RUBEN SANDAPEN, Acadia University

Conformal inversion in the internal light-front dynamics of a pion

In light-front Quantum Chromodynamics (QCD), there is a natural separation between longitudinal and transverse dynamics. Here, we focus on the pion where we find that the equations of motion governing transverse and longitudinal dynamics map onto the infrared and ultraviolet limits of the equation of motion for a scalar field in 5-dimensional anti de Sitter spacetime (AdS) deformed by a quadratic dilaton. While conformal symmetry is explicitly broken on the AdS side for transverse dynamics, it is explicitly broken on the QCD side for longitudinal dynamics.