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# The gradient flow extended to the Standard Model

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The Gradient Flow (GF) has shown significant potential for determining operator renormalization matrices in effective field theories. Nevertheless, its application has predominantly focused on pure QCD, limiting its broader applicability, particularly in the context of the Standard Model Effective Field Theory (SMEFT). In this presentation, I will introduce a gradient flow framework for the flavor-preserving Standard Model in the unbroken phase, serving as an initial step toward systematic GF-based calculations of SMEFT operator renormalization. Key results, including flowed wave function renormalizations up to next-to-next-to-leading order, will be discussed.

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