

# RIGIDITY RESULTS ON $\rho$ -EINSTEIN SOLITONS WITH ZERO SCALAR CURVATURE

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## Resumo

Explicit solutions to the pseudo-Riemannian Einstein-type manifold equation are computed. The geometric question is certainly well motivated, the method of proof is by considering solutions on  $\mathbb{R}^n \setminus \{0\}$  with symmetry. This way, the PDEs are reduced to ODEs. The geometric properties of the solutions (in particular completeness) are analyzed. With several additional assumptions, we give an answer to the question posed by Kazdan.

"If  $M$  has complete metrics  $g_+$  and  $g_-$  with positive (respectively negative), scalar curvature, is there one with zero scalar curvature?"

## Referências

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