

## Variational methods in nonlinear elasticity

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### Abstrak

In less than 100 pages, this book covers the main vector variational methods developed to solve nonlinear elasticity problems. Presenting a general framework with a tight focus, the author provides a comprehensive exposition of a technically difficult, yet rapidly developing area of modern applied mathematics. The book includes the classical existence theory as well as a brief incursion into problems where nonexistence is fundamental. It also provides self-contained, concise accounts of quasi convexity, polyconvexity, and rank-one convexity, which are used in nonlinear elasticity.

Pedregal introduces the reader to Young measures as an important tool in solving vector variational techniques. Readers are encouraged to pursue nonlinear elasticity as one of the best means to apply these techniques. Although there are other books devoted to nonlinear elasticity or variational methods, none are concerned with Young measures as a tool for proving existence results in nonlinear elasticity.

In addition, many valuable references are included to direct the reader to other important research.