

The Series Solution of Problems in the Calculus of Variations via the Homotopy Analysis Method

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The homotopy analysis method (HAM) is used for solving the ordinary differential equations which arise from problems of the calculus of variations. Some numerical results are given to demonstrate the validity and applicability of the presented technique. The method is very effective and yields very accurate results.

Key words: Calculus of Variations; Euler-Lagrange Equation; Homotopy Analysis Method.

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