Contribution ID: **43** Type: **Parallel**

A holographic analysis of the pion

Tuesday 8 July 2025 09:30 (20 minutes)

Using light-front holographic QCD, we compute the pion mass, charge radius, decay constant, electromagnetic form factor and electromagnetic transition form factor. In doing so, we model the longitudinal quark dynamics using (1+1)-dimensional QCD-inspired potentials due to ’t Hooft and to Li & Vary. We explore the strong degeneracy between these two potentials and note that one scenario that accords well with the data also maps onto an equation previously derived by Vegh that describes the dynamics of a four-segmented string in (2+1) Anti de Sitter spacetime.

Secondary track

T10 - Quantum Field and String Theory

Author: Prof. SANDAPEN, Ruben (Acadia University)

Presenter: Prof. SANDAPEN, Ruben (Acadia University)

Session Classification: T10 (Quantum Field and String Theory)

Track Classification: T10 - Quantum Field and String Theory