

Instruction for ADEF1 Solver Software

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1 Introduction

ADEF1 solver software is divided into two parts. Multilevel implementation requires matrices at all levels from finest to coarsest. The data files are constructed in Matlab and subsequently are written into .DAT files. Important part of ADEF1 solver software is part which implements multilevel preconditioner. This is implemented in PETSc, which calls the .DAT files on run time.

1.1 Structure

Main directory `Adef1_Software` contains two sub-directories; `ConstructDatFiles` and `PetscSolver`.

The directory `ConstructDatFiles` constructs data files.

2 Constructing DATA files

Run the Matlab program `MainMarmousi.m` in matlab session. This will immediately ask the options and will construct discrete matrices accordingly. An example is shown in Figure 1.

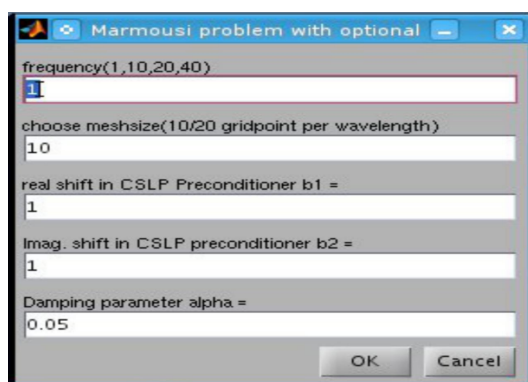


Figure 1: Menu to choose options while constructing .DAT files.