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# Theorie-Palaver

Jan. 21, 2025 at 2 p.m.

Lorentz room (Staudingerweg 7, 5th floor)

Jungwon Lim

Max Planck Institute for Physics, Munich

## **Computing Feynman integrals for three-loop three-point form factors in N=4 SYM and Higgs plus jet amplitudes in QCD**

This talk will present the detailed procedure of computing three-loop four-point Feynman integrals with one massive leg and the applications to three-point form factors and Higgs plus jet amplitudes. In the first part, I will discuss technical details of computing three-loop four-point Feynman integrals using differential equation methods. In the second part, I will discuss about the analytic properties of the form factors and recent updates on the form factors and Higgs plus jet amplitude.

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