**NAME**

CCIFG – CUTEr tool to evaluate a single constraint function value and possibly gradient.

**SYNOPSIS**

CALL CCIFG( N, ICON, X, CI, GCI, GRAD )

**DESCRIPTION**

The CCIFG subroutine evaluates the value of a particular constraint function of the problem decoded into OUTSDIF.d at the point X, and possibly its gradient in the constrained minimization case.

**ARGUMENTS**

The arguments of CCIFG are as follows

**N** [in] - integer
the number of variables for the problem,

**ICON** [in] - integer
the index of the constraint function to be evaluated,

**X** [in] - real/double precision
an array which gives the current estimate of the solution of the problem,

**CI** [out] - real/double precision
the value of constraint function ICON at X,

**GCI** [out] - real/double precision
an array which gives the gradient of constraint function ICON evaluated at X,

**GRAD** [in] - logical
a logical variable which should be set .TRUE. if the gradient of the constraint functions are required and .FALSE. otherwise.

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**SEE ALSO**

*CUTEr (and SifDec): A Constrained and Unconstrained Testing Environment, revisited*,
  N.I.M. Gould, D. Orban and Ph.L. Toint,
  ACM TOMS, **29**:4, pp.373-394, 2003.

*CUTE: Constrained and Unconstrained Testing Environment*, I. Bongartz, A.R. Conn, N.I.M. Gould and Ph.L. Toint, TOMS, **21**:1, pp.123-160, 1995.