

# Asymptotic Safety - recent achievements and links to other approaches

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In recent years more and more evidence has accumulated that gravity might be non-perturbatively renormalisable, or asymptotically safe. In the first part of the talk, I will highlight some milestones that give credibility to this scenario: the concept of effective universality [1] and the study of the two-loop counterterm [2].

Apart from being a technical condition for a well-defined theory, the asymptotic safety condition gives rise to constraints on physical parameters which can be compared to experiment. In the second part, I will discuss some prominent pre- and postdictions performed in an asymptotically safe setup for quantum gravity, including the prediction of the Higgs mass [3], the postdiction of the top mass [4] and the calculation of the first cosmologically viable solution to the renormalisation group equations [5].

The remaining part of the talk will focus on the connection to other approaches of quantum gravity, in particular to Causal Dynamical Triangulations [6] and Hořava-Lifshitz gravity [7].

## References

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