World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:8, No:06, 2014

Global Optimization: The Alienor Method Mixed with Piyavskii-Shubert Technique

Authors : Guettal Djaouida, Ziadi Abdelkader

Abstract : In this paper, we study a coupling of the Alienor method with the algorithm of Piyavskii-Shubert. The classical multidimensional global optimization methods involves great difficulties for their implementation to high dimensions. The Alienor method allows to transform a multivariable function into a function of a single variable for which it is possible to use efficient and rapid method for calculating the the global optimum. This simplification is based on the using of a reducing transformation called Alienor.

Keywords : global optimization, reducing transformation, α-dense curves, Alienor method, Piyavskii-Shubert algorithm
Conference Title : ICAMEM 2014 : International Conference on Applied Mathematics and Engineering Mathematics
Conference Location : Istanbul, Türkiye
Conference Dates : June 19-20, 2014