

# XXVIII International Workshop on Deep Inelastic Scattering and Related Subjects



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## The Physics of the EIC and consequences at the LHC

*Thursday, 26 March 2020 12:40 (25 minutes)*

Nuclear and particle physics are both presently grappling with an array of fundamental questions, running from the dynamical origin of hadronic mass and spin on the one side, to high-energy tests of the Standard Model on the other. Given this situation, we expect a future DIS collider — the Electron-Ion Collider (EIC) for which DOE recently announced CD-0 — to play an essential role in addressing these and many other issues. The enormous power of the EIC will derive from its very high luminosity (~100 times that of HERA) and the relative phenomenological cleanliness of the DIS process itself, which will afford unprecedented resolution to visualize the wave functions and internal dynamics of hadrons and nuclei. In this talk, I will review the primary scientific objectives of the EIC program and survey the large impact it can be expected to have on a wide range of physics at higher energies, especially at the LHC.

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