

ICTS String Seminar (HYBRID)

Title : Applied nonrelativistic conformal field theory: scattering-length and effective-range corrections to nuclear physics

Speaker : Ruchira Mishra (University of Chicago)

Date : Thursday, 20th July 2023

Time : 03:00 PM (IST)

Abstract : In a range of energy, neutrons are described by the nonrelativistic conformal field theory of unitarity fermions, perturbed by one relevant and an infinite number of irrelevant operators. We develop a formalism which provides a definition of local operators in that nonrelativistic conformal field theory. We compute the scattering-length and effective-range corrections to the two-point functions of primary charge-3 operators. These calculations allow us to find the first corrections to the scale-invariant behaviors of the rate of nuclear reactions with three neutrons in the final state in the regime when the neutrons have small relative momenta.

Venue : **Offline:** Madhava Lecture Hall (ICTS)

Online: Please click the below link to join the seminar.

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

Meeting ID: 880 9276 6911

Passcode: 232322