

The PENCIL CODE Newsletter

Issue 2023/1

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1 Code developments

1.1 Transferring snapshots

Kishore G <kishoreg@iucaa.in> wrote us this:
To transfer snapshots (Fortran binary format) to a new processor layout or grid resolution, a Python script `pc_migratevar` is now available. It also allows one to copy only specified variables from one simulation, to be used as an initial condition for another simulation. If the grid sizes of the source and destination simulations differ, the requested variables are automatically interpolated onto the new grid. An example invocation is

```
pc_start
pc_migratevar
  copy=these ux,uy,uz ../src_sim/data
pc_run
```

The above would copy only the velocity field from the source simulation into the current simulation, preserving the values set for the remaining variables by `pc.start`. The script can be easily modified in case one wishes to specify custom initial conditions via Python. For a detailed description of the available options, type `pc_migratevar --help`.

2 Papers since November 2022

As usual, we look here at new papers that make use of the PENCIL CODE. Since the last newsletter of June 15, 11 new papers have appeared on the arXiv, and 10 others, some of which were just preprints and have now been published. We

list both here, 21 altogether. A browsable ADS list of all PENCIL CODE papers can be found on: https://ui.adsabs.harvard.edu/user/libraries/iGR7N570Sy6A1hDMQRTe_A. If something is missing in those entries, you can also include it yourself in: <https://github.com/pencil-code/pencil-code/blob/master/doc/citations/ref.bib>, or otherwise just email brandenb@nordita.org. A compiled version of this file is available as <https://github.com/pencil-code/website/blob/master/doc/citations.pdf>, where we also list a total of now 102 code comparison papers in the last section “Code comparison & reference”. Those are not included in our list below, nor among the now total number of 630 research papers that use the PENCIL CODE.

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This PENCIL CODE Newsletter was edited by Axel Brandenburg <brandenb@nordita.org>, Nordita, KTH Royal Institute of Technology and Stockholm University, SE-10691 Stockholm, Sweden; and Matthias Rheinhardt <matthias.rheinhardt@aalto.fi>, Department of Computer Science, Aalto University, PO Box 15400, FI-00076 Aalto, Finland. See <http://www.nordita.org/~brandenb/pencil-code/newsletter> or <https://github.com/pencil-code/website/tree/master/NewsLetters> for the online version as well as back issues.