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Nearly Kähler manifolds with Killing vector fields

Abstract: Nearly Kähler manifolds are almost Hermitian manifolds for which the covariant derivative of the Kähler form is totally skew-symmetric. In dimension 6 this leads to the existence of a Einstein metric and a Killing spinor. These and other properties make nearly Kähler manifolds interesting in mathematics and physics (string theory).

In my talk I want to give a short survey on what is known about nearly Kähler manifolds and explain in particular a partial classification under the assumption of the existence of Killing vector fields.