

R-factor: Upload consol results

Introduction

This script uploads the results of comsol modeling software

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```
clear; close all; clc;
mllibfolder = '/home/ivan/Desktop/MLIB';
path(path, mllibfolder);
add_mlib_path;
```

Set size of the grid

```
G=GridClass;

% [m]          [m]          [m]          [s]
G.x0=0;        G.y0=0;        G.z0=0;        G.t0 = 0.00;        % initial point
G.nx=1001;     G.ny=1;        G.nz=601;        G.nt = 101;        % grid size
G.dx=10;       G.dy=0;        G.dz=10;        G.dt = 0.1;        % grid step (meter)

G.gridInfo;
```

```
Information about grid:
x0=0, dx=10, Nx=1001.
y0=0, dy=0, Ny=1.
z0=0, dz=10, Nz=601.
t0=0, dt=0.1, Nt=101.
```

```
G.setGrid;
Gold = oldGrid(G);
[Xq, Zq] = meshgrid(G.xx, G.zz);
```

Load Comsol results

```
datatype = {'pressure', 'disp_x', 'disp_y', ...
            'strain_x', 'strain_y', 'strain_xy', ...
            'stress_x', 'stress_y', 'stress_xy'};
Results = [];

if isempty(gcp)
    parpool(20)
    disp('Create new parpool')
else
    disp('Parpool already exists');
```

```
end
```

Parpool already exists

```
for i = 1:length(datatype)

    filename = ['/home/ivan/Desktop/Comsol/' datatype{i} '_modell.csv'];
    rawdata = read_comsol_csv_files(filename, 10, 1202610);
    intdata = zeros(G.nx,G.nz,G.nt);
    parfor t = 1:G.nt
        F = scatteredInterpolant(rawdata(:,1),-rawdata(:,2),rawdata(:,t+2));
        intdata(:, :, t) = F(Xq,Zq)';
    end
    Results = setfield(Results,datatype{i},intdata);
    %clear rawdata intdata
    disp([datatype{i} ' : Ok'])
end
```

```
pressure: Ok
disp_x: Ok
disp_y: Ok
```

[illegible]

[illegible]

[illegible]

[illegible]

```
strain_xy: Ok
```

[illegible]

[illegible]

[illegible]

