

## **SOLUTION OF TWO-DIMENSIONAL FREDHOLM INTEGRAL EQUATIONS OF THE FIRST KIND BY USING OPTIMAL HOMOTOPY ASYMPTITIC METHOD**

**ABSTRACT.** The purpose of this study is to present the optimal homotopy asymptotic method (OHAM) for solving twodimensional linear and nonlinear Fredholm integral equations of the first kind. Several examples are illustrated to show that the method is effective and simple to apply for solving two-dimensional linear and nonlinear Fredholm integral equations of the first kind.

**Key words:** optimal homotopy asymptotic method, two-dimensional linear and nonlinear Fredholm integral equations of the first kind.

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