Additional data to the article published as

David Dureisseix, Henri Bavestrello, Information transfer between incompatible finite element meshes: application to coupled thermo-viscoelasticity, Computer Methods in Applied Mechanics and Engineering, Volume 195, Issues 44-47, 15 September 2006, Pages 6523-6541. http://www.elsevier.com doi:10.1016/j.cma.2006.02.003

> David Dureisseix Univ Lyon, INSA Lyon, LaMCoS, CNRS UMR 5259 Bat. Sophie Germain, 27bis Avenue Jean Capelle, F-69621 VILLEURBANNE CEDEX, FRANCE

December 14, 2017

Since the aforementioned article contains a test case that can serve as a benchmark for field transfer between incompatible FE discretizations, the following files are provided that contain data useful for other testing purpose. Hopefully, this test can be useful to compare the behaviors of other projectors and transfer methods from one mesh to another (herein for a 2D case).

One can therefore use the following files:

- cercle2.dgibi source code for Cast3M¹ FE code to generate the mesh (actually modified to cope with a newer code version, namely bin_Cast3M_win_64_15.exe ORIGINAL Realization 15.0.0).
- cercle.inp output data file of the previous code containing the FE mesh and the value of the analytical function at nodes, with format AVS UCD, readable for instance with Paraview² (raw data file).
- cercle_24.pos, cercle_24.pos.opt, cercle_96.pos, cercle_96.pos.opt result files, with format 1.4 0 8 of Gmsh^3 ; they contain animations for the projected results for N = 24 and N = 96 increments of rotation.
- cercle_results.xlsx and cercle_results.ods spreadsheets reporting the projection errors as functions of the number of rotation increments. One should note that the reported values slightly differ from the original article due to a change in Delaunay triangulation library in MATLAB (the current used version is R2011a). Both genuine values and current ones (with new additional entries) are reported.

¹http://www-cast3m.cea.fr

²https://www.paraview.org

³http://gmsh.info