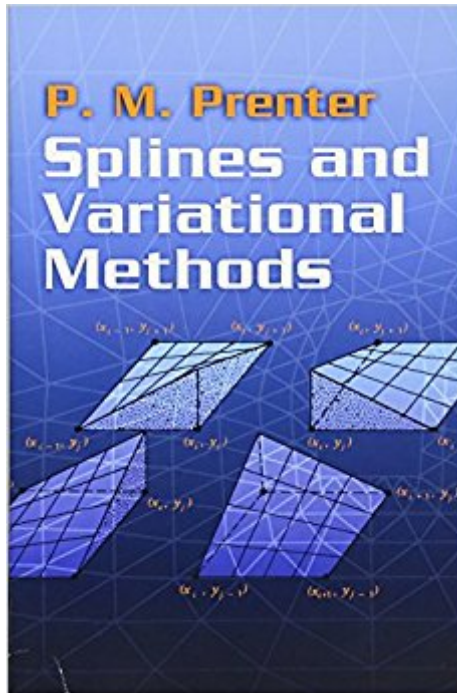




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Splines And Variational Methods (Dover Books On Mathematics)



Synopsis

One of the clearest available introductions to variational methods, this text requires only a minimal background in calculus and linear algebra. Its self-contained treatment explains the application of theoretic notions to the kinds of physical problems that engineers regularly encounter. The text's first half concerns approximation theoretic notions, exploring the theory and computation of one- and two-dimensional polynomial and other spline functions. Later chapters examine variational methods in the solution of operator equations, focusing on boundary value problems in one and two dimensions. Additional topics include least squares and other Galerkin methods. Many helpful definitions, examples, and exercises appear throughout the book. A classic reference in spline theory, this volume will benefit experts as well as students of engineering and mathematics.

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Very good engineering oriented examination of Lagrange and Hermite polynomials leading up to splines including their uses in collocation and the Rayleigh-Ritz finite element method. Includes mesh-generation for two-dimensional boundary value problems and interpolations. Too bad this author only wrote this book. Lots of examples and pictures.

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