



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	<b>Welcome and Introduction</b>	
10:10-10:50	Andrea Ferretti (MaX)	Materials design towards the exascale: codes, workflows and data
10:50-11:00	<b>Q&amp;A</b>	
11:00-11:30	<b>Coffee break</b>	
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	<b>Q&amp;A and Photo session</b>	
13:00-14:00	<b>Lunch break</b>	
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	<b>Q&amp;A</b>	
15:30-16:00	<b>Coffee break</b>	
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	<b>Q&amp;A</b>	