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## **Strong cosmic censorship theorem in Bakry-Emery spacetimes**

*Monday, July 5, 2021 6:00 PM (30 minutes)*

A class of naked strong curvature singularities is ruled out in Bakry-Emery spacetimes by using techniques of differential topology in Lorentzian manifolds.

These spacetimes admit a Bakry-Emery-Ricci tensor which is a generalization of the Ricci tensor. This result supports the validity of Penrose's strong cosmic censorship conjecture in scalar-tensor gravitational theories, which include dilaton gravity and Brans-Dicke theory.

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**Session Classification:** Topological Methods, Global Existence Problems, and Spacetime Singularities

**Track Classification:** Early Universe: Topological methods, global existence problems, and spacetime singularities