

Scientific breakthroughs enabled by technological advanced in hybrid HPC platforms

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Scientific and technological advances often go hand in hand. In this talk, I will review a few examples of how current and future high-performance computing (HPC) platforms can take scientific simulations to the next level. I will present two case studies. The first is a case where the shared-memory Numascale technology enabled the establishment of large-scale priority lists for future nuclear experiments (one follow-up experiment already conducted at nToF at CERN). The second is how GPU-technology can take 3D hydrodynamic simulations of turbulent flows in stars to the next level.