

Numerical methods for nonsmooth DC Optimization and their applications

Adil Bagirov

Federation University Australia, Ballarat, Victoria, Australia

In this talk, we present numerical methods for solving nonsmooth difference of convex (DC) optimization problems. We discuss various generalized subdifferentials of nonsmooth DC functions and formulate optimality conditions using them. We consider numerical methods which use both explicit and implicit DC representations. These methods are extensions of subgradient and bundle methods. Results of numerical experiments using nonsmooth DC optimization academic test problems are reported. The application of these methods for solving piecewise linear regression problems is demonstrated.