# $\mathcal{D}(\mathcal{C})$-Optimization and Robust Global Optimization

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[1] **Abstract:** For solving global optimization problems with nonconvex feasible sets existing methods compute an approximate optimal solution which is not guaranteed to be close, within a given tolerance, to the actual optimal solution, nor even to be feasible. To overcome these limitations, a robust solution approach is proposed that can be applied to a wide class of problems called $\mathcal{D}(\mathcal{C})$-optimization problems. DC optimization and monotonic optimization are particular cases of $\mathcal{D}(\mathcal{C})$-optimization, so this class includes virtually every nonconvex global optimization problem of interest. The approach is a refinement and extension of an earlier version proposed for dc and monotonic optimization.

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