

An Approach to Quantizing GR (online talk)

General theory and quantum mechanics are fundamentally very different theories with distinct formulations. Nevertheless, both of them claim to predict how Nature works! The everlasting battle for exploring and understanding the Universe and for privileging a consistent perception of reality is therefore awaiting a consolidator rather than a conqueror. This should be capable of either unifying those two different benchmarks or at least bringing one closer to the other! The latter describes the consolidating approach we are introducing here. We are not suggesting alternatives to GR. Also, we are not aiming at replacing QM by another theory. The present approach preserves the current versions of both theories. The applicability of GR and QM are solely enlarged so that sensical predictions become feasible at all scales. This was only possible when finite gravitational fields are integrated in QM and quantum-mechanical aspects are then properly imposed on GR. We find that the additional curvatures that emerged with the quantization are associated with a maximal proper force, which is apparently related to the quantum-mechanical jumps characterizing the quantized metric tensor.

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