

Partial Differential Equations (PDEs) are mathematical equations that involve two or more derivatives with respect to different independent variables. Unlike ordinary differential equations, PDEs cannot be solved globally but must instead be solved locally, at each point in the domain of the equation. Examples of PDEs include the wave equation, the Laplace equation, and the heat equation. Solutions to PDEs are used to model many physical phenomena, including the flow of fluids, wave propagation, and diffusion.