



ICTS String Seminar

Title : Bootstrapping the 3d Ising Stress Tensor

Speaker : Rajeev Erramilli (Institut des Hautes Études Scientifiques, France)

Date : Friday, 24 January 2025

Time : 3:30 PM (IST)

Abstract : I present the results of a new numerical conformal bootstrap study of the 3d Ising CFT involving mixed correlator constraints of the operators σ , ϵ , and the stress tensor T . These constraints produce new precise determinations of the scaling dimensions $(\Delta\sigma, \Delta\epsilon) = (0.518148806(24), 1.41262528(29))$ as well as the OPE coefficients involving σ , ϵ , T . In addition, with the subset of the system only involving the stress tensor, we find universal bounds (i.e. which apply to all local unitary CFTs in 3d) on similar data, as well as hints of universal structures in the space of CFT data. This talk is based on [2411.15300](#) of the same title as well as ongoing work, done in collaboration with Cyuan-Han Chang, Vasiliy Dommes, Alexandre Homrich, Petr Kravchuk, Aike Liu, Matthew S. Mitchell, David Poland, and David Simmons-Duffin.

Venue : Emmy Noether Seminar Room

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

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