



Contribution ID: 327

Type: **Poster**

## QFT on Fuzzy AdS Spaces and Boundary Correlation Functions

*Thursday 4 September 2025 14:00 (30 minutes)*

As a contribution to understanding quantum spacetimes, we consider the quantum field theory of a massive scalar field on the Fuzzy AdS spacetime in two and three dimensions. We focus on boundary correlation functions, which, in the case of the commutative AdS bulk, are given by CFT correlators. In two dimensions, the fuzzy two-point function is calculated analytically and expressed in terms of the Appell  $F_1$  function, providing a two-parameter deformation of the conformal two-point function. In three dimensions, the result is given by a definite integral that is numerically calculated. We show how the obtained two-point function can be realized as a CFT three-point function of two local and one defect operator. Based on 2502.17595.

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**Session Classification:** Posters