



Modern Methods in the Calculus of Variations: L_p Spaces I

Fonseca, Irene

Springer New York,
2007

Monografía

This is the first of two books on methods and techniques in the calculus of variations. Contemporary arguments are used throughout the text to streamline and present in a unified way classical results, and to provide novel contributions at the forefront of the theory. This book addresses fundamental questions related to lower semicontinuity and relaxation of functionals within the unconstrained setting, mainly in L_p spaces. It prepares the ground for the second volume where the variational treatment of functionals involving fields and their derivatives will be undertaken within the framework of Sobolev spaces. This book is self-contained. All the statements are fully justified and proved, with the exception of basic results in measure theory, which may be found in any good textbook on the subject. It also contains several exercises. Therefore, it may be used both as a graduate textbook as well as a reference text for researchers in the field. Irene Fonseca is the Mellon College of Science Professor of Mathematics and is currently the Director of the Center for Nonlinear Analysis in the Department of Mathematical Sciences at Carnegie Mellon University. Her research interests lie in the areas of continuum mechanics, calculus of variations, geometric measure theory and partial differential equations. Giovanni Leoni is also a professor in the Department of Mathematical Sciences at Carnegie Mellon University. He focuses his research on calculus of variations, partial differential equations and geometric measure theory with special emphasis on applications to problems in continuum mechanics and in materials science

<https://rebiunoda.pro.baratznet.cloud:38443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMTcyMjMyNTI>

Título: Modern Methods in the Calculus of Variations: L_p Spaces [Recurso electrónico] by Irene Fonseca, Giovanni Leoni

Editorial: New York, NY Springer New York 2007

Descripción física: digital

Tipo Audiovisual: Mathematics Global analysis (Mathematics) Differential equations, partial Mathematical optimization Materials Mathematics Calculus of Variations and Optimal Control; Optimization Continuum Mechanics and Mechanics of Materials Analysis Partial Differential Equations Applications of Mathematics

Mención de serie: Springer Monographs in Mathematics 1439-7382

Documento fuente: Springer eBooks

Contenido: Preface -- Measure Theory and L_p Spaces -- Measures -- L_p spaces -- The Direct method and lower semicontinuity -- Convex analysis -- Functionals defined on L_p -- Integrands $f = f(z)$ -- Integrands $f = f(x; z)$ -- Integrands $f = f(x; u; z)$ -- Young measures -- A Appendix -- B Notes and open problems -- C Notation and List of symbols -- Index.

Restricciones de acceso: Acceso restringido a miembros de la UGR

ISBN: 9780387690063

Autores: Leoni, Giovanni

Entidades: SpringerLink (Online service)

Enlace a formato físico adicional: Printed edition 9780387357843

Punto acceso adicional serie-Título: Springer Monographs in Mathematics 1439-7382

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es