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Einstein deformations on homogeneous spaces

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WebEx

Abstract: Einstein metrics on Riemannian manifolds naturally arise in General Relativity as solutions of the Einstein field equation in a vacuum with cosmological constant. The talk deals with how one could smoothly vary an Einstein metric while still retaining the Einstein property, i.e. how to deform the Einstein metric through a curve of Einstein metrics. If one considers the problem on an infinitesimal scale, what are the constraints on the direction in which our deformation might go?

The focus of the talk lies on the theory of Einstein deformations on homogeneous spaces and on symmetric spaces in particular. Furthermore, the stability of the Berger space $SO(5)/SO(3)$ is discussed.

