Ann. Sc. Norm. Super. Pisa Cl. Sci. (5) Vol. XI (2012), 407-436

Ambient metrics with exceptional holonomy

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Abstract. We present conformal structures in signature (3, 2) for which the holonomy of the Fefferman-Graham ambient metric is equal to the non-compact exceptional Lie group $G_{2(2)}$. We write down the resulting 8-parameter family of $G_{2(2)}$ -metrics in dimension seven explicitly in an appropriately chosen coordinate system on the ambient space.

Mathematics Subject Classification (2010): 53A30 (primary); 53B30, 53C29 (secondary).