



# ENRICO FERMI INSTITUTE COLLOQUIUM

## THE ELECTRON-ION COLLIDER

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Mon  
May **01**  
3:30 PM

**MCP 201**

Michelson Center for Physics  
933 E 56th Street

The U.S. and the broader international Nuclear Physics community have been pursuing the idea of an Electron-Ion Collider (EIC) as the next Quantum Chromodynamics (QCD) frontier for many years. The EIC, a discovery machine, will be built at the Brookhaven National Laboratory in the coming decade. It will enable the definitive study of the role of gluons and quarks in nucleons and nuclei, which are responsible for more than 99% of the visible matter in the universe. The EIC will provide precise images of the gluon/quark structure of the polarized proton, unravel the mysteries of the origin of nucleon mass and spin, and explore the physics of gluons at high density. In this talk, I will discuss the EIC science and the latest status on the EIC. Brookhaven National Laboratory is supported by the U.S. Department of Energy's Office of Science.