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"Dissecting the Guts of the Proton"

Since the discovery of the atom and the proton a century ago, our knowledge of atomic structure and the electromagnetic force has advanced to astronomical precision. But to this day, our knowledge of the internal structure of the proton is sporadic and incomplete, with fundamental questions about the origin of the proton mass and spin still unanswered. These persistent questions and challenges reflect the beautiful, emergent complexity of the nuclear force itself. In this talk I will present an overview of the nuclear force known as quantum chromodynamics and the experimental programs to study it in two distinct regimes: in the plasma state at high temperatures produced in heavy-ion collisions, and "in situ" within the proton using the forthcoming Electron-Ion Collider -- the most powerful electron microscope ever created.