

A method for global minimization of DC functions

Adil Bagirov

Centre for Smart Analytics, Institute of Innovation, Science and Sustainability,
Federation University Australia, Ballarat, Victoria, Australia.

E-mail: a.bagirov@federation.edu.au

Abstract

In this talk, we consider the difference-of-convex (DC) optimization problems subject to box constraints. First, we discuss necessary and sufficient conditions for local and global optimality. Then we present a method for global minimization of DC functions. This method is based on the use of ε -subdifferentials of DC component functions. The method is the combination of the local optimization methods and a special procedure for escaping from stationary points (including local minimizers) of the DC optimization problems. Results of numerical experiments will be reported.

Keywords Global optimization, Nonsmooth optimization, DC optimization

Joint work with K. Joki, S. Taheri and M. Mäkelä