

DC Programming: optimality, duality and applications

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Abstract

This talk will present a survey on the convex analytic approach to the study of d.c. (difference of convex) functions. The main tools in this study are approximate convex subdifferentials and Fenchel conjugate functions; using these concepts one can obtain necessary and sufficient conditions for global optima of d.c. functions and develop duality theories for both unconstrained and constrained optimization problems. Applications to linear programming with 0,1 variables and to location problems with attraction and repulsion points will be briefly discussed.