

The seminar on differential geometry will continue with this lecture:

November 18, 10am, lecture room **M5**.

Hanci Chi (McMaster University/UHK University):

Invariant Einstein Metrics of Cohomogeneity One with Principal Orbits as Wallach Spaces

Abstract:

A Riemannian manifold (M, g) is Einstein if its Ricci tensor is a constant multiple of g . With its charm and influence in both mathematics and physics, the subject of Einstein metrics draws a great amount of attention from both communities. In this talk, we give an introduction to Einstein metrics of cohomogeneity one. Its construction reduces the Einstein equations to a system of ODEs. Then we introduce some new examples. They are vector bundles M whose principal orbit G/K are Wallach spaces. On each M , we found a 1-parameter continuous family of Ricci-flat metrics and a 2-parameter continuous family of negative Einstein metrics. In particular, the complete metric with G_2 holonomy discovered by Robert Bryant and Simon Salamon is recovered in the construction.