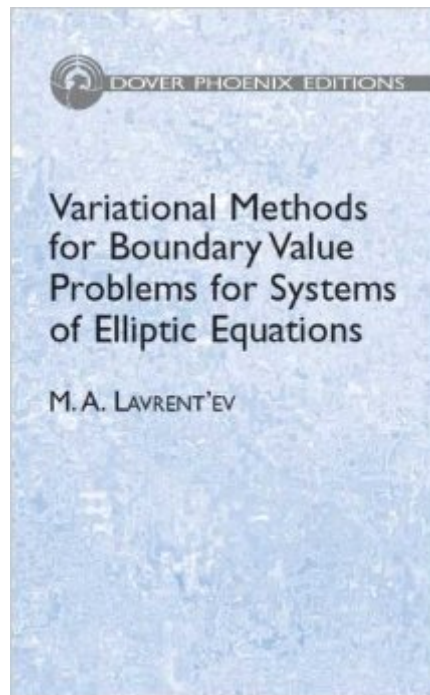# Variational Methods For Boundary Value Problems: For Systems Of Elliptic Equations (Phoenix Edition)

Synopsis

In this famous work, a distinguished Russian mathematical scholar presents an innovative approach to classical boundary value problems â " one that may be used by mathematicians as well as by theoreticians in mechanics. The approach is based on a number of geometric properties of conformal and quasi-conformal mappings. It employs the general basic scheme for the solution of variational problems first suggested by Hilbert and developed by Tonnelli. The method lies on the boundary between the classical methods of analysis, with their concrete estimates and approximate formulae, and the methods of the theory of functions of a real variable with their special character and general theoretical quantitative aspects.The first two chapters cover variational principles of the theory of conformal mapping and behavior of a conformal transformation on the boundary. Succeeding chapters address hydrodynamic applications and quasi-conformal mappings, as well as linear systems and the simplest classes of non-linear systems.Mathematicians will find the method of the proof of the existence and uniqueness theorem of special interest. Theoreticians in mechanics will consider the approximate formulae for conformal and quasi-conformal mappings highly useful in solving many concrete problems of the mechanics of continuous media. This classic work is also a valuable resource for researchers in the fields of mathematics and physics.

Book Information

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Customer Reviews

What can I say? This book is just the cream of the crop when it comes to boundry value problems

for elipictic equations! No other books even come close! The diagram on the cover is just one of MANY that delve deep into the oasis of info-tainment that is the world of elliptic equations and allow you to visualize the many subtly intriging nuances and fiendishly clever intricicies of the subject! I've read many, many books on variational methods for boundry value problems for systems of elliptic equations, even the now famous "Variational Methods for Boundary Value Problems for Systems of Elliptic Equations And You: A Exploration of How the Exciting World of Variational Methods for Boundary Value Problems for Systems of Elliptic Equations Affects Your Every Day Life" By Dr. Ben Suerhamahuerastedt and it can't even come close to the level of intelec-fun-ual content in this super-tastic volume of mathimatical lore. It all brings me back to my days when I used to study Variational Methods for Boundary Value Problems for Systems of Elliptic Equations as a young lad in the snowy villas of Switzerland. This volume is simply the most info-joy-mational work in the whole spectrum of books relating to Variational Methods for Boundary Value Problems for Systems of Elliptic Equations. Top notch! Another coup in the world of mathi-pleasure-matical books by M. A. Lavrentev, Mikhail Alekseevich Lavrent'ev. A must have for every home!

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