

fmincon

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Hi, I need help!!!!!!! I've just started to program in Matlab and I have a problem... obviously!
I need to use fmincon inside 4 cycle for, but the problem is that the optimization doesn't run. It sees the cycle but it gives out an error message that I can't understand:

Optimization terminated: first-order optimality measure less than options.TolFun and maximum constraint violation is less than options.TolCon.

What can I do? Here it is the code.

```
global b; global or; global e; global
alfa;
global nofVal; global t0E; global Tstep Lstep;
global i j h k n;
```

```
t0E=1440
b = [100 300 500]
or = [5 10 15]
e = [600 900 1200]
```

```
alfa =[0.083 0.165
0.284]
```

```
nofVal = 10
```

```
for i=1:length(b) %cycle on the n of b
for j=1:length(or) %cycle on the n of or
for h=1:length(e) %cycle on the class of e
for k=1:length(alfa) %cycle on the patient mix alfa
```

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```
Tstep(i,j,h,k)= (T(3,i,j,h,k)-T(2,i,j,h,k))/nofVal;  
Lstep(i,j,h,k)= (L(2,i,j,h,k)-L(1,i,j,h,k))/nofVal;
```

```
options =  
optimset('LargeScale','off','Display','iter');  
[t1(i,j,h,k),fval,exitflag,output] =  
fmincon(@objfun1TaE,t1s(i,j,h,k),[],[],[],[],lb,[],[],options)  
t1(i,j,h,k)  
end  
end  
end  
end
```

And the objective function is:

```
function Sum1 = objfun1TaE(t1)
```

```
global nofVal;  
global i j h k;  
global b or e alfa;  
global t0E;  
global Tstep Lstep;  
global NortE;  
global A B;  
global L;  
global TrC;  
t1(i,j,h,k)=1  
% The interval lambdaU – lambdaL is divided into nofValues steps  
% initialization of the objective function  
% Wti=ith observation during transient period (simulation for base  
case)  
  
% Value of Tf is obtained from simulation  
% ln(Tf)=a+b*lambda for any arrival  
rate  
Wti(i,j,h,k)= exp(A(i,j,h,k)+B(i,j,h,k)*NortE(1,2));  
  
t=zeros(length(b),length(or),length(e),length(alfa),nofVal);  
for n=1:nofVal  
Tstep(i,j,h,k);  
t(i,j,k,h,n)=t0E+(n-1)*Tstep(i,j,h,k);  
  
Tf(i,j,h,k,n)=exp(A(i,j,h,k)+B(i,j,h,k)*...  
(L(1,i,j,h,k)+(n-1)*Lstep(i,j,h,k)));
```

```
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```

```

Tf(1,1,1,1,1) ;
if n==1
Sum1=0;
TrC(i,j,h,k,n)= t0E+(Tf(i,j,h,k,n)-t0E)*(1-exp(((t0E-
t(i,j,h,k,n))/t1(i,j,h,k)))));

else
TrC(i,j,h,k,n)= TrC(i,j,h,k,n-1)+...
(Tf(i,j,h,k,n)-t0E)*(1-
exp((TrC(i,j,h,k,n-1)-...
t(i,j,h,k,n))/t1(i,j,h,k)));
end
TrC(i,j,h,k,n);
Wti(i,j,h,k);
Sum1 = Sum1 + (Wti(i,j,h,k)-TrC(i,j,h,k,n))^2

```