Institut Henri Poincaré
11 rue Pierre et Marie Curie, 75231 Paris cedex 05

String Theory in Greater Paris

Rencontres Théoriciennes

"Supergravité, théorie des cordes et théorie M"

Jeudi 19 Décembre 2024, 10:00

Rajeev Erramilli

IHES

Bootstrapping the 3d Ising Stress Tensor

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 (Δ_σ, Δ_ϵ) = (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.

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