Preparation for BP-ICAM Conference

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November 2020

My progress and weekly report

Week 1. 03/10 to 11/10

- In the first week starting from 03 October 2020 I studied 1D 1st order square wave using Finite Difference Method. I wrote the formulation in LaTex format and implemented in Python.

Week 2. 12/10 to 18/10

- In the second week, I studied the same problem in Finite Volume Method, wrote down the mathematical formulation in LaTex and implemented the problem in Python. I Also tried injection of a sinusoidal function following the square wave.

Week 3. 19/10 to present

- I have been studying the same problem using DG Finite Element Method since week three and have been trying to implement it in Python.

Future work

- For the following weeks, I will be working on 2D 1st order square wave in FDM, FVM and FEM and then I will move on semi-structured 2D DG FEM. From this point, I will code the problems in FORTRAN too.

Extra courses and training classes

Apart from working on the square wave problem I attended extra courses and training sessions, which some of them still to come:

- Introduction to Python Course
- Introduction to Fortran Course
- HPC Course

- GTA training
- LaTex Course
- Using Git to Code and Share Course
- The Linuc Command Line for Scientific Computing Course