

MP 12: Quantengravitation

Zeit: Donnerstag 8:45–9:35

Raum: ZHG 003

MP 12.1 Do 8:45 ZHG 003

Discrete quantum field theories of the gravitational field —
•GENNARO TEDESCO — Georg-August-Universität Göttingen, Göttingen, Germany.

We introduce a procedure of quantization for the gravitational field by taking a lattice regularization of the space-time in terms of graphs labelled by representations of the symmetry groups. A quantum field theory for the gravitational field, namely the Group Field Theory, is also provided.

MP 12.2 Do 9:10 ZHG 003

Locally covariant field theory as an approach to quantum gravity — •KATARZYNA REJZNER — 2. Institut für Theoretische Physik, Hamburg, Deutschland

I will present recent results concerning the program proposed by Brunetti and Fredenhagen in 2005, to formulate perturbative quantum gravity in the framework of locally covariant field theory. In particular, I will discuss the problem of finding diffeomorphism invariant observables and the background independence.