

Busemann Functions and Some Recent Advances in Optimization on Riemannian Manifolds

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In this lecture, I intend to present some recent advances in optimization on Riemannian manifolds. Taking into account the absence of non-constant affine functions in complete and connected n -dimensional Riemannian manifolds of negative Ricci curvature on some open set, we explore theoretical aspects related to the applicability of the proximal point method to equilibrium problems, as well as the Fenchel-type conjugate defined as the supremum of convex functions, both via Busemann functions. In particular, we discuss the existence of non-trivial affine functions on Riemannian manifolds.

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