Abstract

In this paper, linear and nonlinear boundary value problems for fourth-order fractional integro-differential equations are solved by Variational iteration method (VIM) and Adomian decomposition method (ADM). The fractional derivative is considered in the Caputo sense. The solutions of both problems are derived by infinite convergent series. Numerical example are presented to illustrate the efficiency and reliability of two methods.

References

- AY. Luchko, R. Groreflo, The initial value problem for some fractional equations


Index Terms

Computer Science

Applied Mathematics

Keywords
Fractional integro-differential equations  Caputo fractional derivative  Variational iteration method

Adomain decomposition method

Boundary value problems.