

HPC·AI
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 **CSCS**
Centro Svizzero di Calcolo Scientifico
Swiss National Supercomputing Centre



Welcome to the 17th Annual

HPC-AI Swiss Conference



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Agenda – Day 1

Start Time	Session Title	Presenter
9:00	Day 1 Opening	Brian Sparks (HPCAIC), Hussein Harake (CSCS)
9:10	Sovereign AI and Data: Advancing Supercomputing to the Next Level	Thomas Schulthess (CSCS)
9:30	Opening Keynote: Resolving Molecular Transitions with Markov State Models - and Doing it 1,000x Faster with AI	Erik Lindahl (KTH)
10:25	Apertus: Democratizing Open and Compliant LLMs For Global Language Environments	Imanol Schlag (ETH)
11:10	Coffee Break	
11:30	Breaking Silos Architecting Multi-Protocol Data Services for Modern HPC & AI at University of Pisa	Roberto Dognini (VAST), Maurizio Davini (University of Pisa)
11:50	OpenCHAMI for AI Systems: Reflections on the First Year	Alex Lovell-Troy (Los Alamos National Laboratory)
12:40	Sustainable and Autonomous HPC: Reconfigurable Architectures for Data-Intensive Science	Giordano Mancini (E4)
13:00	Lunch	
14:00	Efficient Collective Communication on Modern HPC GPU Architectures	Andreas Jocksch (CSCS)
14:30	Practical Numerical Profiling: Unlocking Low-Precision Floating-Point for Scientific Computing	Faveo Hörold (ETH Zurich/R-CCS Riken)
15:00	Campus to DataCenter Distributed AI Infrastructure	Maurizio Davini (University of Pisa)
15:30	Coffee Break	
15:50	The Token Economy: Performance as the Profit Driver in AI	Axel Rosenberg (Weka)
16:10	From Files to Semantics: Data Services for AI Practitioners	Jan Heichler (VAST) and Maria Perez Gutierrez (VAST)
16:40	Day 1 Closing Keynote: From Infrastructure to Impact: The Evolution of Italy's National Center for HPC, Big Data and Quantum Computing	Davide Salomoni (ICSC)
17:30	Close Day 1 + Day 2 Preview	Brian Sparks (HPCAIC), Hussein Harake (CSCS)

Agenda – Day 2

Start Time	Session Title	Presenter
9:00	Day 2 Opening	Brian Sparks (HPCAIC), Hussein Harake (CSCS)
9:05	Day 2 Keynote: Tools for AI for Science	Marcin Copik (ETH Zurich)
10:00	Africa's Readiness to Adopting AI, Cloud and Quantum Computing	Happy Sithole (CHPC)
10:30	Podman and Sarus Suite: Cloud-native Productivity Meets Native HPC Speed	Gwangmu Lee (CSCS)
11:00	Coffee Break	
11:20	Make HPC Frictionless: An Overview on Open OnDemand and EESSI	Erica Bianco (Do IT Now)
11:40	AI-Driven Process Tensor Tomography for Scalable Quantum Noise Characterization	Fazeleh Kazemian (Monash University)
12:30	ETH Zürich Campus Heilbronn – Bridging Swiss Excellence at the Heart of Germany's AI Hub	Michele De Lorenzi (ETH Zürich Campus Heilbronn)
13:00	Lunch	
14:00	End-to-End Characterization of HPC-AI Workflows Using Synthetic Digital Twins	Berkin Kartal (NVIDIA)
14:40	Beyond Local NVMe: Disaggregated Storage for HPC, LLM Inference and Vector Search	Jordan Ranous (Western Digital)
15:00	Coffee Break	
15:20	Fueling the AI Factory: The Central Role of the Metadata Catalog	Jean-Thomas Acquaviva (DDN)
15:40	The State of OCHAMI at CSCS	Manuel Sopena (CSCS)
16:10	AI Full Stack Redefined: Compute, Software & Storage	Dachuan Huang and Frank Zhang (Huawei)
16:30	Day 2 Closing Keynote: New Frontiers in Computational Geodynamics	Taras Gerya (ETH Zurich)
17:20	Close Day 2 + Day 3 Preview	Brian Sparks (HPCAIC), Hussein Harake (CSCS)
19:00-22:00	Evening Event	

Agenda – Day 3

Start Time	Session Title	Presenter
9:30	Day 3 Opening	Brian Sparks (HPCAIC), Hussein Harake (CSCS)
9:35	Day 3 Keynote: How Not to Decelerate Your HPC Workloads with Quantum Computing	Roberto Rocco and Gabriella Bettonte (E4 Computer Engineering SpA)
10:20	Enhancing Infrastructure Management and Datacenter Visibility and Security at CSCS with MarmotGraph	Massimo Benini (CSCS)
10:50	Omnia & OpenCHAMI: Open Infrastructure for Large-Scale AI and HPC	Marc Mendez-Bermond (Dell)
11:10	Coffee Break	
11:30	Bridging Cloud and HPC for Operational Ocean Forecasting	Jacopo Nespolo (eXact lab Srl)
12:00	Full-stack HPC Mobility: Portability Across the Holistic HPC Stack	Gilles Fourestey (EPFL)
12:40	BeeGFS High-Performance Storage Software, Sovereign by Design	Davide Villa (BeeGFS)
13:00	Lunch	
14:00	denyroot: An eBPF-based Confinement Mechanism for HPC Environment	Victor Holanda (CSCS)
14:30	Architectural Bottlenecks and Value Capture in In-Situ Scientific AI for HPC	Thomas Thurston (Ducera)
15:00	TBD	(HPE)
15:20	Coffee Break	
15:40	Operationalizing Security in Dynamic HPC Infrastructures (Lessons from CSCS Alps)	Matteo Basso (CSCS)
16:10	Conference Endnote: Scaling LLM Inference on HPC/AI Systems	S��verine Habert (NVIDIA)
17:00	Close and Thank You	Brian Sparks (HPCAIC), Hussein Harake (CSCS)

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