Session Program

13–18 Oct 2025

30th IAEA Fusion Energy Conference (IAEA FEC 2025)

Posters 1

Wednesday 15 October

10:35

Posters 1

Poster Session | **Location:** Chengdu, China

[REGULAR TWIN POSTER] Breakthrough in Field-Reversed Configuration Formation and Sustainment via Neutral-Beam Injection in C-2W

Speaker
Dr Hiroshi Gota

[REGULAR TWIN POSTER] Construction Progress of Chinese First Quasi-axisymmetric Stellarator (CFQS) and Preliminary Results in the CFQS-Test Device

Speaker
Yuhong Xu

[REGULAR TWIN POSTER] High Pedestal Pressure Path to High Fusion Performance Leveraging the New "Shape and Volume Rise" Divertor on DIII-D

Speaker
Theresa Wilks

[REGULAR TWIN POSTER] Peeling limited pedestals in JET, MAST-U and TCV: effect of density and isotope mass in deuterium and tritium-rich plasma on pedestal structure and stability and validation of pedestal predictions for ITER.

Speaker
Lorenzo Frassinetti

[REGULAR TWIN POSTER] CORE AND EDGE TRANSPORT OF SCENARIO WITH INTERNAL TRANSPORT BARRIER IN TRITIUM AND DEUTERIUM-TRITIUM PLASMAS IN JET WITH BE/W WALL

Speaker
Dr Costanza Maggi

[REGULAR TWIN POSTER] Achievement of a high-density, high-confinement, and high beta tokamak plasma regime for ITER and FPP

Speaker
A. M. Garofalo

[REGULAR TWIN POSTER] DEVELOPMENT OF HIGH POLOIDAL BETA SCENARIO FOR LONG-PULSE OPERATION IN COLLABORATION BETWEEN DIII-D AND KSTAR

Speaker
Youngmu Jeon

SIMULATING THE OXYGEN EMISSION FROM ADITYA-U TOKAMAK USING VARIOUS SPECTROSCOPIC MODELS

Speaker
Ritu Dey

CURRENT REARRANGEMENT IN MERGING START-UP OF SPHERICAL TOKAMAK PLASMAS

Speaker
Dr Michiaki Inomoto

ADAPTIVE ENERGY-SENSITIVE X-RAY TECHNOLOGY FOR LONG-PULSE OPERATION OF MAGNETICALLY CONFINED THERMAL AND NONTHERMAL PLASMAS

Speaker
Luis F. Delgado-Aparicio

Investigation of broadband fluctuation-induced inward transport at the edge of HL-2A NBI heated plasma

Speaker
Dr Jie Wu

DETERMINATION OF W CHARACTERISTICS IN WEST BY MEANS OF EXTREME UV EMISSION AND ARTIFICIAL INTELLIGENCE

Speaker
Rémy Guirlet

Global Fluid Turbulence Simulations of Pedestal Relaxation Events in the I-mode regime with GRILLIX

Speaker
Dr Christoph Pitzal

RESEARCH AT THE KURCHATOV INSTITUTE IN SUPPORT OF THE CREATION OF A HYBRID FUSION-FISSION SYSTEM

Speaker
Yury Shpanskiy

CONFINEMENT PROPERTY IN THE JT-60SA FIRST OPERATIONAL PHASE

Speaker
Yoshiaki Ohtani

GYROKINETIC STUDIES ON THE STABILIZATION OF HIGH FIELD AXISYMMETRIC MAGNETIC MIRRORS

Speaker
Maxwell Rosen

EFFECTS OF LITHIUM-COATING WALL CONDITIONS ON TURBULENT TRANSPORT IN EAST ELECTRON HEATING DOMINANT PLASMAS

Speaker
Jianwen Liu

Impurity Accumulation and Radiation Dynamics in advanced Scenarios in W7-X

Speaker
Dr Daihong Zhang

Simulations of the interactions between ELMs and edge turbulences on fusion reactor scale facilities

Speaker
Tianyang Xia

Validating physics-based (ASTRA/TRANSP), data-driven (D3D+AUG), and physics+data hybrid models for quantitatively accurate yet generalizable guidance for ITER operators

Speaker
Joseph Abbate

NONDIMENSIONAL CONFINEMENT SCALING IN SIMILAR NEGATIVE TRIANGULARITY PLASMAS ON THE DIII-D AND TCV TOKAMAKS

Speaker
Prof. Alessandro Marinoni

THREE-DIMENSIONAL NONLINEAR MODELING OF ELM DYNAMICS WITH BIASING IN THE HL-3 TOKAMAK

Speaker
Jie HUANG

Experimental study on configuration dependence of turbulent transport on LHD

Speaker
Kenichi Nagaoka

EXTRACTING THE NEAREST CANONICAL EQUILIBRIUM DISTRIBUTION VIA NATURAL GRADIENT DESCENT METHOD

Speaker
Chao Li

FUSION STUDIES WITH SMALL AND TABLETOP PLASMA FOCUS DEVICES: INVESTIGATIONS ON NEW OPERATIONAL REGIMES, NON-EQUILIBRIUM THERMODYNAMICS, EXTREME MATERIAL CONDITIONS, AND BIOLOGICAL EFFECTS

