institute for Plasma Physics, Garching, Germany)	Turbulent processes in laboratory and natural plasmas: Connecting the dots
Wednesday, May 21, 2014 1:00 PM	Haihong Che (NASA/Goddard Space Flight Center)	The Origin of Kinetic Turbulence in the Solar Wind
Friday, May 16, 2014 1:00 PM	Klaus Hallatschek (Max Planck Institute for Plasma Physics and Technical University Munich, Germany)	Evolution of Zonal Flows from Turbulence in Confined Plasmas and Giant Planets
Tuesday, May 6, 2014 11:30 AM	Matthew Kunz (Princeton University)	Firehose and Mirror Instabilities in a Collisionless Shearing Plasma
Friday, May 2, 2014 1:00 PM	William Daughton (Los Alamos National Laboratory)	Quantifying the Reconnection Rate in Turbulent Kinetic Layers
Tuesday, April 29, 2014 11:30 AM	Frederico Fiuzza (Lawrence Livermore National Laboratory)	Exploring particle acceleration in laser-driven collisionless shocks: from cosmic rays to radiotherapy
Friday, April 11, 2014 1:00 PM	Edmund Highcock (Magdalen College, University of Oxford)	Computing Plasma Turbulence in Fusion and Beyond
Friday, March 21, 2014 1:00 PM	Carlos Paz-Soldan (General Atomics)	Improving the physical basis of tokamak geometric tolerances
Thursday, February 27, 2014 1:00 PM	Raffi Nazikian (Princeton Plasma Physics Laboratory)	Recent Advances in the Understanding of ELM suppression by Resonant Magnetic Perturbations on DIII-D
Friday, January 31, 2014 1:00 PM	Cami Collins (UC Irvine and DIII-D)	Creating a Spinning, Unmagnetized Plasma to Study Astrophysical Accretion Disks and Dynamos
Thursday, January 9, 2014 1:00 PM	Ari Le (UCSD and SciberQuest, Inc.)	Electron Equations of State and Magnetic Reconnection
Friday, November 22, 2013 1:00 PM	Tulasi Parashar (Jet Propulsion Laboratory)	Kinetic Physics of the Solar Wind
Thursday, November 7, 2013 1:00 PM	Hyeon K. Park (UNIST, Ulsan, Korea)	Enhanced understanding of the MHD dynamics and ELM control experiments in KSTAR

Friday, October 25, 2013 1:00 PM	Christopher Chen (UC Berkeley)	Plasma Turbulence in the Solar Wind
2012-2013		
Tuesday, June 25, 2013 1:00 PM	Chris Cooper (University of Wisconsin–Madison)	Confinement in the Madison Plasma Dynamo Experiment
Wednesday, June 5, 2013 3:00 PM	Igor Kaganovich and Yevgeny Raitses (Princeton)	Overview of low-temperature plasma physics research at PPPL
Friday, May 10, 2013 1:00 PM	Giovanni Lapenta (KU Leuven)	Multi-scale simulations of plasma with iPIC3D: the approach and its recent developments
Thursday, April 25, 2013 2:00 PM	Philip R. Goode (NJIT Distinguished Professor and Director of the Big Bear Solar Observatory)	The 1.6 m Off-Axis New Solar Telescope (NST) in Big Bear
Friday, April 5, 2013 1:00 PM	Jie Zhang (UCLA)	Study of internal magnetic field via polarimetry in tokamaks
Tuesday, March 19, 2013 2:00 PM	Alexander Flegel (The University of Nebraska-Lincoln)	Enhanced Multiphoton Effects in Laser-Assisted Electron-Atom Collisions
Tuesday, March 12, 2013 1:00 PM	Jörg Büchner (Max-Planck-Institut für Sonnensystemforschung)	Simulation of disruptions by magnetic reconnection and possible particle acceleration by Alfvén waves at the Sun
Thursday, February 14, 2013 1:00 PM	Yuhou Wang (UCLA)	Destruction of a Magnetic Mirror-Trapped Hot Electron Ring by a Shear Alfvén Wave
Tuesday, February 5, 2013 1:00 PM	Siegfried Glenzer (LLNL)	Progress towards inertial confinement fusion on the National Ignition Facility
Wednesday, January 9, 2013 3:30 PM	Dmitri Uzdensky (University of Colorado)	Strong beaming of high-energy particle acceleration and radiation in magnetic reconnection in relativistic pair plasmas
Thursday, November 8, 2012 12:30 PM	Art Pak (LLNL)	Observation of radiative shock waves from implosion experiments at the National Ignition Facility
IGPP Seminar Friday, October 19, 2012 3:30-5:00 PM	Seth Dorfman (UCLA)	Coupling of Large Amplitude Alfvén waves to Acoustic Modes in the Large Plasma Device (LaPD)
Monday, October 15, 2012 11:00 AM	Nathan Howard (Plasma Science & Fusion Center, MIT)	Validation of Gyrokinetic Heat and Impurity Transport in the Core of Alcator C-Mod Plasmas
Thursday, October 4, 2012 1:00 PM	Nat Hamlin (UCLA)	The Role of the Kelvin-Helmholtz Instability in the Evolution of Magnetized Relativistic Sheared Plasma Flows
Friday, September 14, 2012 11:00 AM	Markus Roth (University of Darmstadt/LANL)	A bright neutron source driven by short pulse lasers
Wednesday, August 22, 2012 1:00 PM	Christian Brandt (UCSD)	Spatiotemporal control of drift wave turbulence
2011-2012		
Friday, May 4, 2012 1:00 PM	Chris Cooper (UCLA)	Transport in a magnetized plasma/neutral gas boundary layer: the end of the plasma...
Friday, April 27, 2012 1:00 PM	Jon Hillesheim (UCLA)	Observation of a critical gradient threshold for electron temperature fluctuations in the DIII-D tokamak
Thursday, March 22, 2012 1:00 PM	Brett Friedman (UCLA)	Energy dynamics in a simulation of LAPD turbulence
Thursday, March 1, 2012 1:00 PM	R.D. Sydora (University of Alberta)	A Gyrokinetic Particle Simulation of Plasma Turbulence and Transport in LAPD (Large Plasma Device)
Thursday, February 16, 2012 12:30 PM	Juan C. Fernández (Los Alamos National Laboratory)	A view of current High Energy Density and Plasma Physics research at Los Alamos
Thursday, February 9, 2012 1:00 PM	David Schaffner (UCLA)	Observation of improved and degraded confinement and reduction of particle flux through driven flow on the LAPD
Tuesday, January 24, 2012 1:00 PM	Padma Shukla (University of Bochum, Germany)	Quantum Free Electron Lasers
Friday, January 13, 2012 1:00 PM	Paul Terry (University of Wisconsin-Madison)	Damped Modes in Plasma Turbulence

