CH49019: CAPE Laboratory [AA]

Date: October 21, 2021

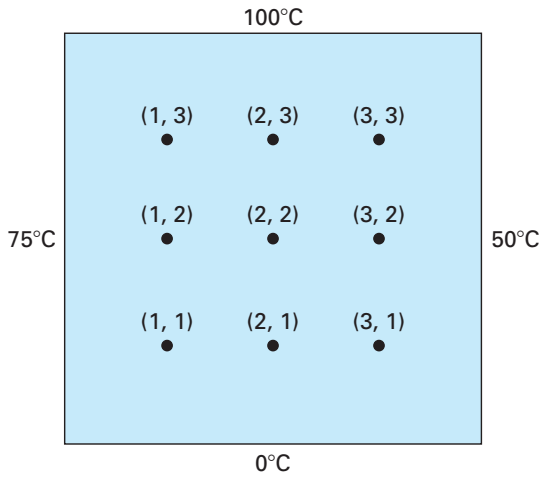
Submission due: October 22, 2021 (midnight – 11.59 PM) (Marks: 100%)

Submission closing (late hand-ins): October 23, 2021 (midnight – 11.59 PM) (Marks: 50%)

Problem statement:

Use Gauss-Seidel method to solve for the 2-D temperature distribution of heated plate shown in the following figure. Employ over-relaxation with a value 1.5 for weighting factor and iterate to tolerance (ε =) 1% using central differencing scheme for discretizing the governing (Laplace) equation. Consider $\Delta x = \Delta y$.

Also, make your code flexible for $\Delta x = \Delta y/2$.



IMPORTANT Instructions

- **Before submission, RENAME the file with your Roll No.**
- **ONLY (MATLAB and C/C++) Codes (*.m, *.c, or *.cpp) to be uploaded/submitted through Teams Assignment portal.**
- **Do NOT forget to click on Hand-in button in Teams Assignment submission**