

Abstract Submitted
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Towards generic resolution of strong singularities in loop quantum cosmology PARAMPREET SINGH, Louisiana State University — Singularities are the boundaries of classical spacetime in General Relativity. It has been always hoped that quantum gravitational effects may resolve these singularities. In recent years, progress in loop quantum cosmology has provided insights on the resolution of big bang, big crunch and other spacelike singularities. In this talk we will give an update on the recent status of the generic resolution of strong spacelike singularities in loop quantum cosmology. We will show that for flat and curved Roberston-Walker backgrounds and also for Bianchi-I models, loop quantum gravity effects resolve all strong curvature singularities. However, weak curvature singularities, that is those beyond which geodesics can be continued, may not be resolved.

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