

# De *Madrid* al *Cosmos*

## Spacetime-noncommutativity regime of Loop Quantum Gravity

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**Abstract:** A recent study by Bojowald and Paily provided a path toward the identification of an effective quantum-spacetime picture of Loop Quantum Gravity, applicable in the "Minkowski regime", the regime where the large-scale (coarse-grained) spacetime metric is flat.

A pivotal role in the analysis is played by Loop-Quantum-Gravity-based modifications to the hypersurface deformation algebra, which leave a trace in the Minkowski regime. We here show that the symmetry-algebra results reported by Bojowald and Paily are consistent with a description of spacetime in the Minkowski regime given in terms of the kappa-Minkowski noncommutative spacetime, whose relevance for the study of the quantum-gravity problem had already been proposed for independent reasons.

Lunes 09 de mayo, 16:00 h.  
Sala de Seminarios FT-I  
Facultad de CC. Físicas, UCM

Ciclo de seminarios organizado conjuntamente por los grupos

- *Teorías Efectivas en Física Moderna* (UCM)
- *Gravitación y Cosmología* (IEM-CSIC)

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