

The spin foam program is a covariant approach towards a non perturbative and background-independent quantum theory of gravity. Spin foam models (SFMs), therefore, provide a powerful formalism to analyze the dynamics of Loop Quantum Gravity (LQG). As state-sum lattice models inspired by topological quantum field theory, SFMs are a LQG analog of Feynman's path integral description of quantum gravity. In particular they describe the histories of evolving quantum geometries of space. The study of SFMs has uncovered many remarkable properties in the last two decades. Amongst others, SFMs are finite and have an interesting semiclassical behavior that relates to General Relativity (GR).

Semiclassical consistency is one of the most crucial requirements for a candidate quantum gravity theory. Recent results show that SFMs give rise to *discrete* spacetime geometries in a *large spin limit*. The discreteness of the geometries is a consequence of the lattice dependence of SFMs. If SFMs do indeed qualify as models of quantum gravity, then there should also exist a continuum limit under which smooth general relativity arises as an effective low energy theory.

In this talk, I will give a brief overview over SFMs and discuss the emergence of smooth geometries from linearized SFMs under an appropriate semiclassical continuum limit.