



Einladung zum Vortrag

“A Novel Approach to Simulations in Particle Physics Phenomenology”

Simon Plätzer

Fakultät für Physik, Gruppe Teilchenphysik, Universität Wien

Termin: Freitag, 24.05.2019, 13:00 Uhr

Ort: Lise-Meitner-Hörsaal
9. Boltzmannngasse 5, 1. Stock

Abstract:

Interpreting particle physics experiments requires precise and detailed simulations of the complex final states observed at particle colliders. For QCD, the theory of strong interactions, so-called 'event generators' combine perturbative calculations with phenomenological models. Parton shower algorithms are at the heart of these programs, describing the evolution of partons into jets of hadrons.

I will introduce event generators with a focus on QCD corrections to jet production in the much-used Herwig program. I will then highlight new research directions to advance parton showers to precision QCD simulation tools. I will exemplify the conceptual and computational challenges in changing the underlying probabilistic paradigm to one based on scattering amplitudes, and provide an outlook on how this can further constrain phenomenological models.

Im Rahmen des Vortrages findet eine Lehrprobe zum Thema
„Periodic Potentials in Quantum Theory“ statt.