

Haar wavelets and their application to numerical solution of ordinary differential equations and numerical integration

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Abstract

This presentation is focused on introduction of Haar wavelets and their application to the numerical solution ordinary differential equation and numerical integration. New numerical methods based on Haar wavelets are proposed for the numerical solution of coupled nonlinear ODEs, singularly perturbed problems and numerical integration. Part of the presentation will also include mesh generation through TFI and its smoothing through elliptic grid generation.