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QUADRATIC CONVEX REFORMULATION: BASIC CONCEPTS AND EXTENSIONS

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We review the ideas and preliminary results of quadratic convex reformulation for finding exact (or global) solutions to quadratic programs with binary variables. Then, we show its extension to quadratic programs in mixed-integer variables. Lastly, we present an adaptation to polynomial problems in binary variables, as well as the links between this adaptation and the Lasserre hierarchy. We illustrate these concepts with numerical experiments.

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