# NEW DERIVATIVE FREE ITERATIVE METHOD FOR SOLVING NON-LINEAR EQUATIONS

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## ABSTRACT

*Several iterative methods have been proposed and analyzed in the literature for solving non-linear equation,* $f(x) = 0$. *Recently Wu et al have suggested derivative free method for solving non-linear equations. Other well-known methods with derivatives create numerical difficulties or fail to converge in neighborhood of the required root. In this paper, we propose and analyze two two-step derivative free algorithms. The numerical tests show that the new two-step algorithms are comparable with the existing algorithms and are successful in case where the existing algorithms fail to converge or have numerical difficulties.*

*Keywords: Nonlinear equations, Iterative methods, Two-step methods, Derivative free methods, Numerical examples.*