
```

rng default % for reproducibility
try
    gaAvailable = false;
    nvar = 4;
    gaoptions = optimoptions('ga','MaxGenerations',15,'Display','iter');
    startTime = tic;
    gasol = ga(@expensive_objfun,nvar,[],[],[],[],[],[],[],[],gaoptions);
    time_ga_sequential = toc(startTime);
    fprintf('Serial GA optimization takes %g seconds.\n',time_ga_sequential);
    gaAvailable = true;
catch ME
    warning(message('optimdemos:optimparfor:gaNotFound'));
end

```

%84.5459 seconds for one of the runs

Single objective optimization:

4 Variable(s)

Options:

CreationFcn: @gacreationuniform
CrossoverFcn: @crossoverscattered
SelectionFcn: @selectionstochunif
MutationFcn: @mutationgaussian

Generation	Func-count	Best $f(x)$	Mean $f(x)$	Stall Generations
1	100	-4.262e+20	2.502e+19	0
2	147	-4.272e+20	2.217e+19	0
3	194	-2.524e+25	-5.048e+23	0
4	241	-3.53e+30	-7.061e+28	0
5	288	-3.537e+30	-1.59e+29	0
6	335	-3.141e+31	-1.049e+30	0
7	382	-6.532e+38	-1.306e+37	0
8	429	-6.532e+38	-2.088e+37	1
9	476	-8.12e+39	4.432e+40	0
10	523	-4.507e+45	-9.222e+43	0
11	570	-9.282e+47	-1.907e+46	0
12	617	-1.105e+50	-2.26e+48	0
13	664	-1.321e+50	-7.486e+48	0
14	711	-3.302e+50	-3.114e+49	0
15	758	-3.685e+50	-7.463e+49	0

Optimization terminated: maximum number of generations exceeded.
Serial GA optimization takes 83.942 seconds.

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