



ICTS

INTERNATIONAL
CENTRE *for*
THEORETICAL
SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS String Seminar

Title : Renormalons as Saddle Points

Speaker : Arindam Bhattacharya (Harvard University, USA)

Date : Monday, 18 August 2025

Time : 11:30 AM (IST)

Abstract : Renormalons play an important role in connecting non-perturbative power corrections to high-order perturbative predictions in QCD. Associated with branch points in the Borel transform of asymptotic series, they have largely been studied diagrammatically in perturbation theory. Similar statements can be made about instantons, though these have been shown to be non-perturbative saddle points of the path integral. We demonstrate that, in a similar vein, renormalons can be understood as saddle points of the one-loop effective action in the path integral, thereby opening new avenues for probing their existence beyond diagrammatics.

Venue : Feynman Lecture Hall

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

Meeting ID: 880 9276 6911

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