Speaker
Leopoldo Soto

Multi-Machine Studies of Low-Z Benign Termination of Runaway Electron Beams and Extrapolation to ITER

Speaker
Umar Sheikh

Experimental identification of coexisting local and non-local turbulence

Speaker
Dr Naoki Kenmochi

EXPLORING ENHANCED PLASMA PERFORMANCE AFTER PELLET INJECTIONS VIA ROTATIONAL TRANSFORM MODULATION IN THE TJ-II STELLARATOR

Speaker
Isabel García-Cortés

INVESTIGATION OF PLASMA PARAMETERS IN SAWTOOTH OSCILLATION BY ABSOLUTE INTENSITY OF SOFT X-RAY EMISSION IN JT-60SA INTEGRATED COMMISSIONING PHASE

Speaker
Ryuichi Sano

INTERPRETING STRUCTURES OBSERVED IN PELLET ABLATION PROFILES IN THE STELLARATOR TJ-II

Speaker
Dr Kieran Joseph Mc Carthy

APPLICATIONS OF IN-SHOT CONTINUOUS NBI CONTROL SYSTEM TO FIRE MODE IN KSTAR

Speaker
Seulchan Hong

INVESTIGATION OF THE MAGNETIC FLUX PUMPING EFFECT IN MAST UPGRADE

Speaker
Sam Blackmore

VALIDATION OF GKEYLL GYROKINETIC TURBULENCE SIMULATIONS AGAINST TCV EXPERIMENTAL DATA AND TRIANGULARITY PHYSICS

Speaker
Antoine Hoffmann

Overview of WHAM Diagnostic Techniques and Realta Fusion Digital Validation Efforts

Speaker
Douglass Endrizzi

Tungsten (W) impurity reduction by ICRH in a high power and high performance H-mode discharge on EAST

Speaker
Shengyu SHI

FIRST RESULTS FROM WHAM AND THE REALTA FUSION TANDEM MIRROR DEVELOPMENT PATH

Speaker
Cary Forest

Numerical Analysis of Electron Distribution Function under Electron Cyclotron Heating during Tokamak Start-up

Speaker
Dr Naoto Tsujii

Linear and quasi-linear toroidal modeling of resonant magnetic perturbations during ELMs mitigation in HL-3

Speaker
Neng Zhang

NTST, A NEGATIVE TRIANGULARITY SPHERICAL TOKAMAK

Speaker
Yi Tan

COMPARISON BETWEEN GYROKINETIC SIMULATIONS AND EXPERIMENTS IN THE LITHIUM TOKAMAK EXPERIMENT-ß (LTX-ß)

Speaker
Manaure Francisquez

Self-Organized FRC Formation in Mirror Field Orthogonal to the Axis of Counter-Injected Plasmoids

Speaker
Tomohiko Asai

Turbulence and flow dynamics approaching the density limit in L-mode plasmas at DIII-D

Speaker
Zheng Yan

DISCOVERY OF CROSS-SCALE NONLINEAR INTERACTION AND BIFURCATION IN MULTI-SCALE TURBULENCE IN LHD PLASMA

Speaker
Tokihiko Tokuzawa

INTERMITTENT MERGING OPERATIONS OF SPHERICAL TOKAMAK PLASMAS FOR RECONNECTION HEATING AND HELICITY INJECTION

Speaker
Yasushi Ono

Lawson Machine 26: An Update on Recent Magnetized Target Fusion Compression Results

Speaker
Myles Hildebrand

GYROKINETIC LINEAR SIMULATION OF HOT ION MODE IN GLOBUS-M2 SPHERICAL TOKAMAK

Speaker
Evgenii Kiselev

BOUT++ SIMULATION STUDY OF THE EFFECT OF RESONANT MAGNETIC PERTURBATION ON THE TURBULENCE TRANSPORT

Speaker
Shifeng MAO

CQL3D-M, A 3D Nonlinear, Bounce-Averaged Fokker-Planck Collision Model Coupled with Neutrals for Magnetic Mirrors, with Fusion Applications

