## First European Physical Society Conference on Gravitation



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## A Graceful Exit for the Cosmological Constant Damping Scenario

Thursday, 21 February 2019 12:13 (17 minutes)

Abstract: I will present a simple and generic class of scalar-tensor theories that successfully realize dynamical damping of the effective cosmological constant, therefore providing a viable dynamical resolution of the fine-tuning cosmological constant problem. In contrast to early versions of this approach, the models considered do not suffer from unacceptable variations of Newton's constant, as one aims at a small but strictly positive late-time curvature. I will then show that the original fine-tuning issue is traded for a hierarchy of couplings, and further suggest a way to naturally generate this hierarchy based on fermion condensation and softly broken field shift symmetry. This talk is based on Phys. Rev. D 98, 124031 (2018), arXiv:1810.12336.

**Summary** 

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