Department of Mathematics
University of Notre Dame

PDE, COMPLEX ANALYSIS AND DIFFERENTIAL GEOMETRY SEMINAR

Guest Speaker: Ricardo Mendes
University of Oklahoma

Date: Tuesday, November 23, 2021
Time: 11:00 AM
Location: 258 Hurley Hall
Zoom URL:

Lecture Title:

A geometric take on Kostant's Convexity Theorem

Abstract

We characterize convex subsets of R^n invariant under the linear action of a compact group G, by identifying their images in the orbit space R^n/G by a purely metric property. As a consequence, we obtain a version of Kostant's celebrated Convexity Theorem (1973) whenever the orbit space R^n/G is isometric to another orbit space R^m/H. (In the classical case G acts by the adjoint representation on its Lie algebra R^n, and H is the Weyl group acting on a Cartan sub-algebra R^m). Being purely metric, our results also hold when the group actions are replaced with submetries.

Ricardo Mendes - University of Oklahoma