Contribution ID: **21** Type: **not specified**

Issues in the parallelization of physics algorithms on GPU

Tuesday 14 November 2023 17:15 (30 minutes)

I will briefly report on two distinct attempts to port on GPU an algorithm commonly used in the evaluation of radiative corrections to particle scattering processes:
1) the reconstruction of a rational function, useful in the exact numerical solution of the linear systems typically present in multi-loop calculations;
2) the generation of events via a parton-shower algorithm.
In both cases some interesting indications emerge, related to the logical mistakes that one should avoid in the parallelization of algorithms which originally are designed for sequential evaluation.

Presenter: VICINI, Alessandro (Università degli Studi e INFN Milano (IT))

Session Classification: NNLO and beyond