SEMINARIO
Departamentos de Física Teórica I y II
Universidad Complutense de Madrid

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TITULO: **"Nonsingular Black Holes in Quadratic Palatini Gravity"**

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ABSTRACT

I present the field equations of a quadratic extension of general relativity (GR) formulated in the Palatini approach (assuming that metric and connection are independent fields). Then I discuss static, spherically symmetric solutions with an electric field (Reissner-Nordstrom black holes). Unlike in GR, all the solutions of this theory present a central core whose area is proportional to the Planck area times the number of charges. Some of these solutions are nonsingular. In this case, the mass-to-charge ratio implies that the core matter density is independent of the specific amounts of charge and mass and of order the Planck density.