

DIII-D Participation at the 29th IAEA Fusion Energy Conference

Invited Talks

Presenter	Title	Date/Time
Christopher Holcomb	DIII-D Research to Provide Solutions for ITER and Fusion Energy	October 16 at 2:21 pm
Guillaume Brochard	Saturation of fishbone instability by self-generated zonal flows in tokamak plasmas	October 17 at 10:40 am
Xi Chen	Recent progress of the reactor-relevant intrinsically ELM-stable Quiescent H-mode on the DIII-D tokamak	October 18 at 5:04 pm
Nathan Howard	Performance and Transport in ITER: Multi-Channel Validation in DIII-D ITER-like Conditions and Predictions of ITER Burning Plasmas via Nonlinear Gyrokinetic Profile Prediction	October 19 at 09:21 am
Qiming Hu	Integration of RMP ELM control with divertor detachment in the DIII-D tokamak	October 20 at 09:04 am
Juan Huang	Sustainment of High q_{min} , High BetaN Plasmas on DIII-D towards Steady-state Advanced Tokamak Fusion	October 20 at 5:38 pm
Valerie Izzo	Runaway electron prevention by a passive 3D coil in disruption simulations of the SPARC and DIII-D tokamaks	October 20 at 09:21 am
Nikolas Logan	Improved pedestal performance utilizing 3d fields and edge localized electron cyclotron current drive	October 18 at 4:47 pm
George McKee	Turbulence, Transport and Confinement Dependence on Isotope Mass in Dimensionally Similar H-Mode Plasmas on DIII-D	October 19 at 08:47 am
Filippo Scotti	2D characterization of radiative divertor regimes with impurity seeding in DIII-D	October 21 at 09:21 am
Andrew Seltzman	Development of Monolithically Additive Manufactured Lower Hybrid Current Drive Launchers	October 18 at 3:25 pm
Ricardo Shousha	Closed Loop RMP ELM Suppression With Minimized Confinement Degradation Using Adaptive Control Demonstrated In DIII-D And KSTAR	October 19 at 11:31 am
Gary Staebler	Successful Prediction of Tokamak Transport in the L-mode Regime	October 21 at 09:14 am
Kathreen Thome	Assessment of Negative Triangularity as a Reactor Scenario in DIII-D	October 17 at 08:47 am
Francesca Turco	First Tungsten radiation studies and non-linear oscillations in DIII-D's ITER Baseline Demonstration Discharges	October 17 at 08:30 am
George Wilkie	Kinetic simulations of pedestal fueling asymmetry and implications for scrape-off-layer flows	October 18 at 08:47 am
Andreas Wingen	Prediction of pellet mass thresholds for ELM triggering in low-collisionality, ITER-like discharges	October 20 at 2:17 pm

Poster Presentations

Presenter	Title	Date/Time
Craig Petty	DIII-D: Closing the gaps to future fusion reactors	October 16 at 12:20 pm
Rongjie Hong	Mesoscopic turbulent transport events with long-radial-range correlation in low flow shear H-mode plasmas on DIII-D	October 20 at 07:30 am
Saeid Houshmandyar	Wide pedestal quiescent H-modes without power degradation of energy confinement: an observation understood by transport modelling	October 17 at 07:50 am
Jie Chen	Internal magnetic turbulence measurements link to confinement factor in DIII-D L-, ELMy H-, Quiescent H-, and I-mode plasmas	October 20 at 07:10 am
Kyle Callahan	Origin of the L-H power threshold isotope effect in DIII-D hydrogen and deuterium plasmas	October 18 at 12:20 pm
Lothar Schmitz	Accessing and Maintaining Robust H-mode in ITER Pre-Fusion Power Operation (PFPO) Plasmas	October 20 at 09:50 am
Guiding Wang	Core electron temperature turbulence and transport during sawtooth oscillations in the DIII-D tokamak	October 21 at 07:30 am
Robert Pinsker	First High-Power Helicon Results from DIII-D	October 18 at 4:30 pm
Stephen Wukitch	Development of DIII-D High Field Side Lower Hybrid Current Drive Launcher	October 19 at 10:00 am
Michael Van Zeeland	Isotope Impact on Alfvén Eigenmodes and Fast Ion Transport in DIII-D	October 19 at 4:30 pm
Eric Bass	Integration of critical-gradient model Alfvén eigenmode-driven energetic ion transport predictions into whole-device modeling workflows for fusion devices	October 18 at 4:10 pm
Azarakhsh Jalalvand	Towards Real-time Control of Alfvén Eigenmodes at DIII-D using Data-Driven Models and High-Resolution Diagnostics	October 20 at 09:10 am
Laszlo Bardoczi	The Root Cause of Disruptive NTMs and Paths to Stable Operation in Low-Torque DIII-D ITER Baseline Scenario Plasmas	October 20 at 10:00 am
Jeremy Hanson	Variable-spectrum mode control of high poloidal beta discharges	October 20 at 10:00 am
Mihir Pandya	Early detection of tearing modes and its impact on understanding the MHD stability of high-q _{min} plasmas in DIII-D	October 19 at 10:00 am
Allan Reiman	Passive, automatic RF stabilization of magnetic islands	October 19 at 4:30 pm
Himank Anand	Real-time plasma equilibrium reconstruction and shape control for the MAST upgrade tokamak	October 19 at 10:00 am
Vincent Graber	Assessment of the Burning-Plasma Operational Space in ITER by Using a Control-Oriented Core-Edge Model with SOLPS Parameterization	October 20 at 10:00 am
Shira Morosohk	Rapid Model-Based Scenario Optimization Using Machine Learning: Reducing Computational Time While Preserving Prediction Accuracy by Using Surrogate Models	October 17 at 10:00 am
Sai Tej Paruchuri	Actuator-sharing Algorithm for Simultaneous Regulation of Plasma Properties with Coupled Dynamics	October 18 at 10:00 am
David Eldon	Detachment control innovations used to support long-pulse detachment studies on the KSTAR tokamak	October 19 at 3:40 pm
Matthew Beidler	Wall Heating By Subcritical Energetic Electrons Generated By the Runaway Electron Avalanche Source	October 18 at 4:10 pm
Andres Pajares	Advanced Control in DIII-D: Supervisory and Fail-safe Algorithms for Future Reactor-grade Tokamaks	October 17 at 10:00 am

