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1  '''
2  Created on 29 Oct 2014
3
4  @author: bob
5  '''
6  import multiprocessing
7  import scipy
8  from workers.worker2 import Worker2 as worker2
9  from workers.workerSimple import workerSimple as workerSimple
10 from workers.worker_nls import WorkerNLS
11 import matplotlib.pyplot as plot
12 from test import plottest
13
14
15 if __name__ == '__main__':
16     manager = multiprocessing.Manager()
17     return_dict = manager.dict()
18     jobs = []
19     nb_ofLoopsPerProces = 5
20     nb_Proces = 8
21     Ksqr = scipy.linspace(1, 500, nb_ofLoopsPerProces*nb_Proces).tolist()
22     sigma = scipy.linspace(1, 1.5, 1).tolist()
23     g = scipy.linspace(-1, -1.5, 1).tolist()
24     n = 10
25     y0=[0.,1.];
26     t0=0
27     tend=1
28     h=0.01
29     for i in range(nb_Proces):
30         name = 'Worker %s'%(i+1)
31         filename = 'File%s.txt'%(i+1)
32         eigenSys = workerSimple(Ksqr[nb_ofLoopsPerProces*i:nb_ofLoopsPerProces*(i+1)], sigma, g, n, y0, t0, tend, h, filename)
33         p = multiprocessing.Process(target=eigenSys.task, args=(i+1, return_dict, filename))
34         jobs.append(p)
35         p.start()
36     i = 1;
37     for p in jobs:
38         p.join()
39         print 'Job %s finished, from %s'% (i, len(jobs))
40         i+=1
41     result = scipy.zeros((nb_ofLoopsPerProces*nb_Proces,n+3))
42     print return_dict
43     for i in range(nb_Proces):
44         result[i*nb_ofLoopsPerProces:(i+1)*nb_ofLoopsPerProces,:] = return_dict[i*nb_ofLoopsPerProces:(i+1)*nb_ofLoopsPerProces,:]
45     ax1 = plot.subplot2grid((1,2), (0,0), colspan=1)
46     ax7 = plot.subplot2grid((1,2), (0, 1), rowspan=1,colspan=1)
47
48     ax1.plot(result[:,0],result[:,3])
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49     ax1.plot(result[:,0],result[:,4])
50     ax1.plot(result[:,0],result[:,5])
51     ax1.plot(result[:,0],result[:,6])
52     ax1.plot(result[:,0],result[:,7])
53     ax1.plot(result[:,0],result[:,8])
54     ax1.plot(result[:,0],result[:,9])
55     ax1.plot(result[:,0],result[:,10])
56     ax1.plot(result[:,0],result[:,11])
57     ax1.plot(result[:,0],result[:,12])
58     plottest.PlotWave(data=result,fig = ax7)
59     plot.savefig(' ../.. /plot/mainResult.eps')
60     plot.show()
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