Student Differential Geometry Seminar

Stony Brook University

September 17, 2018

Marlon Gomes : "Holonomy representations and Einstein metrics"

ABSTRACT: I will introduce the concept of holonomy, and present structure theorems about the holonomy groups of Riemannian metrics. I will discuss the Holonomy Principle and the Ambrose-Singer Theorem, relating the Lie algebra of the holonomy group to curvature tensors. Finally, I will present Berger's list of possible holonomy representations, and discuss why metrics of special holonomy are Einstein.