David Schissel	Remote Operation of the DIII-D National Fusion Facility	October 17 at 10:00 am
David Smith	Real-time ELM onset prediction with deep neural networks and high-bandwidth edge fluctuation measurements	October 18 at 3:40 pm
Brendan Lyons	Simulation of DIII-D disruption with pellet injection and runaway electron beam	October 18 at 4:10 pm
Huiqian Wang	Manipulating density pedestal structure to improve core-edge integration towards low collisionality	October 19 at 4:30 pm
Shaun Haskey	Plasma Fueling due to Thermal Charge Exchange Neutrals on DIII-D and Future Reactors	October 19 at 4:30 pm
Florian Laggner	Disentangling H-Mode Pedestal Structure And Neutral Ionization Source	October 20 at 10:00 am
Saskia Mordijck	Impact of ionization and transport on pedestal density structure in DIII-D and C-mod	October 17 at 2:40 pm
Zheng Yan	Inter-ELM pedestal turbulence and edge current density dynamics	October 21 at 10:20 am
Theresa Wilks	Limiting factors for achieving peeling-limited pedestals in present devices	October 19 at 4:30 pm
Robert Hager	Understanding the kinetic physics of RMP penetration in tokamak edge plasma with high-fidelity gyrokinetic simulations	October 20 at 10:00 am
Matthias Knolker	Advances in RMP ELM suppression towards high pedestal pressures harnessing the Super H-mode regime	October 19 at 4:30 pm
Auna Moser	Heat Flux Broadening And Divertor Detachment In High Parallel Heat Flux DIII-D Discharges	October 19 at 09:50 am
Florian Effenberg	Reducing plasma-material interactions in the DIII-D low-Z and high-Z divertors with impurity powders	October 17 at 4:10 pm
Jeremy Lore	Time-Dependent SOLPS-ITER Simulations of the Tokamak Plasma Boundary for Model Predictive Control	October 19 at 10:00 am
Roberto Maurizio	Experiments on plasma detachment in a V-shaped slot divertor	October 17 at 4:10 pm
Adam McLean	Radiated power by molecular deuterium in the tokamak divertor	October 19 at 3:20 pm
Morgan Shafer	Radiation dependence of divertor leg length in detachment on DIII-D	October 19 at 09:30 am
Tyler Abrams	Unraveling the physics of tungsten sourcing and leakage from a slot divertor configuration on DIII-D	October 20 at 10:00 am
Renato Perillo	Heat and particle flux to primary and secondary divertors for various ELM types and its implications for future machines	October 19 at 4:00 pm
Philip Snyder	Self-consistent integrated modeling of the pedestal, scrape-off layer, and divertor	October 20 at 10:00 am
Robert Wilcox	Interpretive Modeling Using SOLPS-ITER for Pumping Experiments with a Closed Divertor	October 17 at 4:10 pm
Siye Ding	On the development of an operational regime with high normalized density and confinement for ITER and attractive fusion pilot plant	October 17 at 4:10 pm
Orso Meneghini	Fusion Synthesis Engine: A next generation framework for integrated design of fusion pilot plants	October 17 at 10:00 am
Alessandro Marinoni	Nonlinear Gyrokinetic Modelling of High Confinement Negative Triangularity Plasmas	October 17 at 10:00 am
Tess Bernard	Effects of neutral transport and negative triangularity on plasma scrape-off layer turbulence in gyrokinetic simulations	October 18 at 4:10 pm
Andrew Oakleigh Nelson	Robust L-Mode Edge Behavior In High Performance Negative Triangularity Plasmas: From Experiments To Reactors	October 20 at 10:00 am
Federico Halpern	Drift-fluid simulations of tokamak edge turbulence with energy conservation	October 18 at 4:10 pm

Jon Kinsey	Predictive Equilibrium Reconstruction of DIII-D H-mode Plasmas	October 17 at 4:10 pm
Brendan Lyons	Flexible, Predictive Modeling of Tokamak Stability, Transport, Equilibrium, and Pedestal Physics	October 18 at 4:10 pm
Min-Gu Yoo	Innovative delta-f PIC algorithm for efficient homogeneous simulation of fusion plasmas from core to edge	October 18 at 4:10 pm