



General Relativity and Quantum Cosmology

Isotropic extensions of the vacuum solutions in general relativity

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In this work, we obtain isotropic extensions of the usual spherically symmetric vacuum geometries in general relativity. Exact and perturbative solutions are derived. The classes of geometries obtained include black holes in compact and noncompact universes, wormholes in the interior region of cosmological horizons, and anti-de Sitter geometries with excess/deficit solid angle. The tools developed here are applicable in more general contexts.

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