

# ADS BLACK-HOLE SOLUTIONS IN EINSTEIN-GAUSS-BONNET HIGHER ORDER DERIVATIVE GRAVITY

In recent years, black holes solutions in Anti-de Sitter (AdS) spaces have attracted a great deal of attention. This is partly due to the success of AdS/CFT correspondence, which has the holographic entanglement entropy (EE) proposed by Ryu and Takayanagi as one of its most important applications

This is why, as the first part of a project that intends to study EE in higher order derivative theories of gravity, we will analyze black hole solutions in Einstein's theory with a Gauss-Bonnet term and a negative cosmological constant that constitutes one of the most accessible theories of higher order derivatives.

## **arXiv**

Sun, Y., Xu, H., & Zhao, L. (2016). Thermodynamics and holographic entanglement entropy for spherical black holes in 5D Gauss-Bonnet gravity. *Journal of High Energy Physics*, 2016(9), 60.

**Authors:** Mr ARGANDOÑA VILLAVICENCIO, Andrés Aarón (GFT-UNMSM); Dr VARGAS AUCCALLA, Teofilo (GFT-UNMSM)

**Presenter:** Mr ARGANDOÑA VILLAVICENCIO, Andrés Aarón (GFT-UNMSM)

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