



DEVELOPMENT OF A HIGH-PRECISION NUMERICAL METHOD FOR INTEGRATION OVER ONE PERIOD OF PERIODIC FUNCTIONS WITH A SHARP PEAK

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Abstract. In the paper, a high-precision numerical integration method PAT(peak adjustment transform) is proposed. PAT requires a discretization method with non-equidistant collocation points. PAT is valid for the integration over one period of periodic functions with a sharp peak which makes high-precision numerical integration difficult. Numerical computations are carried in multiple precision. Numerical results are very satisfactory in accuracy.

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