

## **New third order convergence iterative method for finding multiple roots of nonlinear equations**

### **ABSTRACT**

In this paper, we derive a new modified third order convergence iterative methods for computing multiple roots of non-linear equations. Our proposed scheme requires one evaluation of function and two evaluations of first derivative. Error term is proved to possess a third order. Numerical performance shows that the proposed method provides a highest accuracy results as compared to other existing third order iterative methods.

**Keyword:** Multi-point iterative methods; Multiple roots; Nonlinear equations; Order of convergence.