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Taming power divergences with the gradient flow

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When calculating hadronic matrix elements using a lattice regulator,
the presence of power divergences in the lattice spacing poses a significant challenge.
Non-perturbatively subtracting these power divergences presents
both theoretical and numerical difficulties.
The gradient flow offers a theoretically sound and numerically robust approach
for renormalizing power divergences.
We demonstrate how to establish a connection between flowed and physical (unflowed)
hadronic matrix elements, focusing specifically on the quark content of the nucleon and
CP-odd local operators as illustrative examples.

Topical area

Tests of Fundamental Symmetries

Primary author: SHINDLER, Andrea (Michigan State University)

Presenter: SHINDLER, Andrea (Michigan State University)

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