

Seminář z diferenciální geometrie pokračuje 18.11.2019 od 10:00 v učebně M5

**Hanci Chi (McMaster University/UHK University):**

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

Abstrakt:

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.