

Partial Differential Equations PDEs are a fundamental component of modern mathematics and science. The sources and references of this research are distinguished by their diversity, most notably the books: Li and Yi-Tung Chen, Computational Partial Differential Equations Using MATLAB , Seongjai Kim, Numerical Methods for Partial Differential Equations. Which contributed greatly to the excellence of the subject. Solving PDEs is a crucial task in many scientific and engineering fields, such as physics, fluid dynamics, heat transfer, and structural analysis. In Chapter 2, we discussed the definition, classification of partial differential equations and also studied ways of solving them, where we studied the method of FDM, FEM and FVM. In any system wherein the independent variables (e.g, space and time) take on a continuum of values, the laws governing the system usually result in a partial differential equation PDE for the quantity or quantities of interest.