Solving second kind linear Fredholm integral equation via Quarter-Sweep SOR Iterative method

Abstract

In this paper, we consider the numerical solutions of linear Fredholm integral equations of the second kind. The Quarter-Sweep Successive Over-Relaxation (QSSOR) iterative method is applied to solve linear systems generated from discretization of the second kind linear Fredholm integral equations using quadrature method. In addition, the formulation and implementation of the proposed method to solve the problem are also presented. Numerical tests and comparisons with other existing methods are given to illustrate the effectiveness of the proposed method.