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The Virasoro Minimal String

Thursday 9 November 2023 09:40 (40 minutes)

I will introduce a critical string theory in two dimensions and explain that this theory, viewed as two-dimensional quantum gravity on the worldsheet, admits an equivalent holographic description in terms of a double-scaled matrix integral. The worldsheet theory consists of Liouville CFT with central charge c>25 coupled to timelike Liouville CFT with central charge 26-c. The dual matrix integral has as its leading density of eigenvalues the universal Cardy density of primary states in a two-dimensional CFT of central charge c, which motivates the name of the theory. This duality holds for any value of the continuous parameter c and reduces to the well-known JT gravity/matrix integral duality in the large central charge limit, thus providing a precise stringy realization of JT gravity. This talk is based on work with Scott Collier, Lorenz Eberhardt, and Victor Rodriguez.

Presenter: MUEHLMANN, Beatrix (McGill Univ.)