NAME

qvsum – Quadruple-precision vector sum

SYNOPSIS

Fortran (77, 90, 95, HPF):

f77 *[flags] file(s) . . . -L/usr/local/lib -lgjl*

REAL*16 FUNCTION qvsum(x,n)
INTEGER   n
REAL*16   x(*)

C (K&R, 89, 99), C++ (98):

cc *[flags] -I/usr/local/include file(s) . . . -L/usr/local/lib -lgjl*

Use

#include <gjl.h>

to get this prototype:

void qvsum(fortran_quadruple_precision * x_,
    const fortran_integer * n_);

NB: The definition of C/C++ data types **fortran_** *xxx*, and the mapping of Fortran external names to C/C++ external names, is handled by the C/C++ header file. That way, the same function or subroutine name can be used in C, C++, and Fortran code, independent of compiler conventions for mangling of external names in these programming languages.

DESCRIPTION

Return an accurate estimate of the sum $x(1) + x(2) + ... + x(n)$ using Kahan error-compensating summation.

AUTHORS

The algorithms and code are described in detail in the paper

Fast Gaussian Quadrature for Two Classes of Logarithmic Weight Functions

in ACM Transactions on Mathematical Software, Volume ??, Number ??, Pages ????--???? and ????--????, 20xx, by

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