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# Theoriekolloquium

May 18, 2017 at 4 p.m.  
Newton-Raum, Staudinger Weg 9, 01-122

Dr. Benjamin Bahr  
Universität Hamburg

## **Renormalization in Covariant Loop Quantum Gravity**

The Renormalization group flow of a theory describes how a physical system behaves at different scales. This issue is notoriously difficult in models for the unification of quantum theory and general relativity. While Loop Quantum Gravity has emerged as an interesting quantum gravity model for this unification in recent years, it has been only very recently that the issue of renormalization has been addressed. In this talk, I will give a brief overview of Loop Quantum Gravity in its path integral formulation, and show first results of the computation of the renormalization group flow. We draw connections to the Asymptotic Safety Scenario, which postulates the existence of a non-Gaussian fixed point of that flow.

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