

Numerical Evaluation for Cauchy Type Singular Integrals Using Modification of Discrete Vortex Method and Spline Approximation

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ABSTRACT

This paper deals with the construction of an efficient quadrature formula for singular integrals (SI) of Cauchy type based on modification of discrete vortex method (MDV) and interpolation linear spline. The estimations of errors are obtained in the classes of $H^\alpha(K, [-1,1])$ and $C^1([-1,1])$. Numerical analysis are also given

Key words: singular integral, quadrature formula, canonic partition, discrete vortex method, approximation, spline.

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