Py4Incompact3D Documentation

Release 0.0.0

Yorgos Deskos
Paul Bartholomew

October 03, 2018

CONTENTS:

CHAPTER

ONE

INTRODUCTION

Py4Incompact3D is a library for postprocessig data produced by Xcompact3D simulations. The aim of this project is to facillitate automated postprocessing of Xcompact3D simulations by providing, at first:

- Mesh class: this stores the domain data for the simulation
- Case class: this stores the information of the case: boundary conditions, fields etc.

With these building blocks, complex postprocessing tools may be built - for example, derivative calculateors to compute the vorticity and Q-criterion given the velocity field.

Installation

- Clone the git repository to a location on your `${PYTHONPATH}`
- Test module can be imported by python interpreter: `import Py4Incompact3D`

Documentation

Documentation of functions can be found under *doc/build/latex/*.

To regenerate documentation, from the project root type `make -C doc/ latexpdf` (requires sphinx).

Contributing

It is hoped that users of Xcompact3D will find this library useful and contribute to its development, for instance by adding additional functionality.