



# 2025 CERN openlab Technical Workshop

Dr. Maria Girone, Head of CERN openlab



# About CERN openlab

For nearly 25 years, CERN openlab has been the bedrock of partnership, providing a structured and collaborative framework for industry and research organisations to engage with CERN researchers.

Collaboration is the core of CERN openlab, where industry and scientific researchers co-develop innovative solutions.

Together, we embark on **four primary missions:**



**Establishing strategic industry collaborations**



**Fuelling technological innovation**



**Exposing technology to researchers**



**Nurturing knowledge and growth in young STEM researchers**

# R&D Directions

Projects within the CERN openlab framework are dedicated to accelerating computing for science, particularly under the R&D directions of **'Sustainable Infrastructures'** and **'Emerging Technologies'**.

## Sustainable Infrastructures

Heterogeneous Computing,  
Platforms and HPC systems

Advanced Storage, Data  
Management and Networks

Computing Architectures and  
Software Engineering

Infrastructures and Techniques  
for Artificial Intelligence

Applications for Society and  
Environment

## Emerging Technologies

New Materials for  
Long-Term Digital Storage

Digital Twins



# Our members

## Established Industry and Research Members

ORACLE    micron    PURESTORAGE

SIEMENS    cerabyte    Johnson & Johnson

E4 COMPUTER ENGINEERING    intel    SIM NS FOUNDATION    Pasqal

INFN    UNIVERSITÀ DEGLI STUDI DI TRIESTE

## Industry and Research Members in Pre-Agreement Stage

UCL    NVIDIA    Google  
IMPERIAL    SURF

## Prospective Industry and Research Members

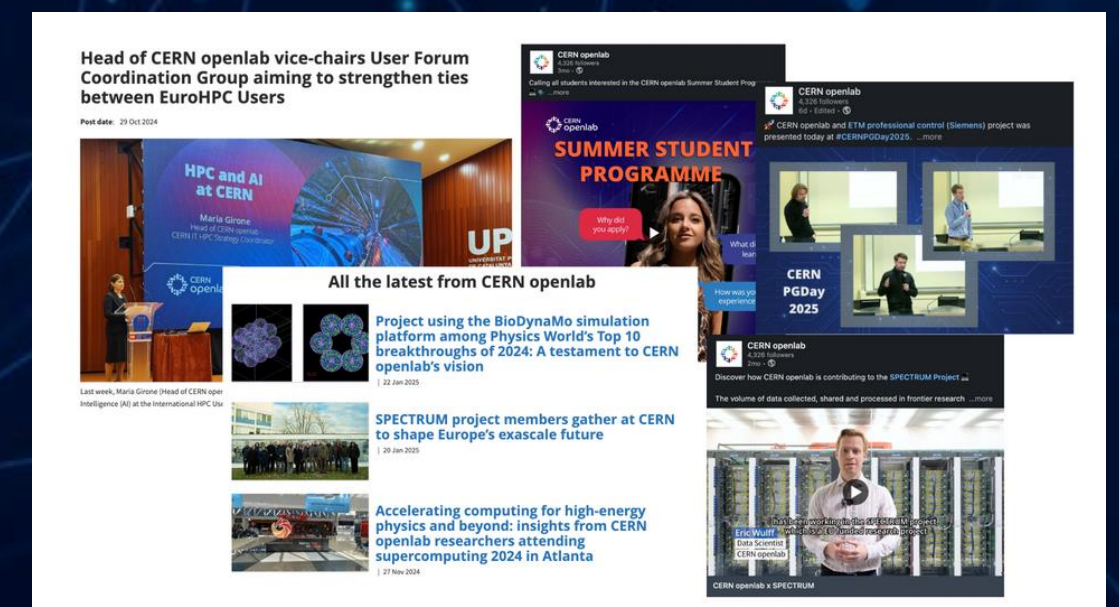
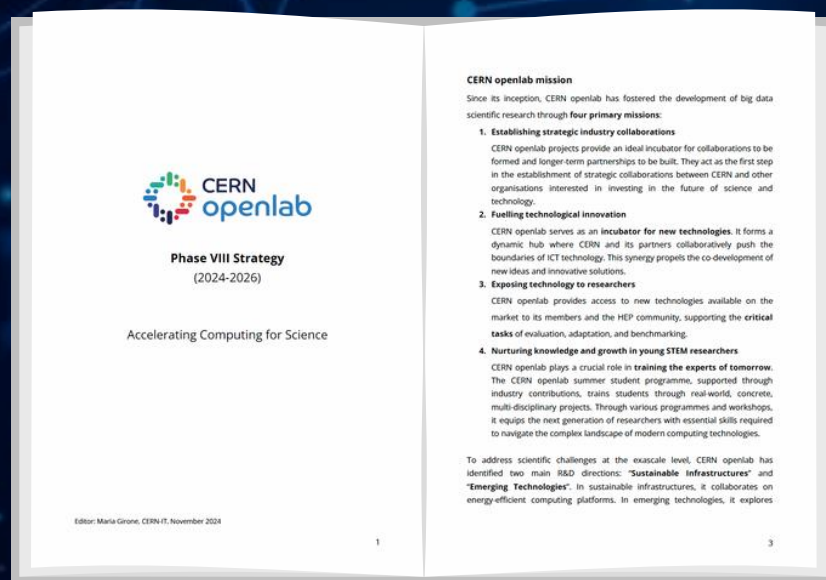
cerebras    Hewlett Packard Enterprise    AMD XILINX    NOKIA

