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Sommario/riassunto

A powerful tool for the approximate solution of differential equations, the finite element is extensively used in industry and research. This book offers students of engineering and physics a comprehensive view of the principles involved, with numerous illustrative examples and exercises.Starting with continuum boundary value problems and the need for numerical discretization, the text examines finite difference methods, weighted residual methods in the context of continuous trial functions, and piecewise defined trial functions and the finite element method. Additional topics include higher o