

Hamiltonian truncation in AdS*

Tuesday, May 24, 2022 10:00 AM (1 hour)

Anti-de Sitter spacetime is interesting for many reasons: of course it furnishes a canvas for the study of quantum gravity, but it also appears to be a fruitful setting for Hamiltonian truncation. After all, QFTs in AdS have a notion of conserved energy, their Hilbert spaces are well-understood, and even a hard energy cutoff preserves many spacetime symmetries. In this talk I will discuss this framework in detail and present some results on both scalar fields and 2d minimal models. In particular, I will discuss the issue of divergent counterterms that arise from the curvature of AdS, and present a prescription to extract the correct continuum limit.

Based on work with M. Meineri, J. Penedones and K. Salehi Vaziri, arXiv:2104.10689. An introductory example in Python can be found at the attached link.

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