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Algorithms and Sampling for Amplitude Level Evolution

Monday 29 November 2021 17:20 (20 minutes)

Amplitude level evolution has become a new theoretical paradigm to analyze parton shower algorithms which are at the heart of multi-purpose event generator simulations used for particle collider experiments. It can also be implemented as a numerical algorithm in its own right to perform resummation of non-global observables beyond the leading colour approximation, leading to a new kind of parton cascade. In this talk I will present the computational details and challenges behind the CVolver method and library, and its relation to new Monte Carlo sampling algorithms and a possible future structure of event generators.

Significance

References

I will talk about the methods behind the results presented in Phys.Rev.Lett. 126 (2021) 11, 112001, see JHEP 05 (2018) 044 and JHEP08(2019)145 for some theoretical background.

Speaker time zone

Compatible with Europe

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Session Classification: Track 3: Computations in Theoretical Physics: Techniques and Methods

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