SUBROUTINE OCCEUA

Description

This subroutine performs the competitive complex evolution scheme.

Calling Sequence

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CALL OCCEUA (NOPT, NPS, S, SF, SPBIAS, SRCOF, BL, BU, XNSTD, ICALL,
             ISEED, A, MA, OPTIM, PBIAS, RCOF, ISTEP)
```

Argument List

Variable	Input/ Output	Type	Dimension	Description
NOPT	Input	I	1	Number of parameters to be optimized.
NPS	Input	I	1	Number of points in a sub-complex.
S	Both	R	NOPT*NPS	Matrix which holds every point in a sub-complex.
SF	Both	R	NPS	Array which holds the criterion values of the sub-complex.
SPBIAS	Both	R	NPS	Array which holds the percent bias values of the sub-complex.
SRCOF	Both	R	NPS	Array which holds the correlation coefficient values of the sub-complex.
BL	Input	R	NOPT	Array which specifies the lower bounds on the parameters to be optimized.
BU	Input	R	NOPT	Array which specifies the upper bounds on the parameters to be optimized.
XNSTD	Input	R	NOPT	Normalized standard deviation of current population in each parameter direction.

Variable	Input/ Output	Type	Dimension	Description
ICALL	Both	I	1	Current number of trials, updated each time a criterion value is computed.
ISEED	Both	I	1	Seed value for the random number generator.
A	Both	R	MA	Array containing values of the parameters to be optimized. This array is updated no more than MAXN times.
MA	Input	I	1	Dimension of the A array.
OPTIM	Both	R	1	Criterion value corresponding to the A array.
PBIAS	Both	R	1	Percent bias value corresponding to the A array.
RCOF	Both	R	1	Correlation coefficient value corresponding to the A array.
ISTEP	Output	I	1	Indicates which evolution step is taken.