# DistTab

# Chapter 1

# CHANGELOG

7/6/2021

- Table and block size is now command-line argument driven. Added a unit test to check that functionality for small 2D tables is correct. 4/6/2021

- Retooled example table generation and flat-to-block major rearrangement of tables so that blocks with dimension size not divisible by table size are padded with zeroes when going off the table

# Chapter 2

# DistTab

Distributed Tabulation of Spray Flamelet Lookup Tables

## 2.1 Instructions

- Dependencies MPI (I use OpenMPI)

- Compile
  ```
  cd src/lib/
  mpifort disttab_table.f90 disttab.f90 -o disttab
  ```

- Run Test (Command Runstring To Be Explained Later)
  ```
  cd src/tests/reordering-test-2D-small/
  ./reordering-test-2D-small.sh
  ```

# Chapter 3

# TODO

7 June 2021

- Implement and test Alya-format to block-format mapping algorithm for n control variables, assuming blocks fit evenly into table.

- Implement and test Alya-format to block-format mapping algorithm for 2 control variables, zero-padding for blocks that do not evenly fit into table.

- Implement and test Alya-format to block-format mapping algorithm for n control variables, zero-padding for blocks that do not evenly fit into table.