# Communication & Outreach

The CERN openlab **annual report** was revived, a vital tool for communication and outreach, serving as a comprehensive showcase of the collaboration's achievements, initiatives, and future aspirations. The **CERN openlab Phase VIII Strategy** document was also finalised and launched on our website.

New website!

We have significantly enhanced our social media presence with the launch of the **CERN openlab LinkedIn account**. Through LinkedIn, we have shared **multiple articles** highlighting our projects, achievements, and opportunities, broadening our reach and fostering connections with stakeholders.



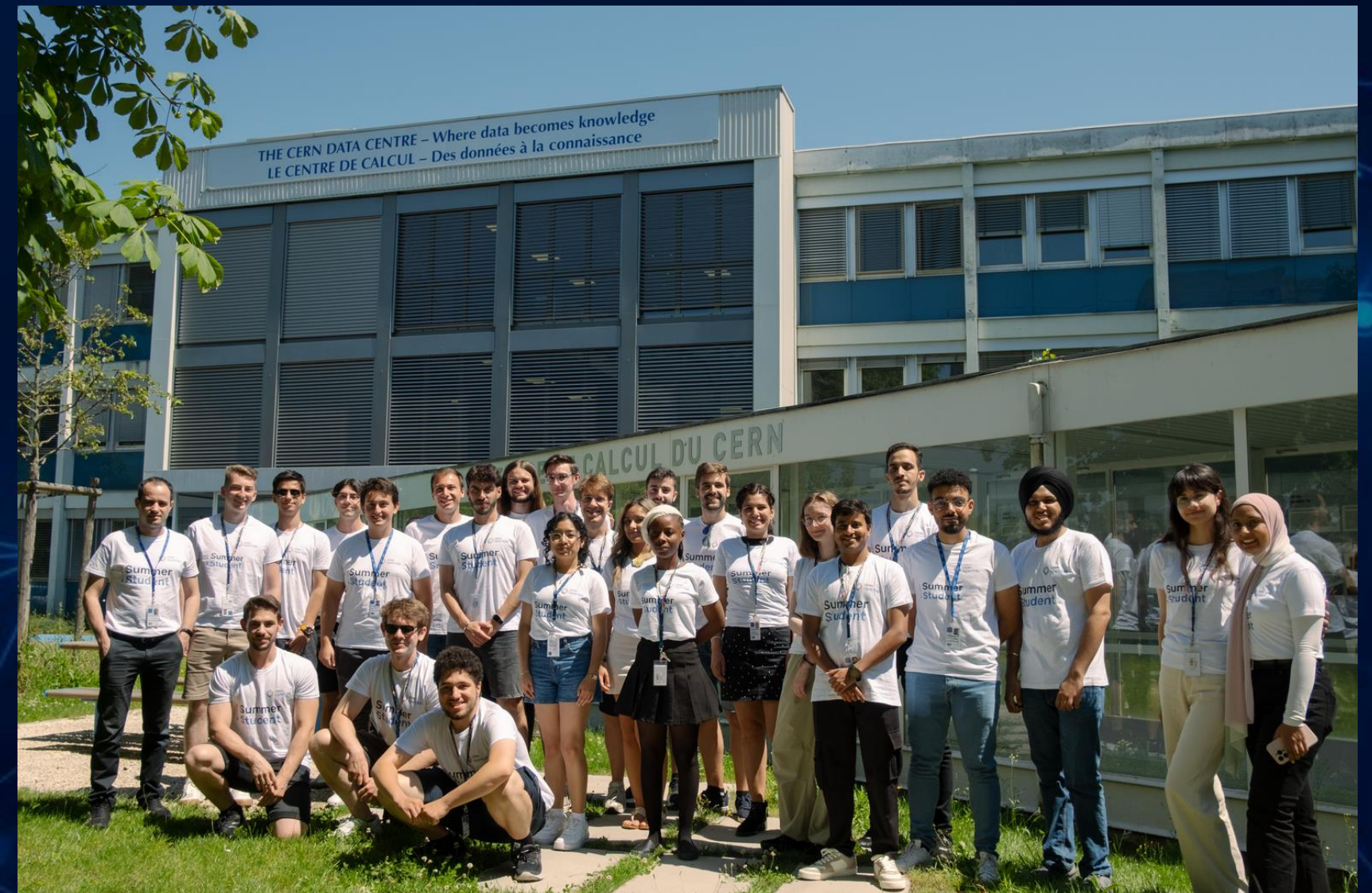
Phase VIII Strategy      2024 Annual Report



