

Second Order Symmetric and Maxmin Symmetric Duality with Cone Constraints

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Abstract—In this paper, a pair of second order symmetric dual programs with cone constraints is formulated. For this pair of programs, weak, strong, converse and self duality theorems are validated under bonvexity-boncavity condition. Further, a pair of second order maxmin mixed integer symmetric dual programs involving cones are constructed and for this pair of programs, symmetric as well as self duality is investigate. Some particular cases are derived from our results.

Keywords—Second order symmetric and self duality, Cone constraints, Duality theorems, Bonvexity and boncavity, Maxmin symmetric duality, Mixed integer symmetric dual programs

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