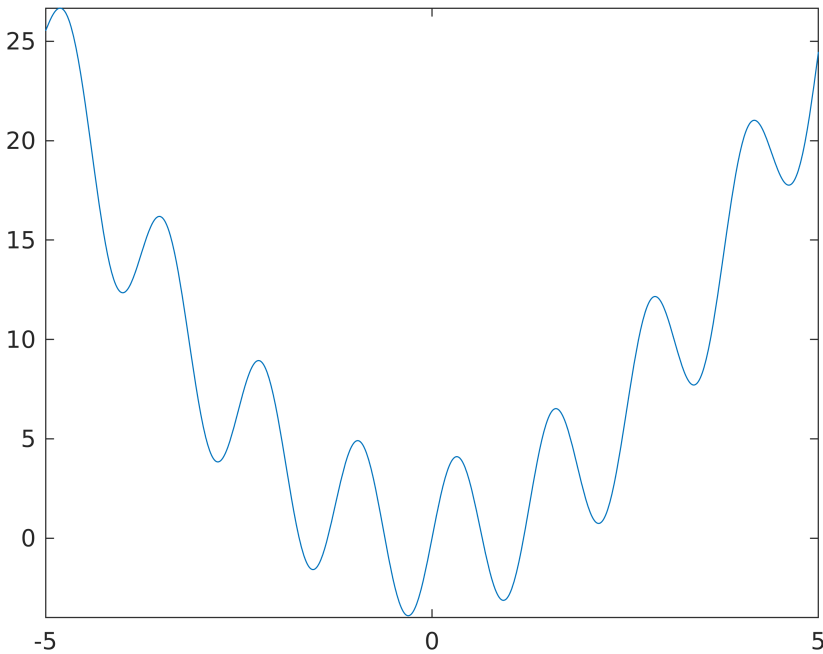


Run GlobalSearch on 1-D Problem

Consider a function with several local minima.

```
fun = @(x) x.^2 + 4*sin(5*x);  
fplot(fun, [-5,5])
```



To search for the global minimum, run GlobalSearch using the fmincon 'sqp' algorithm.

```
rng default % For reproducibility  
opts = optimoptions(@fmincon, 'Algorithm', 'sqp');  
problem = createOptimProblem('fmincon', 'objective', ...  
    fun, 'x0', 3, 'lb', -5, 'ub', 5, 'options', opts);  
gs = GlobalSearch;  
[x, f] = run(gs, problem)
```

GlobalSearch stopped because it analyzed all the trial points.

All 23 local solver runs converged with a positive local solver exit flag.

```
x = -0.3080  
f = -3.9032
```

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