

First order piecewise collocation solution of fredholm integral equation second type using SOR iteration

ABSTRACT

We evaluate the first-order approximation solution piecewise by firstorder polynomial collocation with Quadrature scheme on second-type Fredholm integral equations. This discretization derived the formulation to solve the first order piecewise approximation equation in which the linear system was built. The SOR method was described as a linear solver in which its formulation was constructed and applied in this study. In order to obtain the approximation solutions, the combination of SOR iterative method with the first-order piecewise polynomial by collocation with quadrature scheme has shown that performance of SOR method is superior than Jacobi method in terms of number of iterations and time of completion.