CONVERGENCE ACCELERATION OF ALTERNATING SERIES

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Abstract. We discuss some linear acceleration methods for alternating series which are in theory and in practice much better than that of Euler–Van Wijngaarden. One of the algorithms, for instance, allows one to calculate $\sum(-1)^k a_k$ with an error of about 17.93^{-n} from the first n terms for a wide class of sequences $\{a_k\}$. Such methods are useful for high precision calculations frequently appearing in number theory.