

**NAME**

CDIMSH – CUTEr tool to determine number of nonzeros to store the Hessian of the Lagrangian.

By convention, the signs of the Lagrange multipliers  $V$  are set so the Lagrangian function can be written as  $L(X, V) = f(X) + \langle c(X), V \rangle$ .

**SYNOPSIS**

CALL CDIMSH( NNZH )

**DESCRIPTION**

The CDIMSH subroutine determines the number of nonzero elements required to store the Hessian matrix of the Lagrangian function for the problem decoded into OUTSDIF.d in the constrained minimization case. The matrix is stored in sparse "coordinate" format.

**ARGUMENTS**

The arguments of CDIMSH are as follows

**NNZH** [out] - integer  
the number of nonzero elements in the matrix.

**AUTHORS**

I. Bongartz, A.R. Conn, N.I.M. Gould, D. Orban and Ph.L. Toint

**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.