Spinorial Path Integral for Loop Gravity: Coherent states and Spinfoam symmetries

Etera Livine

ENS Lyon - Laboratoire de Physique - CNRS UMR 5672
E-mail: etera.livine@ens-lyon.fr

The spinfoam framework defines transition amplitudes for spin network states of loop quantum gravity. I will review their recent reformulation in terms of spinorial variables allowing to see these amplitudes as coherent state path integrals [1,2,3]. This clarifies their geometrical meaning and at the identification of symmetries: recursion relations for 3nj symbols are turned into Hamiltonian constraints satisfied by the spinfoam amplitudes [4,5]. This applies in particular to the derivation of modified FRW equations for quantum cosmology [6].

References