

Finite difference methods for the time fractional order differential equations

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Abstract

In this talk, I will report our group's work on the finite difference methods for the time fractional order differential equations. The outline is as follows.

- Approximations to the fractional derivatives
- Finite difference methods for the fractional sub-diffusion equation
- Finite difference methods for the fractional diffusion-wave equation
- Finite difference methods for the multi-term fractional diffusion-wave equation
- ADI methods for the multi-dimensional fractional equations