



Mahesh Narayanamurthi &lt;maheshnm@vt.edu&gt;

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**Fwd: FW: Files for the adjoint code**

2 messages

**Sri Hari Krishna Narayanan** <snarayan@mcs.anl.gov>

Fri, May 29, 2015 at 11:13 AM

To: Mahesh Narayanamurthi &lt;maheshnm@vt.edu&gt;

Here is Vishwas's code. Try it out.  
Krishna

----- Forwarded Message -----

**Subject:**FW: Files for the adjoint code**Date:**Fri, 29 May 2015 11:12:12 -0500**From:**Abhyankar, Shrirang G. <abhyshr@anl.gov>**To:**Narayanan, Sri Hari Krishna <snarayan@mcs.anl.gov>

Hi Krishna,

The following set of files solve a 2-variable ODE constraint optimization problem with the sensitivities calculated via adjoints. There is also a check for comparing the adjoints with the finite differencing (commented). This is the first problem that Vishwas worked on. Some of the missing global variables values are given below. Please put them in sens\_check.m right after their global declarations.

```
pmax = 2.0877;  
omegaB = 120*pi;  
omegaS = 1;  
H = 5.0;  
D = 5.0;  
thetaS = 1.0;  
beta = 2;  
c=10000;  
t0 = 0;  
tend = 10.0;  
tf = 0.1; % fault-on time  
tcl = 0.2; % fault-off time  
dt = 0.01;
```

This example is as described in section 2 TSOPF\_Experiments.pdf. We had fiddled with Poblano toolbox earlier but I rewrote the code later using MATLAB's fmincon solver.

Let me know anything else you need.

Shri

-----Original Message-----

From: Emil Constantinescu &lt;emconsta@mcs.anl.gov&gt;

Date: Monday, November 24, 2014 at 12:54 PM

To: Shri &lt;abhyshr@mcs.anl.gov&gt;


Subject: Re: Files for the adjoint code

>nope, they are not - there are two files main.m and sens\_check.m (see  
>enclosed).  
>

>Some, I can guess; but not all. and you seem to have a clearing time  
>there as well.  
>  
>Can you take a look?  
>  
>Thanks,  
>  
>Emil  
>  
>On 11/24/14 11:04 AM, Abhyankar, Shrirang G. wrote:  
>> They should all be declared in either of the files.  
>>  
>> -----Original Message-----  
>> From: Emil Constantinescu <emconsta@mcs.anl.gov>  
>> Date: Mon, 24 Nov 2014 11:03:10 -0600  
>> To: Shri <abhyshr@mcs.anl.gov>  
>> Subject: Re: Files for the adjoint code  
>>  
>>> Shri,  
>>>  
>>> Can you please send us the parameters:  
>>>  
>>> pmax omegaB omegaS H D thetaS t0 tf tcl beta c?  
>>>  
>>> Emil  
>>>  
>>>  
>>> --  
>>> Emil M. Constantinescu, Ph.D.  
>>> Asst Computational Mathematician  
>>> Argonne National Laboratory  
>>> Mathematics and Computer Science Division  
>>> 9700 S Cass Avenue,  
>>> Argonne, IL 60439, USA  
>>>  
>>> Ph: [630-252-0926](tel:630-252-0926)  
>>> <http://www.mcs.anl.gov/~emconsta>  
>>>  
>>> On 11/18/14 11:19 AM, Abhyankar, Shrirang G. wrote:  
>>>> Emil,  
>>>> Attached are the .m files that run the 2-variable optimization  
>>>>with  
>>>> ODE  
>>>> constraints problem. Let me know if you have any problems running it.  
>>>> The  
>>>> document contains the description of the problem.  
>>>>  
>>>> Let me know if you need anything else.  
>>>>  
>>>> Shri  
>>>>  
>>>>  
>>>>  
>>

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**3 attachments**

 **sens\_check.m**  
6K



**main.m**  
1K



**TSOPF\_Experiments.pdf**  
209K

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**Mahesh Narayanamurthi** <maheshnm@vt.edu>  
To: Sri Hari Krishna Narayanan <snarayan@mcs.anl.gov>

Fri, May 29, 2015 at 11:16 AM

Dear Krishna,

Thanks! I will surely check it out today.

Regards,

[Quoted text hidden]