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A Probabilistic View of Renormalization Group Flows

Monday 23 September 2024 15:30 (20 minutes)

I present a probabilistic framework to analyse global Renormalization Group Flows in large theory spaces. The framework allows to efficiently find basins of attraction, including fixed points of the linearized flow, as well as novel nonlinear attractors. As a working example, I discuss the gauge, Yukawa, and Higgs sector of the Standard Model of particle physics. I will also comment on naturalness and discuss how the framework can facilitate indirect Bayesian searches for new physics at energy scales which are inaccessible to direct observation.

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