



APPLIED RESEARCH

INFN AND AMAZON WEB SERVICES WORK TOGETHER TO ACCELERATE RESEARCH INTO QUANTUM COMPUTING

INFN and Amazon Web Services (AWS) launched a collaboration aimed at strengthening scientific knowledge of quantum computing, within the Italian research community, and identifying potential applications in high-energy physics and fundamental physics. In the context of this collaboration, AWS will provide the INFN scientific community with access to Amazon Braket's computer resources.

INFN is increasingly engaged in the field of quantum technologies and in high-performance computing. It is the sole non-U.S. partner of the Superconducting Quantum Materials and Systems Center (SQMS) project, funded by the American Department of Energy, and is one of the partners of the EXANEST consortium for developing exascale supercomputers, with a view to the future convergence of high-performance computing and quantum computing. The collaboration with the AWS Quantum Technologies group will contribute, therefore, to strengthening INFN activities in this new research and development field. The INFN researchers will, in fact, have access to different types of quantum computers: from computers that are based on superconducting qubits developed by Rigetti, to computers that use ion traps. This collaboration is, therefore, a new and important element of INFN global strategy in researching quantum computing. ■