



Contribution ID: 202

Type: **Talk**

## **Towards the time-like pion form factor beyond the elastic regime using domain-wall QCD**

*Tuesday 4 November 2025 15:10 (20 minutes)*

In this work we investigate the time-like pion form factor from lattice QCD, a quantity interesting for its physics content and its phenomenological reach. This observable can be calculated in the elastic region using the finite-volume approach, up to the first (four-particle) open channel. With the goal of accessing the exclusive two-pion form factor in the inelastic region, starting from a three-point correlator involving the vector current and two (temporally-displaced) pion interpolating operators, we examine the associated underlying spectral density and relate it to the form factor using recent developments based on inverse-problem techniques. The status of our preliminary calculation performed on RBC/UKQCD ensembles using domain-wall fermions is presented.

### **Parallel Session (for talks only)**

Hadronic and nuclear spectrum and interactions

**Author:** MORANDI, Gabriele (Università degli Studi di Milano - Bicocca)

**Co-authors:** Mrs BRESCIANI, Francesca Argia (Università degli Studi di Milano - Bicocca); Prof. BRUNO, Mattia (Università degli Studi di Milano - Bicocca)

**Presenter:** MORANDI, Gabriele (Università degli Studi di Milano - Bicocca)

**Session Classification:** Hadronic and nuclear spectrum and interactions