1060-33-124   **Juri M. Rappoport*** (`jmrap@landau.ac.ru`), Vlasov Street Building 27 Apt.8, Moscow, 117335, Russia. *Approximation algorithms for some modified* Bessel *functions.*

The approximation and computation of kernels of Kontorovitch–Lebedev integral transforms–modified Bessel functions of the second kind with pure imaginary order $K_{i\beta}(x)$ and with complex order $K_{1/2+i\beta}(x)$ are elaborated on the basis of several approaches [1,2]. The hypergeometric type differential equations of the second order with polynomial coefficients are considered. The computational scheme of Tau method is extended for the systems of hypergeometric type differential equations [3]. The effective applications of the modified Bessel functions are given.

References

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