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Loop Quantum Gravity, Spin Foams, and gravitons

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Loop Quantum Gravity provides a candidate description for the quantum degrees of freedom of gravity at the Planck scale. In this talk, I review recent progress in formulating its covariant dynamics in terms of Spin Foams. In particular, I discuss the main assumptions behind this approach, its relation with classical General Relativity, and its low-energy description in terms of an effective quantum field theory of gravitons.