

## **Analytical approximate solution of carleman's equation by using Maclaurin series**

### **Abstract**

In this paper we introduce a expansion method for solution of carleman's equation, in this method we expand the known function as a Maclaurin series and convert the solution into linear combination of some elements. we proved this linear combination is uniformly convergence to the analytic solution. If the known function be a polynomial then we have exact solution.

**Keyword:** Weakly singular integral equation; Carleman's equation; Maclaurin series; Approximation