Speaker
RW (Bob) Harvey

Utilizing a visible camera in the first operation phase(s) of a fusion device

Speaker
Tamas Szepesi

NOVEL SOFT X-RAY MULTI-ENERGY CAMERA TO STUDY THERMAL PLASMAS AT WEST

Speaker
Tullio Barbui

SIMULATION OF EFFECT OF POLOIDAL INJECTION GEOMETRY ON LI-PELLET TRIGGERED ELM UNDER BOUT++ FRAMEWORK

Speaker
Dr Mao Li

INFLUENCE OF ION TEMPERATURE ON THE DYNAMICS OF UNIDIRECTIONAL CURRENT CARRYING FILAMENTARY ELM BLOBS IN THE EDGE REGION OF A TOKAMAK

Speaker
Souvik Mondal

Simulation study of the effect of impurities on the nonlinear dynamic process of Edge-Localized-Modes

Speaker
Taihao Huang

Observation of MHD stabilized operation during NBI-sustained discharge in 17 T axisymmetric mirror

Speaker
Tony Qian

Dimensional Isotope Scaling of Heat and Particle Transport between JET Deuterium and Tritium L-mode Plasmas

Speaker
Tuomas Tala

MITIGATION OF ELM BY 3D MAGNETIC PERTURBATIONS IN HL-3/HL-2A TOKAMAKS

Speaker
Guangzhou Hao

Plasma-Nneutral Interaction Studies with OpenMC

Speaker
Dr George Wilkie

PROGRESS IN MULTIPLE-MIRROR PLASMA CONFINEMENT AT THE GOL-NB FACILITY

Speaker
Sergey Polosatkin

Regime of Electron Internal Transport Barrier in High-Density NBI Heated Plasmas of Heliotron J

Speaker
Shinji Kobayashi

Density Limit Disruption Induced by Core-localized Alfvenic Ion Temperature Gradient Instabilities in a Toroidal Plasma

Speaker
Wei Chen

JET HYBRID SCENARIO DEVELOPMENT IN D-T FOR IMPURITY SCREENING STUDY

Speaker
Dr damian king

Overview of the physics design of the EHL-2 spherical torus for proton-Boron fusion

Speaker
Hua-sheng Xie

A Low-cost Gyrokinetic Code for Interpretive Transport Analysis of Tokamak Experiments

Speaker
Robert Hager

Pulse Design Simulator for JT-60SA

Speaker
Emmanuel Joffrin

Pumping requirements for core plasma performance in STEP using JINTRAC

Speaker
Emmi Tholerus

Impact of impurities on energy confinement bifurcation at density above the Greenwald limit in DIII-D high-BetaP plasmas

Speaker
Siye Ding

Bifurcated particle transport states driven by regulatory energetic ions in LHD plasmas

Speaker
Masaki Nishiura

Development of predictive rotation models for ITER-relevant plasma conditions on the ASDEX Upgrade and DIII-D tokamaks

Speaker
Benedikt Zimmermann

Operating Beyond the Greenwald Density Limit in Negative Triangularity Plasmas on DIII-D Tokamak

Speaker
Rongjie HONG

PROGRESS IN FIRST-PRINCIPLES BOUNDARY SIMULATIONS OF PLASMA TURBULENCE AND NEUTRAL DYNAMICS WITH THE GBS CODE

Speaker
Mr Paolo Ricci

Investigation of high Q L-mode plasma operation sustained by enhanced pellet fueling in ITER

Speaker
Dr JIE ZHANG

Kinetic modeling of tungsten transport induced by low-n X-point mode

Speaker
Huayi Chang

DEVELOPING MACHINE LEARNING FACILITATED PEDESTAL MODELS

Speaker
Aaro Järvinen

NON-IDEAL AND SHAPING EFFECTS IN EXTENDED-MHD SIMULATIONS OF ELM-FREE TOKAMAK PLASMAS

Speaker
Fatima Ebrahimi

MEASUREMENTS OF TOROIDAL ROTATION VELOCITY IN TUMAN-3M TOKAMAK IN NBI AND H-MODE REGIMES

Speaker
Leonid Askinazi

Advanced Magnetic Plasma Control Enabled by Reinforcement Learning

Speaker
Georgy Subbotin

TURBULENCE-TRANSPORT COUPLING SIMULATION STUDY OF THE ELM DYNAMICS FROM HIGH RECYCLING ATTACHED REGIME TO IMPURITY SEEDED DETACHMENT REGIME WITHIN EDGE PLASMA COUPLING SIMULATION (EPCS) FRAMEWORK

Speaker
TianYuan Liu

COUPLED PARTICLE-MHD SIMULATIONS OF INTERATIONS BETWEEN EDGE LOACALIZED MODES AND NEUTRALS AND IMPURITIES USING JOREK CODE

Speaker
Zhe Liang

Observation of fluctuation-induced particle transport phenomena in the RT-1 levitated dipole

Speaker
Haruhiko Saitoh

Neutron-Physical Characteristics of Blanket of Hybrid Fusion Neutron Source based on Solution of Thorium Nitrate and Minor Actinides in Heavy Water

Speaker
Dr Alexey Zhirkin

13:30