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HERMITE COLLOCATION METHOD FOR NUMERICAL SOLUTION OF SECOND ORDER PARABOLIC PARTIAL DIFFERENTIAL EQUATIONS

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ABSTRACT

A two point boundary value problem has been solved using Hermite collocation method. This technique is a combination of orthogonal collocation and Hermite interpolation polynomial. Zeros of Legendre polynomial has been taken as collocation points. The approximating function has been discretized using cubic Hermite polynomials. The resulting set of equations has been solved using MATLAB ode15s system solver.

KEYWORDS: Hermite Interpolating Polynomials, Orthogonal Collocation, Collocation Points, Boundary Value Problems, Reaction Diffusion Equation