COMPUTING
BIG DATA: INFN INVESTS IN TRAINING

INFN invests a million Euros in training future big data professionals, publishing 12 post-doc scholarships to collaborate with experiments at the Large Hadron Collider (LHC) at CERN. New scientific discoveries and the advancement of technologies always proceed in parallel in modern society. This is also true for high-energy physics and computing technologies. And to address the challenges of the next generation of experiments at the LHC, the LHC High Luminosity project requires far more resources. It is envisaged, in fact, that a CPU 60 times more powerful than nowadays ones will be required, together with a storage space 40 times larger than the current one to manage the data produced by the future machine. The people selected will deal with the development of innovative work procedures for computing and data management solutions in the field of big science, data analysis and algorithms for high performance computing and development of deep learning machines and techniques. This important initiative, to train young people with cutting-edge skills in supercomputing, is a good example of a national framework of excellence in this area, as demonstrated by the recent choice of Bologna - which is already home to many major centres, including INFN's CNAF, one of the first level nodes of the LHC GRID network, and CINECA - as the headquarters of ECMWF, European Centre for Medium-Range Weather Forecasts. ■