

Registration:

The deadline for registration is the 9th of August. Please simply fax, telephone, e-mail, or write to me, saying when and how you will arrive, whether you are coming to the conference dinner, and which menu you would like.

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Kähler-Einstein metrics with $SU(2)$ action.

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Abstract

The aim of this paper is to analyse Kähler-Einstein metrics of real dimension four admitting an isometric action of $SU(2)$ with generically three-dimensional orbits. In the case when the Einstein constant is zero the metrics are hyperkähler and have been classified. We shall take the Einstein constant to be nonzero.

We derive a system of ordinary differential equations whose solutions correspond precisely to such metrics, and we determine which trajectories of the equations give complete metrics. There are two families of complete metrics with negative Einstein constant. One consists of the $U(2)$ -invariant metrics previously found by other authors. The other family consists of triaxial metrics.

References

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to appear in Proc. Roy. Soc. A

Hierarchy of Conservation Laws for Self-Dual Gravity

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Abstract

An infinite hierarchy of non-local conservation laws is constructed for the self-dual vacuum equations. Further, it is shown that the construction of such conserved currents has a natural description in terms of Penrose's non-linear graviton construction of such self-dual vacuum metrics.

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