

# **Half-Sweep Conjugate Gradient method for solving first order linear fredholm integro-differential equations**

## **Abstract**

The main purpose of this paper is to examine the effectiveness of Half-Sweep Conjugate Gradient (HSCG) method. The trapezoidal and central difference scheme will be used to discretize linear Fredholm integro-differential equations of the first order to formulate system linear equation. The basic formulation and implementation of the proposed method is also presented. Some numerical tests were carried out to show the effectiveness of the proposed method compared to the Full-Sweep Conjugate Gradient (FSGS) iterative method.