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Type: Parallel Talk

QCD tree amplitudes on modern GPUs: A case study for novel event generators

Saturday, 9 July 2022 12:00 (15 minutes)

For more than a decade the current generation of CPU-based matrix element generators has provided hard scattering events with excellent flexibility and good efficiency.

However, they are a bottleneck of current Monte Carlo event generator toolchains, and with the advent of the HL-LHC and more demanding precision requirements, faster matrix elements are needed, especially at intermediate to large jet multiplicities.

We present first results of the new BlockGen family of matrix element algorithms, featuring GPU support and novel colour treatments, and discuss the best choice to deliver the performance needed for the next generation of accelerated matrix element generators.

In-person participation

Yes

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