Higgs Geometry

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A Higgs bundle is a vector bundle equipped with an endomorphism with values in 1-forms. There is a suitable (semi)stability condition for such pairs. The point I want to make in my talk is that these bundles carry information on the base variety. For instance, Kahler-Einstein manifolds of positive curvature carry nontrivial semistable Higgs bundles only if they satisfy the Calabi-Yau condition. I will discuss this and other similar properties of semistable Higgs bundles.