Contribution ID: **181** Type: **Parallel session talk**

Tropical Feynman integration in the physical region

Friday 25 August 2023 09:25 (20 minutes)

I will present a new computer program, **feyntrop**, which uses the tropical Monte Carlo approach to evaluate Feynman integrals numerically.
In order to apply this approach for physical kinematics, we introduce a new parametric representation of Feynman integrals that implements the causal $i\varepsilon$ prescription concretely while retaining projective invariance. **feyntrop** can efficiently evaluate dimensionally regulated, quasi-finite Feynman integrals, with not too exceptional kinematics in the physical region, with a relatively large number of propagators and with arbitrarily many kinematic scales. I will provide the necessary mathematical background and discuss many explicit examples of evaluated Feynman integrals.

Collaboration / Activity

Independent

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