ALGORITHM 524: MP, A FORTRAN MULTIPLE-PRECISION ARITHMETIC PACKAGE

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Abstract

A collection of ANSI Standard Fortran subroutines for performing multiple-precision floating-point arithmetic and evaluating elementary and special functions is given. The subroutines are machine independent and the precision is arbitrary, subject to storage limitations.

Comments

Only the Abstract is given here. The full paper appeared as [3]. The calling sequences are described in more detail in [1], and the algorithms are outlined in [2, 5]. For related work see [4, 6]. Note, however, that the Augment precompiler described in [6] is no longer supported.

References

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Key words and phrases. Arithmetic, multiple-precision, extended precision, floating point, elementary function evaluation, Euler's constant, gamma function, polyalgorithm, software package, Fortran, machine-independent software, special function evaluation, Bessel functions, exponential integral, logarithmic integral, Bernoulli numbers, zeta function, portable software.

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