A Filled Function Method for Constrained Global Optimization

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Abstract

In this paper, a filled function for escaping the current local minimizer of a constrained global optimization problem is proposed. Then a filled function method for obtaining a global minimizer of the constrained optimization problem is presented. By this method, a global minimizer of a constrained global optimization problem can be obtained just by searching local minimizers of the original constrained optimization problem and some unconstrained programming problems constructed by the given filled functions. Some Numerical results demonstrate the efficiency of this global method for constrained global optimization.

Keywords. filled function, filled function method, constrained global optimization

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