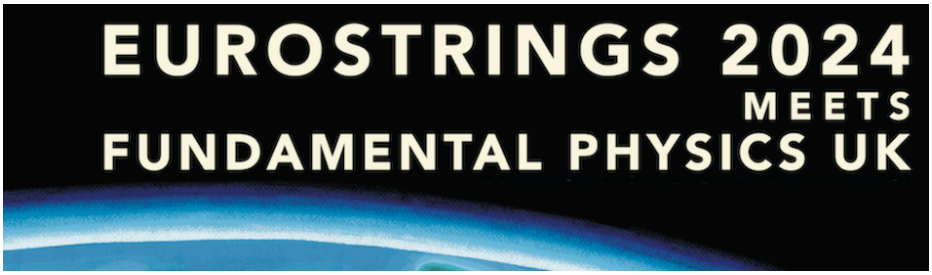

Contribution ID: **94** Type: **Talk in parallel session**

Nambu-Goto equation from three-dimensional gravity

Thursday 5 September 2024 14:50 (20 minutes)

In this talk, I will demonstrate that the solutions of three-dimensional gravity obtained by gluing two copies of a spacetime across a junction constituted of a tensile string are in one-to-one correspondence with the solutions of the Nambu-Goto equation in the same spacetime up to a finite number of rigid deformations. The non-linear Nambu-Goto equation satisfied by the average of the embedding coordinates of the junction emerges directly from the junction conditions along with the rigid deformations and corrections due to the tension. Therefore, the equivalence principle generalizes non-trivially to the string. Our results are valid both in three-dimensional flat and AdS spacetimes. In the context of AdS_3/CFT_2 correspondence, our setup could be used to describe a class of interfaces in the conformal field theory featuring relative time reparametrization at the interface which encodes the solution of the Nambu-Goto equation corresponding to the bulk junction.

Link to publication (if applicable)

https://arxiv.org/abs/2404.02149

Author: BANERJEE, Avik (University of Crete)

Co-authors: Prof. MUKHOPADHYAY, Ayan (Valparaiso U., Catolica); Prof. POLICASTRO, Giuseppe (ENS Paris)

Presenter: BANERJEE, Avik (University of Crete)

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