Pseudo-code of current version of my algorithm:

;

initialize starting point ;

initialize radius *r* and size of sampling points *num*;

initialize a blank list to store optimal values

**repeat**

shuffle the order of variables;

**repeat**

sampling along single direction within range

call Alamopy to get the surrogate model based on sampling data points;

call Baron to get the optimal point of surrogate model;

**if** the difference between actual black-box value and calculation result of optimal point is big:

decrease *r*; increase *num*;

**else**:

increase *r*; decrease *num*;

**until** the actual black-box value of optimal point minimal value obtained by Baron;

update with new optimal point; and append optimal value to solution list;

**until** termination is satisfied