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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS String Seminar

Title : High-Energy Pion Scattering in Holographic QCD

Speaker : Bartosz Pyszkowski (Yukawa Institute for Theoretical Physics, Japan)

Date : Wednesday, 26 November 2025

Time : 3:30 PM (IST)

Abstract : Following Polchinski and Strassler arXiv:hep-th/0109174 and our recent work arXiv:hep-th/2412.17784, I will discuss our ongoing study of high-energy pion scattering in a holographic QCD model. I will begin with a general review of the Polchinski--Strassler proposal before applying it to our holographic model. The primary focus will be comparing our predictions for the angular dependence of the process $\pi^+ \pi^- \rightarrow \pi^+ \pi^-$ with experimental data. Having previously shown that our approach reproduces the constituent counting rule found in QCD, we now find qualitative agreement with data in the fixed-angle regime at the highest available energies. Time permitting, I will comment on efforts to understand the Regge regime, as well as possible extensions to other processes and holographic models.

Venue : Online

Zoom Link: <https://icts-res-in.zoom.us/j/88092766911?pwd=R3ZrVk9yeW96ZmQ4ZG9KRzVhenRKZz09>

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