عنوان مقاله:

Bounding error of calculating the matrix functions

محل انتشار:

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خلاصه مقاله:

Matrix functions play important roles in various branches of science and engineering. In numerical computations and physical measurements there are several sources of error which significantly affect the main results obtained from solving the problems. This effect also influences the matrix computations. In this paper, we propose some approaches to enclose the matrix functions. We then present some analytical arguments to ensure that the obtained enclosures contain the exact result. Numerical experiments are given to illustrate the performance and effectiveness of the proposed approaches.

کلمات کلیدی:

Matrix function, Floating point arithmetic, Interval arithmetic