Instantons on the Exceptional Holonomy Manifolds of Bryant and Salamon

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Resumo

We give a construction of G_2 and $Spin(7)$ instantons on exceptional holonomy manifolds constructed by Bryant and Salamon, by using an ansatz of spherical symmetry coming from the manifolds being the total spaces of rank-4 vector bundles. In the G_2 case, we show that, in the asymptotically conical model, the connections are asymptotic to Hermitian Yang-Mills connections on the nearly Kähler $S^3 \times S^3$.