

A user's guide to authors in a model FVCA8 proceeding – benchmark session

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Abstract This model proceeding is a template for the \LaTeX environment `svmult` to be used for preparing a FVCA8 proceedings for the benchmark session. Special macros are provided to typeset all the expected tables containing the numerical results. Those tables are directly produced from plain text files in the sub-directory `data` by using the `pgfplotstable` package

The maximum length allowed is 16 pages for contributions containing only 2D computations and 24 pages for contributions containing both 2D and 3D cases.

1 Results files

- All the results produced by your code should be provided in the plain text files `*.dat` provided in the subdirectory `data`. **Please do not change the names of the files.** This will help us to produce comparison graphs between all the contributions.
- All the columns are mandatory but missing values can be given by using the `NaN` keyword.
The order of the columns in each file has no importance. The column separator `|` is optional.
- You can remove some rows if you were not able to perform the computations for all the given meshes in the family.

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You are invited to give **all the results files** you obtained even if you don't display all the corresponding tables in the final PDF file of the proceedings in order to fulfill the maximal length constraint. They may be used by the organisers to compare all the contributions to the benchmark.

2 Macros

We provide various macros to typeset the tables in the correct format directly from your results files. You simply have to comment out some lines in the template for the tables that you don't want to display in the proceedings and, of course, to add the description of the scheme in Section 1 and your comments concerning your results.

- `\accuracytable{file.dat}{caption}{label}`
This command produces an accuracy table from the file `data/file.dat` with a caption `caption` and a label `label` that you may use in your text to refer to the table.
This is useful in sections 2.1, 2.2, 3.1, 3.2, 4.1 and 4.2 of the benchmark.
- `\complexitytable{file.dat}{caption}{label}`
The same for producing a complexity table (sections 2.1 and 2.2 of the benchmark)
- `\comparisontable{file.dat}{caption}{label}`
The same for producing a comparison table (sections 5.1 and 5.2 of the benchmark).
- `\streamtable{file.dat}{caption}{label}`
This command produces a table for showing minimal and maximal values of the stream function in section 6.1.
- `\horizontalvelocitytable{file.dat}{caption}{label}`
`\horizontalvelocitytable{file.dat}{caption}{label}`
Those commands produce tables for the values of horizontal/vertical velocity along the midlines in the cavity in section 6.1.
 - They assume that all the sampling points are the same for all the meshes in the family. The number and the values of the sampling points are not imposed even though we have given a possible choice in the `*.dat` files.
 - If this is not the case, you should use instead the macros
`\horizontalvelocitylongtable{file.dat}{caption}{label}`
`\horizontalvelocitylongtable{file.dat}{caption}{label}`