Adv. Theor. Math. Phys. **8** (2004) 987–1000

A New Infinite Class of Sasaki-Einstein Manifolds

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Abstract

We show that for every positive curvature Kähler–Einstein manifold in dimension $2n$ there is a countably infinite class of associated Sasaki–Einstein manifolds X_{2n+3} in dimension $2n+3$. When $n=1$ we recover a recently discovered family of supersymmetric $AdS_5 \times X_5$ solutions of type IIB string theory, while when $n=2$ we obtain new supersymmetric $AdS_4 \times X_7$ solutions of $D=11$ supergravity. Both are expected to provide new supergravity duals of superconformal field theories.

e-print archive:
http://lanl.arXiv.org/abs/hep-th/0403038