

## **The solution of 2D Helmholtz Equations by Modified Explicit Group Iterative Method**

### **Abstract**

The main aim of this paper is to examine a block iterative method known as the four point-Modified Explicit Group Modified Gauss Seidel (MEGGS) iterative method in solving 2D Helmholtz equations. The method is shown to be very much faster as compared to existing four-point block iterative method. In addition, by using an approximate equation based on the finite difference scheme, formulation and implementation of the proposed method to solve the problems are also presented. Numerical test and comparison with other existing four-point block iterative methods are given to illustrate the effectiveness of the proposed method.