



CERN openlab

TECHNICAL

WORKSHOP

2024

WELCOME!!

TUESDAY

26th MARCH



CERN openlab

**TECHNICAL
WORKSHOP**

2024

Reception (09h00-10h10)

09h00 | Welcome Session

Speakers: Maria Girone (Head of CERN openlab) and Bob Jones (Leader of CERN IT Strategy and Executive Governance)

09h10 | Future CERN accelerator programme and its technological challenges

Speaker: Mike Lamont (CERN's Director for Accelerators and Technology)

09h40 | CERN openlab Phase VIII

Speaker: Maria Girone (Head of CERN openlab)

09h55 | Innovation at CERN IT department

Speaker: Alberto Di Meglio (Leader of CERN IT Innovation)

10h10 – 10h40 | Coffee Break and Poster Session

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2024

Heterogeneous Computing Platforms and Infrastructures (10h40 – 12h20)

10h40 | Real-time data processing for level 1 trigger using CXL memory-Lake architecture

Speaker: Giovanna Lazzari Miotto

10h55 | Solving HPC challenges with Micron CXL attached memory products

Speaker: Andrey Kudryavtsev, Micron

11h15 | Accelerating the HEP software

Speaker: Attila Krasznahorkay

11h30 | Diving into NVIDIA Grace Hopper and NVIDIA Grace CPU Superchips: capabilities and performance

Speaker: Filippo Spiga, NVIDIA

11h50 | Heterogeneous Architectures Testbed @ CERN and E4 project

Speaker: Joaquim Santos

12h20 – 13h30 | Lunch and Poster Session

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**TECHNICAL
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Heterogeneous Computing Platforms and Infrastructures (13h30 – 14h50)

13h30 | Benchmarking Heterogeneous Architectures with HEP Score

Speaker: David Southwick

13h45 | The New Prévessin Data Centre at CERN

Speaker: Luca Atzori

14h00 | IT carbon-aware computing programme

Speaker: João Fernandes

14h25 | GROUP PHOTO

14h35 – 15h05 | Coffee Break and Poster Session

15h05 | Intel AMX: Xeon built-in acceleration for AI

Speaker: Walter Riviera, Intel

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AI applications and HPC Convergence (15h20 – 17h20)

15h20 | Overview of AI activities at CERN

Speaker: Lorenzo Moneta

15h35 | AI in low-latency environments

Speaker: Thomas Owen James

15h50 | Generative Models for Simulation

Speaker: Kristina Jaruskova

16h05 | AI model registry in the Cloud

Speaker: Renato da Costa Cardoso

16h20 | Distributed Training and HPO at Centre of Excellence on AI and Simulation-Based Engineering at Exascale (CoE RAISE)

Speaker: Eric Wulff

16h35 | interTwin - an Interdisciplinary Digital Twin Engine for Science

Speaker: Matteo Bunino

16h50 | LHC Digital Twin

Speaker: Jurgen De Jonghe

17h05 | Data Analytics for Industrial Control Systems Speaker:

Abhit Patil

17h20 – 19h00 | Science Gateway Visit and Networking Cocktail

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Applications for Society and Environment (09h00 – 10h15)

09h00 | The programme of CERN KT for society and environment

Speaker: Giovanni Anelli

09h15 | BioDynamo

Speaker: Tobias Duswald

09h30 | EMP2 - Environmental Modelling and Prediction Platform using Foundation Models

Speaker: Ilaria Luise

09h45 | Intertwin use cases - Virgo and CMCC

Speaker: Alexander Zoechbauer

10h00 | Reinforcement learning for causal discovery and data quality monitoring

Speaker: Olivia Jullian Parra

10h15 - 10h45 | Coffee Break and Poster Session

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Cloud and Storage (10h45 – 12h40)

10h45 | On data storage technologies - past, present, future

Speaker: Luca Mascetti

11h00 | Oracle: Bringing developers, DBAs, and Gen AI together

Speaker: Cristobal Pedregal-Martin, John Lathouwers, Oracle

11h20 | Integration of Oracle Cloud Resources into CERN IT BC&DR

Speakers: Miroslav Potocky and Alexandros Stoumpis

11h35 | AI and Kubernetes @ CERN – Challenges

Speakers: Antonio Nappi and Ricardo Rocha

11h50 | Kubediff - Facilitate and automatize Kubernetes operations

Speakers: Adrian Karasinski

12h05 | Next Generation Archiver for WinCC OA

Speaker: Pedro Agostinho

12h20 | Siemens - Connectivity and Edge

Speaker: Christian Kern, Siemens

Quantum Computing (12h40 – 13h10)

12h40 | Quantum Databases for Dynamic Data Storage (Intel)

Speaker: Carla Sophie Rieger

12h55 | Noisy Gates for Simulating Quantum Computers

Speaker: Michele Grossi

LET'S GET
STARTED!!!