

## High Energy Physics - Theory

# Anti de Sitter quantum field theory and a new class of hypergeometric identities

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We use Anti-de Sitter quantum field theory to prove a new class of identities between hypergeometric functions related to the Källén-Lehmann representation of products of two Anti-de Sitter two-point functions. A rich mathematical structure emerges. We apply our results to study the decay of unstable Anti-de Sitter particles. The total amplitude is in this case finite and Anti-de Sitter invariant.

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