

Globally solving non-convex problems with indefinite quadratic functions

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We apply a spatial branch-and-bound algorithm to globally solve non-convex optimization problems, in which the non-convexity is manifested as indefinite quadratic functions. We investigate different ways of splitting indefinite quadratics with the goal of exploiting as much as possible the convexity extracted from the functions that formulate the problem. Numerical experiments are presented with benchmark test problems.