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Non-perturbative determination of anomalous dimensions of bound states in QCD and beyond

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Anomalous dimensions of composite operators like the scalar, tensor, or baryon are important
to determine energy dependent renormalization constants. Until now only perturbative predictions were available.
The recent proposal [PRL 121 (2018) 201601] provides a non-perturbative determination of anomalous dimensions in conformal systems
by defining a continuous real-space renormalization group transformation from gradient flow.

In this work we generalize the method to determine the running anomalous dimensions in QCD-like systems and
present results for the scalar, tensor, and baryon anomalous dimensions as the function of the
running coupling up to $g^2 \approx 10$.

We also investigate the emergence of chiral-spin symmetry suggested by Glozman et al.

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