

# Generating Kerr Amplitudes from Higher-Spin Theory

*Thursday 14 December 2023 15:00 (30 minutes)*

Higher-spin theory and massive gauge invariance can be used as input for constraining root-Kerr and Kerr amplitudes, relevant for calculating gravitational observables with spin. Elegant three-point spin- $s$  amplitudes exist for Kerr black holes, however constructing the corresponding four-point Compton amplitudes is an open problem. In this talk, I will discuss the origin of the Kerr three-point amplitudes from a higher-spin theory perspective. Guided by higher-spin constraints and classical-limit analysis, I will propose quantum and classical tree-level Compton amplitudes relevant for root-Kerr and Kerr to all orders in spin.

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