GAMS Index for the NAG Parallel Library

This index classifies NAG Parallel Library routines according to Version 2 of the GAMS classification scheme described in [1]. Note that only those GAMS classes which contain Library routines, either directly or in a subclass, are included below.

C Elementary and special functions (*search also class L5*)

C1 Integer-valued functions (e.g., factorial, binomial coefficient, permutations, combinations, floor, ceiling)

- `C06GXFP` Factorizes a positive integer n as $n = n1 \times n2$. This routine may be used in conjunction with C06MCFP

D Linear Algebra

D1 Elementary vector and matrix operations

D1a Elementary vector operations

D1a1 Set to constant

D1a11 Other vector operations

- `F01XEFP` Scatter real vector distributed conformally to sparse matrix, used with routines from Chapter F11
- `F01XFFP` Gather real vector distributed conformally to sparse matrix, used with routines from Chapter F11
- `F01XGFP` Scatter integer vector distributed conformally to sparse matrix, used with routines from Chapter F11
- `F01XHFP` Gather integer vector distributed conformally to sparse matrix, used with routines from Chapter F11
- `F01XUFP` Gather complex vector distributed conformally to sparse matrix, used with routines from Chapter F11
- `F01YEFP` In-place generation of real dense vector distributed conformally to sparse matrix
- `F01YTFP` In-place generation of complex dense vector distributed conformally to sparse matrix, used with routines from Chapter F11
- `F01ZYFP` In-place generation of complex vector in column block fashion, used with routines from Chapter F07
- `F01ZZFP` In-place generation of real vector in column block fashion, used with routines from Chapter F07
- `F11YBFP` Permutation of real vector from distribution based order to local indexing based order
- `F11YCFP` Permutation of real vector from local indexing based order to distribution based order
- `F11YPFP` Permutation of complex vector from distribution based order to local indexing based order
- `F11YQFP` Permutation of complex vector from local indexing based order to distribution based order
- `X04YPFP` Outputs complex vector, distributed conformally to sparse matrix to a sequential file

D1b Elementary matrix operations

- `F01CPFP` Element-wise maximum or minimum in absolute value of integer matrices
- `F11YAFP` Permutation of non-zero entries of real sparse matrix with repeated sparsity pattern
- `F11YNFP` Permutation of non-zero entries of complex sparse matrix with repeated sparsity pattern
- `F11ZGFP` Generates multi-colour ordering for real sparse matrix with symmetric sparsity pattern, distributed in row block form
- `F11ZUFP` Generates multi-colour ordering for complex sparse matrix with symmetric sparsity pattern, distributed in row block form.
- `X04BZFP` Outputs complex matrix stored in row block fashion

D1b1 Initialize (e.g., to zero or identity)

- `F01YAFP` In-place generation of real sparse matrix using cyclic row block distribution
- `F01YBFP` In-place generation of real sparse matrix using cyclic row block distribution (suitable for repeated sparsity pattern), used with routines from Chapter F11
- `F01YPFP` In-place generation of complex sparse matrix according to cyclic row block distribution, used with routines from Chapter F11
- `F01YQFP` In-place generation of complex sparse matrix according to cyclic row block distribution (suitable for repeated sparsity pattern)
- `F01YWFP` In-place generation of complex Hermitian banded matrix in column block fashion, used with routines from Chapter F07
- `F01YXFP` In-place generation of real symmetric banded matrix in column block fashion, used with routines from Chapter F07
- `F01YYFP` In-place generation of real matrix in row block fashion on a one-dimensional grid of processors, used with routines from Chapter F07
- `F01YZFP` In-place generation of complex matrix in row block fashion on a one-dimensional grid of processors, used with routines from Chapter F07
- `F01ZHFP` Generates an l by m by n three-dimensional array $\mathrm{A}(i, j, k)$ on a grid of processors in i-block form

References

[1] Boisvert R F, Howe S E and Kahaner D K (1990) The guide to available mathematical software problem classification scheme. *Report NISTIR 4475* Applied and Computational Mathematics Division, National Institute of Standards and Technology.