Thursday, January 12, 2012 1:00 PM	Maxim Umansky (LLNL)	Modeling of the "death-ray" phenomenon in tokamak edge
Tuesday, November 22, 2011 11:30 AM	Raanan Gad (Technion)	Magnetically Induced Transparency in Cold Magnetized Plasma by Spatially Periodic Magneto-Static Field
Wednesday, November 9, 2011 11:00 AM	Bjorn Manuel Hegelich (LANL)	Relativistic Laser-Matter Interaction in the Transparent-Overdense Regime: Particle Acceleration, Relativistic Optics and Coherent X-ray Sources
Tuesday, October 18, 2011 12:00 PM	Ian Hutchinson (MIT)	Plasma flow round dust, probes, and the moon
Monday, September 19, 2011 1:00 PM	David Brower (UCLA)	Plasma Flow Driven by Kinetic Stress
Friday, October 21, 2011 11:00 AM	Louise Willingale (University of Michigan)	Ion acceleration from high-intensity laser interactions with underdense and near critical density plasma
Friday, October 14, 2011 11:30 AM	Francis F. Chen (UCLA) Davide Curreli (University of Padua, Italy)	What My Mother Never Told Me About Gas Discharges
Thursday, September 22, 2011 1:00 PM	Alexander Kosovichev (Stanford University)	Investigations of the solar interior and magnetism with SDO
2010-2011		
Monday, June 13, 2011 3:00 PM	Seth Dorfman (Princeton University)	Dynamics of Current Layer Disruptions and Associated Turbulence in the Magnetic Reconnection Experiment (MRX)
Friday, June 10, 2011 2:30 PM	Lothar Schmitz (UCLA)	Zonal Flow-Induced Predator-Prey Oscillations Preceding the L-H Transition
Friday, May 13, 2011 12:00 PM	Michael Schulz (Lockheed Martin, Retiree)	Wave-Particle Interactions in Space Plasmas
Friday, May 6, 2011 12:00 PM	Adolfo Ribeiro (UCLA/ESS)	Linear and non-linear numerical simulations of poloidal Alfvén waves
Friday, April 29, 2011 12:00 PM	Yuri Shprits (UCLA/IGPP and AOS)	Resonant Wave-particle Interactions in the Earth's Van Allen Radiation Belts
Friday, April 22, 2011 12:00 PM	Ricardo Fonseca (IST Lisbon, Portugal)	Towards Osiris 3.0 : present and future developments in the OSIRIS framework
Monday, April 18, 2011 11:30 AM	Peter Norreys (RAL, UK)	Control of fast electron beam divergence in intense laser-plasma interactions
Monday, April 4, 2011 11:30 AM	Walter Guttenfelder (Princeton Plasma Physics Laboratory)	Electromagnetic transport from microtearing mode turbulence in spherical tokamaks
Friday, April 1, 2011 12:00 PM	Stanislav Boldyrev (University of Madison-Wisconsin)	Turbulence of Alfvén waves
Friday, February 25, 2011 12:00 PM	Bill Heidbrink (UC Irvine)	THE INTRIGUING NONLINEAR DYNAMICS OF OFF-AXIS FISHBONES
Friday, February 11, 2011 2:30 PM	Andrey Zhmoginov (Princeton University)	ALPHA-channeling in mirror machines
Friday, January 21, 2011 12:00 PM	Bedros Afeyan (Polymath Research Inc.)	OPTIMAL CONTROL of nonlinear optical instabilities in Plasmas using stud pulses
Friday, Dec 3, 2010 12:00 PM	David S. Montgomery (Director, Trident Laser Facility) Los Alamos National Laboratory	Imaging X-ray Thomson Scattering and High-Energy-Density Laboratory Physics at the Trident Laser Facility
Thursday, November 18, 2010 11:00 AM	Trevor Lafleur, Christine Charles and Rod Boswell (Space Plasma Power and Propulsion RSPE, ANU, Canberra, ACT, Australia)	Broad band electron cyclotron damping in a low magnetic field helicon source
Friday, November 5, 2010 12:00 PM	Michail Tzoufras (University of Oxford)	A Vlasov-fokker-planck Code for high energy density physics
Friday, October 29, 2010 10:00AM	M.V. Umansky (LLNL)	Toward validation of a 3-D plasma turbulence model using LAPD data
Friday, October 22, 2010 12:00 PM	Arthur Pak (UCLA)	Injection of electrons via tunnel ionization into laser driven wakefields

Friday, October 15, 2010
12:00 PM

Eric Wang
(LLNL)

Magnetic stochasticity in gyrokinetic simulations of
plasma microturbulence