5th Fusion HPC Workshop

The HPC Fusion Workshop is an annual event created in 2020 to foster knowledge sharing and collaboration on computing applications using High-Performance Computing (HPC) in the field of fusion. Since its first edition, the event has brought together more than 960 people from all over the world, who have had the opportunity to delve into areas such as energy and particle transport, multi-physics modelling, plasma turbulence and related transport processes, edge and plasma-material interactions, heating, fueling and current drive, laser-plasma interactions, fusion reactor materials and fusion reactor technology.

Participants at the Fusion HPC Workshop will gain a broad understanding of the status of fusion HPC research internationally by attending presentations by leading researchers on a broad range of topics. The event covers all computer applications using High Performance Computing (HPC) in the field of fusion research. These include, but are not limited to, numerical simulations for Fusion physics, technology and materials in different areas.

Speakers

Confirmed keynote speakers:

Speaker: Miquel Moreto, Barcelona, Supercomputing Center, Spain.
Title: Towards European High Performance Computing Accelerators based on the RISC-V Open ISA.

Speaker: Jesús Romero, TAE Technologies, USA.
Title: Integrating inference and real-time plasma control to advance aneutronic fusion.

Speaker: Jae-Min Kwon, Korea Institute of Fusion Energy, Republic of Korea.
Title: Digital Twin Technology to Accelerate Fusion R&D.

Speaker: Ane Lasa, University of Tennessee, USA.
Title: Development of multi-scale computational frameworks to solve fusion materials science challenges

Speaker: Jeff Candy, General Atomics, USA.
Title: Porting and Performance of Spectral Gyrokinetics on NVIDIA, AMD and Intel GPU architectures.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación