From POPMUSIC to generalized local branching – exploring matheuristics

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Abstract

Popular matheuristics include the corridor method, POPMUSIC and generalized local branching. Common features use local search based candidate solutions by means of a fully-fledged optimization method generating optimal solutions over appropriately defined neighborhoods. That is, neighborhoods are constructed to be suitable domains for the optimization method used. We clarify differences and commonalities of these methods and exemplify by network design and maritime shipping.

Keywords: matheuristics, POPMUSIC, generalized local branching, corridor method.