



Contribution ID: 122

Type: 20 minutes talk

$Hb\bar{b}$ production as an example of modern amplitudes calculations

Thursday, 16 December 2021 15:30 (30 minutes)

In this talk, I present some of the modern techniques used in computation of scattering amplitudes. Using $Hb\bar{b}$ production as an example, I give an overview of the method and describe how computational bottlenecks can be overcome by using finite field reconstruction to obtain analytic expressions from numerical evaluations. I also show how the method of differential equations allows us to express the answers using a basis of special functions whose numerical values can be readily obtained at any point in phase space. Finally, I discuss the obstacles of loop computations and potential advances in the field.

This talk is based on arXiv:2107.14733

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Amplitudes

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Session Classification: Full-length talks