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Ascribing quantum system to Schwarzschild spacetime

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I will present the quantization the Schwarzschild black hole using the affine coherent states quantization method. The novelty of the approach is quantization of both temporal and spatial coordinates. Quantization smears the gravitational singularity indicated by the Kretschmann invariant avoiding its localization in the configuration space. This way we resolve, to some extent, the singularity problem of considered black hole. The approach relies on using only the metric tensor so that it can be applied to other black holes with the metrics satisfying Einstein's equation.

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