

Porous Fluid

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Аннотация

This manual explains how folders are structures. The objective of each files and classes.

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1 Code documentation

1.1 File and Folder Structure

1. **porous-fluid/docs/** documents, instructions and other files related to the model.
 - (a) **instructions/** cmd commands
 - (b) **manual/** the documentation of code
 - (c) **publications/** list of papers and conference papers published on this model
 - (d) **reference-papers/** papers read to develop this model
 - (e) **reports/** reports, analysis and other calculation files
2. **porous-fluid/makefile-gen/** the make file generator program
 - (a) **build/** makefile-gen.exe and other object files
 - (b) **src/** the source code of the makefile-gen.exe
 - (c) **file-structure.txt** the structure and list of files in porous-fluid/src
 - (d) **Makefile** commands to generate Makefile and put it in the root folder.
3. **porous-fluid/run** this normally does not exist but when the code is run for the first time it is created automatically
 - (a) **build/** all the object files
 - (b) **input/** incongen.txt, parameter.txt, tlength.txt, tmns.txt, tradius.txt

(c) **output/**

- i. **calculations/** saturation-vs-x.txt
- ii. **data-raw/** tpressure.txt tmns.txt tvelocity.txt ttime.txt
- iii. **graph/** plots of saturation-vs-x.txt at various moments of time
- iv. **initial-conditions/** tradius.txt, tlength.txt
- v. **pressure/**
- vi. **velocity/**
- vii. **visualization-nothick/** visualization where the thickness of the tube is visible
- viii. **visualization-thick/**

(d) **incongen.exe**

(e) **test.exe**

(f) **simulate.exe**

1.2 Makefile

The make file has the following high level commands:

- 1. **all**: necessary_compile, run
- 2. **necessary_compile**: folder_check, list_exe
- 3. **folder_check**: check goodness of porous-fluid/run/ folder
- 4. **run**: run_exe, back_up
- 5. **force**: clean, necessary_compile
- 6. **clean**: cleans the build folder
- 7. **list_exe**: instructions on how to link
- 8. **list_obj**: instructions on how to build the object files

Список литературы