



**HOMOTOPY ANALYSIS TRANSFORM METHOD
FOR TIME-SPACE FRACTIONAL GAS
DYNAMICS EQUATION**

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Abstract

Homotopy Analysis Transform Method (HATM) is applied to tackle time-space fractional Gas Dynamics equation. The proposed HATM is an elegant coupling of homotopy analysis method (HAM) and Laplace transform. Numerical results coupled with graphical representation explicitly reveal the complete reliability of the proposed algorithm.

Keywords and phrases: homotopy analysis transform method (HATM), homotopy analysis method (HAM), fractional equations, nonlinear gas dynamics equation.

**Pioneer Journal
of Advances in
Applied
Mathematics**

PSP Pioneer Scientific
Publisher