

Using Derivative Free Method to Improve the Error Estimation of Numerical Quadrature

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Abstract : Numerical integration is an essential tool for deriving different physical quantities in engineering and science. The effectiveness of a numerical integrator depends on different factors, where the crucial one is the error estimation. This work presents an error estimator that combines a derivative free method to improve the performance of verified numerical quadrature.

Keywords : numerical quadrature, error estimation, derivative free method, interval computation

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