

The FORTRAN provides the foundation and environment for the programming in this paper. Below are the main components of the program and their respective functions:

- (1) **INPUT.DAT:** This file sets the basic parameters for the input program, such as shape, geometric length and the distribution of the inhomogeneities, the number of iterations, and the size of the matrix.
- (2) **PROGMAIN.F90:** This module calls the data from **INPUT.DAT** and executes various subprograms based on the parameters specified in that file.
- (3) **GRIDMESH.F90:** This module determines the size of the computational domain and performs grid partitioning, discretizing the computational area into rectangular elements. It also sets the basic dimensions and corresponding coordinates of these rectangular elements.
- (4) **ITEGNFLD.F90:** This module determines whether a rectangular element is located within an inhomogeneity and specifies the output format for the calculated data, as well as the parameters for the target line.
- (5) **TEMP.f90:** This module corresponds to the disturbed temperature solutions described in Section 2.3. It calls the ZEROP2DB function for zero-completion operation, the ICFFTCNV function to perform wrap-around operation and construct the circulant matrix, and the CNVFT2CB function to carry out the convolution operation for transforming from the frequency domain back to the time domain.
- (6) **TEMPGRAD.f90 and HEATFLOW.f90:** These modules correspond to the disturbed temperature gradient solutions and disturbed heat flux solutions in Section 2.3, respectively. They utilize functions similar like those in point (5).