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Metrics with strongly positive curvature on flag manifolds

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Resumo

This work concerns a curvature condition for Riemannian manifolds called "strongly positive curvature", which lies strictly between positive sectional curvature and positive definite curvature operator, and which was introduced by J. Thorpe in the 70s.

We identify the moduli space of homogeneous metrics satisfying this condition on the manifolds W^6, W^{12} and W^{24} of complete K-flags in K^3, where K is the algebra of complex numbers, quaternions and octonions, respectively.

In particular, this finishes the classification of manifolds admitting a homogeneous metric with strongly positive curvature initiated in our previous work. It also provides evidence for a general deformation conjecture. This is joint work with Renato G. Bettiol (U. of Notre Dame, Notre Dame, IN, USA).