

30th Fusion Energy Conference (FEC 2025)

Monday 13 October 2025 - Saturday 18 October 2025

China

Topics

OV - Overview

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Device overview, programme overview, topic overview

EX - Magnetic Fusion Experiments including Validation

Experimental plasma physics including validation

EX-C - Confinement

Confinement and transport, including scenario development

EX-S - Stability

Stability, including disruptions, runaways, control, mitigation & consequences

EX-W - Waves

Plasma waves and energetic particle interactions

EX-D - Divertor

Divertor/SOL physics and general power handling

EX-E - Edge Transient Control

Edge transients, ELMs, mitigation & benign/no ELM scenarios, 3D-physics

EX-M - Material Interactions

Materials-plasma interactions

EX-P - Pedestal, Core-edge, Turbulence

Pedestal physics and core-edge integration, turbulence, L-H transition

EX-H - Heating & Current Drive

Heating and current drive physics, antenna-plasma interactions

TH - Magnetic Fusion Theory and Simulation

Theory and simulation

TH-C - Confinement

Confinement and transport, including scenario development

TH-S - Stability

Stability, including disruptions, runaways, control, mitigation & consequences

TH-W - Waves

Plasma waves and energetic particle interactions

TH-D - Divertor

Divertor/SOL physics and general power handling

TH-E - Edge Transient Control

Edge transients, ELMs, mitigation & benign/no ELM scenarios, 3D-physics

TH-M - Material Interactions

Materials-plasma interactions

TH-P - Pedestal, Core-edge, Turbulence

Pedestal physics and core-edge integration, turbulence, L-H transition

TH-H - Heating & Current Drive

Heating and current drive physics, antenna-plasma interactions

TEC - Fusion Energy Technology

Not plasma interaction

TEC-MTL - Material Developments

Material Developments

TEC-IVC - In Vessel Components

In Vessel Components

TEC-HCD - Heating & Current Drive

Heating & Current Drive

TEC-ITR - ITER Technology

ITER Technology

TEC-FNT - Fusion Nuclear Technology

Includes fusion nuclear science and technology research

TEC-CTL - Control

Control software and hardware, control algorithms and theory, control demonstration, AI-driven control

TEC-R - Robotics and Remote Maintenance

Robotics and Remote Maintenance

TEC-T - Tritium

Tritium

IFE - Inertial Fusion Energy

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Experiments, theory and modelling, materials, power plant design, targets, drivers

IAC - Innovative and Alternative Fusion Concepts

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Experiments, theory and modelling, linear, non-magnetic, magneto-inertial, hybrid concepts

PWF - Pathways to Fusion

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Fusion plants (e.g., DEMO, pilot plants), timelines, roadmaps, supporting facilities, partnership frameworks, commercialization, supply chains, education and training, socioeconomic and environmental aspects, licensing