



27 January 2026



10:00–17:30 CET



Krakow, Poland

Rethinking scientific applications for exascale and emerging architectures

the Centres of Excellence challenge



Andrea Ferretti
(MaX)



Eva Hernández
(ChEESE)



Helen Schottenhamml
(EoCoE)



Tine Colman
(SPACE)



Martin Kronbichler
(DEALII)



Pratik Nayak
(MICROCARD)



Ilaria Siloi
(QEC4QEA)



Luca Pennati
(PLASMA-PEPSC)



Juniper Tyree
(ESiWACE)



Helena Vela Beltran
(MultiXscale)



Sandra Mendez
(POP)



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10:00-10:10	Welcome and Introduction	
10:10-10:50	Andrea Ferretti (MaX)	Materials design towards the exascale: codes, workflows and data
10:50-11:00	Q&A	
11:00-11:30	Coffee break	
11:30-11:50	Helen Schottenhamml (EoCoE)	Large-scale wind farm flow simulations within the Energy-oriented Center of Excellence
11:50-12:10	Luca Pennati (PLASMA-PEPSC)	Physics-Aware Data Compression for Exascale Plasma Simulations
12:10-12:30	Tine Colman (SPACE)	The legacy astrophysics code RAMSES on the road to exascale
12:30-12:50	Eva Hernández (ChEESE)	Data Storage and Availability for Scientific Workflows in HPC Systems
12:50-13:00	Q&A and Photo session	
13:00-14:00	Lunch break	
14:00-14:40	Roundtable: "Beyond Technical Achievements: Showcasing the Value of Centres of Excellence"	
14:40-15:00	Martin Kronbichler (dealii-X)	Towards Exascale Finite Element Solvers for the Human Body: A Perspective from the dealii-X CoE
15:00-15:20	Pratik Nayak (MICROCARD)	Preparing legacy codes for large-scale computing: Experiences from different applications
15:20-15:30	Q&A	
15:30-16:00	Coffee break	
16:00-16:20	Ilaria Siloi (QEC4QEA)	Early Directions on Quantum-Enhanced Applications within QEC4QEA
16:20-16:40	Juniper Tyree (ESIWACE)	Exploring Lossy Data Compression in an Online Open Science Laboratory for Climate Science and Meteorology
16:40-17:00	Helena Vela Beltran (MultiXscale)	Status Update on EESSI: the European Environment for Scientific Software Installations
17:00-17:20	Sandra Mendez (POP)	Performance Analysis of Hybrid Parallel Applications Using the POP Methodology
17:20-17:30	Q&A	