PSTD3Dfun (Calls: 200

Time: 639.806 s)

Generated 16-May-2017 09:05:13 using performance time.
function in file C:\Gits\IndiEngiSchola\Matlab\PTSD\PSTD3Dfun.m
Copy to new window for comparing multiple runs

Refresh

☑ Show parent functions ☑ Show busy lines ☑ Show child fu

☑ Show Code Analyzer results ☑ Show file coverage ☑ Show function

Parents (calling functions)

Function Name	Function Type	Calls
ptsd3dtesting	script	2000

Lines where the most time was spent

Line Number	Code	Calls	Total Time	% Time
24	`pdiffhatx = ifftn(temp1,'symme...`	2000	60.640 s	9.5%
36	`udiffhatx = ifftn(temp,'symmet...`	2000	59.494 s	9.3%
26	`pdiffhatz = ifftn(temp3,'symme...`	2000	59.414 s	9.3%
25	`pdiffhaty = ifftn(temp2,'symme...`	2000	59.372 s	9.3%
41	`udiffhaty = ifftn(temp,'symmet...`	2000	58.997 s	9.2%
All other lines			341.889 s	53.4%
Totals			639.806 s	100%

Children (called functions)
No children

0,

nctions

n listing

Time Plot
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Code Analyzer results

No Code Analyzer messages.

Coverage results

Show coverage for parent directory

Total lines in function	43
Non-code lines (comments, blank lines)	20
Code lines (lines that can run)	23
Code lines that did run	23
Code lines that did not run	0
Coverage (did run/can run)	100.00 %

Function listing

Color highlight code according to time

```
 time    Calls   line
                  11  function[pd, udx, udy, udz] = PSTD3Dfun(pd, udx,
                  12      diffmatrixX, diffmatrixY, diffmatrixZ,...
                  13       PMLdiff, PMLalphau, PMLalphap, PMLconst)
                  14      %% Function solves using the PSTD method fo
                  15      %  velocity vector and differentiation impu
                  16      %  and returns the solved pressure and velo
                  17
                  18  %% Velocity in 3d
 51.36    2000    19      phat = fftn(pd);
 10.26    2000    20      temp1 = phat .* diffmatrixX;
  9.36    2000    21      temp2 = phat .* diffmatrixY;
  8.48    2000    22      temp3 = phat .* diffmatrixZ;
                  23
 60.64    2000    24      pdiffhatx = ifftn(temp1,'symmetric');
 59.37    2000    25      pdiffhaty = ifftn(temp2,'symmetric');
 59.41    2000    26      pdiffhatz = ifftn(temp3,'symmetric');
                  27
                  28  %% Total Velocity
  2.94    2000    29      udx = udx .* PMLdiff - PMLalphau .* (pdiffha
  2.98    2000    30      udy = udy .* PMLdiff - PMLalphau .* (pdiffha
  3.15    2000    31      udz = udz .* PMLdiff - PMLalphau .* (pdiffha
                  32
                  33  %% Pressure in 3d
 49.78    2000    34      uhat = fftn(udx);
  8.28    2000    35      temp = uhat .* diffmatrixX;
```

```
, udy, udz,...


r a pressure vector,...
lse response in 1 dimension
city vectors
```

```
atx./PMLconst);
aty./PMLconst);
atz./PMLconst);
```

```
59.49     2000   36     udiffhatx = ifftn(temp,'symmetric');
                 37
                 38 %% Pressure in 3d
51.69     2000   39     uhat = fftn(udy);
 6.13     2000   40     temp = uhat .* diffmatrixY;
59.00     2000   41     udiffhaty = ifftn(temp,'symmetric');
                 42
                 43 %% Pressure in 3d
51.67     2000   44     uhat = fftn(udz);
 6.29     2000   45     temp = uhat .* diffmatrixZ;
58.93     2000   46     udiffhatz = ifftn(temp,'symmetric');
                 47
                 48 %% Total Pressure
 3.75     2000   49     pd = pd .* PMLdiff -(PMLalphap .* (udiffhat
          2000   50         - (PMLalphap .* (udiffhaty./(PMLconst))
          2000   51         - (PMLalphap .* (udiffhatz./(PMLconst))
                 52
16.78     2000   53 end
x./(PMLconst)))...
)...
);
```