

Cosmology from Asymptotically Safe Proca Theories



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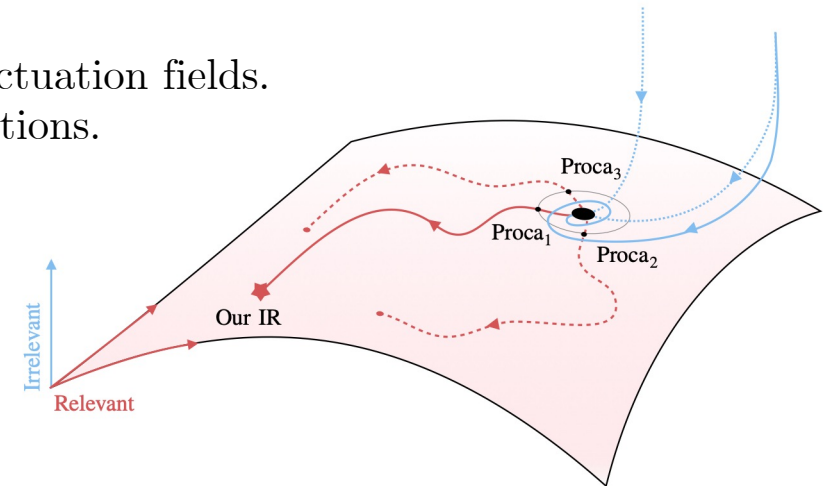
THE GOAL

“Study the UV completion of EFTs for Cosmology — We start with V-T QFTs”
– *Or how to constrain the set of possible IR scenarios from UV-informed EFTs* –

How: Within **Asymptotic Safety**! Using a vertex expansion in the fluctuation fields.
We solve for **6 coupled flows**, including cubic and quartic self-interactions.

Why: Proca theories are **massive V-T theories** with **many applications in cosmology**! E.g., modelling dark energy, late-time cosmic acceleration, growth of structure...

The findings: A **very rich fixed point structure**! Evidence for non-perturbative renormalisability of V-T theories.



A connection btw. Quantum Gravity & Cosmology!!