



Contribution ID: 13

Type: **not specified**

## **An INFN-CERN collaboration towards the usage of IBM quantum resources**

*Friday 10 December 2021 10:45 (5 minutes)*

### **Description**

An agreement between IBM and CERN grants CERN a license to access the IBM Q System, join the IBM Q Network, operate the CERN Hub and sublicense access to the same for purposes of research-level engagements. A collaboration agreement between CERN and INFN has been subsequently signed, whereby INFN researchers will access the IBM quantum systems and software technologies. Research topics include: studies of the dynamics of QCD-inspired theoretical models; the investigation of thermodynamical properties of simple theory models; a quantum simulation of the nucleon-nucleon potential; quantum machine learning for event classification at the LHC; the exploitation of Quantum graph networks for particle track reconstruction.

### **CERN group or section submitting a project proposal**

no

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**Session Classification:** Project and collaboration proposals