Sinc Function Approximation

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Abstract

In this talk, a brief survey of Sinc approximation to numerical solution of differential, integral equations and fractional differential equations has been investigated. We will emphasize on recent development in this field as well as the works which have been developed at Iran University of Science and Technology. This talk has six major parts, first part is devoted to the definition and main concepts of Sinc approximation and second part is concern with application of Sinc function for numerical solution of integral equations. The third part focused on solution of singularly perturbed parabolic convection-diffusion problems by Sinc basis function. The fourth part is devoted to numerical solution of ordinary differential equation. The fifth part is concerned with the Sinc- Galerkin and Sinc-collocation method for solving nonlinear two point boundary value problems. The sixth part is concern with application of Sinc function for numerical solution of fractional differential equations.