SET OPTIMIZATION AND ITS APPLICATIONS

In this research, we introduce the concept of set optimization, an optimization problem that involves an objective set-valued map under a specific set relation.

Notably, the solution concepts in this framework are defined by a preorder relation on the power set of the image space of the objective set-valued map, which distinguishes it from the traditional vector optimization with an objective set-valued map.

In this presentation, we provide motivating examples that explain the importance of this problem, and introduce results on the existence of solutions, duality theorems, and methods of scalarization. By investigating these fundamental aspects, we aim to comprehensively understand set optimization and its applications in various mathematical contexts and real world problem domains.

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Seminario

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