# CERN openlab Summer Student Programme

The CERN openlab summer student programme **provides undergraduate and master's level students with an opportunity to work on one of the R&D projects for nine weeks** under experts' supervision.

CERN openlab joined forces with **IDEAS4HPC** to sponsor a CERN openlab Summer Student, **promoting the participation of women in high-performance computing research**. CERN openlab is committed to diversity, equity and inclusion in ICT and will continue championing it.





# 2025 CERN openlab Technical Workshop

## Tuesday

Welcome & Keynotes

13:15pm  
to  
14:05pm

Infrastructures and Techniques  
for AI and HPC

14:05pm  
to  
15:40pm

Advanced Storage Solutions

16:10pm  
to  
17:45pm

## Wednesday

Digital Twins, Applications for  
Society and Environment

9am  
to  
10:10am

Heterogeneous Computing,  
Platforms and HPC

10:45am  
to  
15:35pm

Infrastructures and Techniques  
for AI and HPC

15:35pm  
to  
16:50pm

# Industry Talks

## Tuesday

**NVIDIA** Compute Update and Recent Developments in HPC Software

15:05pm

**Cerabyte** Ceramic Glass Storage Technology

16:25pm

## Wednesday

**Micron** CXL and SSD Solutions

11am

**Intel** Solutions on AI and HPC Convergence

11:45am

Evaluating HPC Architectures for Scientific Computing in **E4**: Performance, Scalability, and Energy Efficiency

12:50pm

AI for Source Code: A Practitioner's Insights into Automating DevOps at **Oracle**

14:10pm



# Don't forget to network!

The goal of the annual CERN openlab technical workshop is to **promote networking, create links between CERN, industry and research industries**. Moments for networking: lunch, coffee breaks, poster sessions and networking cocktail.

## Tuesday

Coffee Break & **Poster Session** 15:40pm

Networking Cocktail 17:45pm

## Wednesday

**Group Photo!** 10:10am

Coffee Break & **Poster Session** 10:15am

Lunch Break 12:05pm

Coffee Break & **Poster Session** 14:35pm



**Thank you for joining us!**