Weak subgradient method in unconstrained optimization

Gulcin Dinc Yalcin, Refail Kasimbeyli

In this work we study a new subgradient method for solving unconstrained optimization problems. The method uses weak subgradients of the objective function at every iteration. Due to this reason the weak subgradient method does not require convexity and uses dynamic step sizes. Convergence properties for the sequence of solutions generated by iterations of the proposed algorithm are investigated.

Keywords: weak subgradient, nonsmooth optimization, nonconvex programming, continuous optimization