Contribution ID: **3**   Type: **not specified**

Gradient Flow Renormalisation for Meson Mixing and Lifetimes

Tuesday 1 October 2024 16:40 (20 minutes)

The gradient flow offers a unique renormalization scheme applicable in both perturbation theory and lattice calculations. Especially, it suppresses operator mixing on the lattice, shifting it to the perturbative matching calculation. In this talk, we discuss using the gradient flow scheme for the four-quark operators describing neutral meson mixing and lifetimes. While meson mixing calculations are well-established on the lattice and validate our procedure, a lattice calculation of matrix elements for heavy meson lifetimes remains outstanding. We provide an overview of the full calculation process and present some preliminary results.

Primary authors: SHINDLER, Andrea (RWTH Aachen University); RAGO, Antonio (University of Southern Denmark); LANGE, Fabian (Universität Zürich and Paul Scherrer Institut); KOHNEN, Jonas (RWTH Aachen University); BLACK, Matthew (University Siegen); WITZEL, Oliver (Universität Siegen); HARLANDER, Robert (RWTH Aachen University)

Presenter: LANGE, Fabian (Universität Zürich and Paul Scherrer Institut)

Session Classification: Afternoon 2