

Session Program

9–12 Dec 2025

Workshop on Digital Engineering for Fusion Energy Research

Simulation and Data Integration

Cambridge, Massachusetts, USA

Hacker Reactor at MIT's iHQ. Address: 292 Main Street | MIT Bldg. E38 | Floor 7 | Cambridge, MA 02142

Tuesday 9 December

09:15

Simulation and Data Integration

Session |

Location: Cambridge, Massachusetts, USA, Hacker Reactor at MIT's iHQ. Address: 292 Main Street | MIT Bldg. E38 | Floor 7 | Cambridge, MA 02142

09:15-09:45 Digital twin workflow development for SPARC

Speaker
Tom Looby

09:45-10:10

A Multi-Physics Digital Twin for the Integrated Design and Optimization of an Inertial Fusion Energy Power Plant

Speaker
Dr Valeria Ospina Bohorquez

10:10-10:35

PathSim: An Open-Source Python Framework for Digital Twin Applications in Fusion Fuel-Cycle Modeling

Speaker
Milan Rother

10:35

Wednesday 10 December

09:00

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09:00–09:30 **Digital Assembly work for BEST tokamak**

Speaker

Xiongyi Huang

09:30–09:55

Development of a Mod-Sim Workflow for Multiphysics Assessment in EX-Fusion's Laser Fusion Test Chamber

Speaker

Max Monange

09:55–10:20

Bringing together integrated simulation, surrogates, and data to support digital twins for fusion engineering

Speaker

Casey Icenhour

10:25

14:00

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14:00–14:30 **Mesh and 3D Data Analysis Technology for Digital Twin**

Speaker

Eisung Yoon

14:30–14:55

PCMS: A Geometry and Discretization Aware Multi-physics Coupling Tool for Fusion Devices

Speaker

Jacob Merson

14:55–15:15 **Walk from Hackerspace to PSFC**

15:15–16:00 **PSFC Tour**

16:00