Сетевая модель двухфазной фильтрации в неоднородных пористых среда

Шаббир Кафи Ул[1]

[1]Московский Физико-Технический Институт (национальный исследовательский университет)

17 мая 2025 г.

Аннотация

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

Содержание

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 cource 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

This is a blank citation [1]

Список литературы

[1] Коэффициент Джини — Википедия — ru.wikipedia.org. `https://ru.wikipedia.org/wiki/%D0%9A%D0%BE%D1%8D%D1%84%D1%84%D0%B8%D1%86%D0%B8%D0%B5%D0%BD%D1%82_%D0%94%D0%B6%D0%B8%D0%BD%D0%B8`.