

FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

Garching Maier-Leibnitz-Kolloquium

Donnerstag, 11.07.2024, 16¹⁵ Uhr

Hörsaal der LMU in Garching, Am Coulombwall 1
Treffen zum gemeinsamen Kaffee 16 Uhr

Dr. Xing Wang

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Two tales in pushing the limit of precision predictions at colliders

Precision predictions of collider observables are crucial not only for testing various aspects of the Standard Model of particle physics but also for searching potential signals of new physics. However, as the desired precision increases, the complexity of these calculations within the perturbative quantum field theory (QFT) framework grows dramatically. In this talk, I will briefly outline two powerful methodologies for dealing with this challenge. The first is the effective field theory approach, which is particularly useful when a hierarchy of scales is present in the observables. The second focuses on how the calculation of Feynman integrals, a significant bottleneck in perturbative predictions, can benefit from algebraic geometry.

Hybrid online access via ZOOM:

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Meeting ID: 984 5733 2925

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