

## EuroHPC Summit Week 2022



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# Project "Leonardo"

*Wednesday, March 23, 2022 2:45 PM (15 minutes)*

Leonardo is a precursor-of-exascale class system, one of the three funded by the European Commission through the EuroHPC programme and by the Italian Ministry of University and Research (MUR). It will be installed on the newly built data center located in the Bologna Technopole, where Emilia Romagna Region and MUR had already established a collaboration in order to promote and develop the project to a national and international level. This collaboration was successful in obtaining the decision from the ECMWF council to relocate its own data center in Bologna Technopole and to include the hosting of INFN main data center. Therefore, by virtue of hosting ECMWF, CINECA and INFN data centers, Bologna Technopole raises to become one of the main European hubs for computing and data processing.

Leonardo is based on Atos BullSequana XH2000 technology, with over 13,000 GPUs based on NVIDIA Ampere architecture and NVIDIA Mellanox HDR InfiniBand.

Leonardo will provides to users two main partitions: "Booster" with GPU accelerators and "DataCentric" with more traditional X86 technology. Leonardo is a system capable of nearly 250 PFlops and equipped with over 100 petabytes of storage capacity. The system will provide 10-20 times the computing power of the current CINECA flagship system Marconi-100.

**Presenters:** CESARINI, Daniele (HPC Specialist at the HPC department of CINECA); GABRIELLA, Scipione (Head of CINECA "HPC Data Management and Analytics" division)

**Session Classification:** Exascale computing architectures including quantum computing and hybrid HPC / quantum