

1. Record Nr.	UNINA9910900172303321
Autore	Borsuk Mikhail
Titolo	Interface Problems for Elliptic Second-Order Equations in Non-Smooth Domains // by Mikhail Borsuk
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Birkhäuser, , 2024
ISBN	3-031-64091-8
Edizione	[2nd ed. 2024.]
Descrizione fisica	1 online resource (337 pages)
Collana	Frontiers in Mathematics, , 1660-8054
Disciplina	516.15
Soggetti	Differential equations Functional analysis Differential Equations Functional Analysis Càlcul diferencial Seccions còniques Equacions diferencials el·líptiques Paràboles El·lipsi Equacions en derivades parcials Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	- 1. Preliminaries -- 2. Eigenvalue Problem and Integro-Differential Inequalities -- 3. Best Possible Estimates of Solutions to the Interface Problem for Linear Elliptic Divergence Second Order Equations in a Conical Domain -- 4. Interface Problem for the Laplace Operator with N Different Media -- 5. Interface Problem for Weak Quasi-Linear Elliptic Equations in a Conical Domain -- 6. Interface Problem for Strong Quasi-Linear Elliptic Equations in a Conical Domain -- 7. Best Possible Estimates of Solutions to the Interface Problem for a Quasi-Linear Elliptic Divergence Second Order Equation in a Domain with a Boundary Edge -- 8. Interface Oblique Derivative Problem for Perturbed $p(x)$ -Laplacian Equation in a Bounded $n$ Dimensional Cone -- 9. Existence of Bounded Weak Solutions.

## Sommario/riassunto

The goal of this book is to investigate the behavior of weak solutions to the elliptic interface problem in a neighborhood of boundary singularities: angular and conic points or edges. This problem is considered both for linear and quasi-linear equations, which are among the less studied varieties. As a second edition of *Transmission Problems for Elliptic Second-Order Equations for Non-Smooth Domains* (Birkhäuser, 2010), this volume includes two entirely new chapters: one about the oblique derivative problems for the perturbed  $p(x)$ -Laplacian equation in a bounded  $n$ -dimensional cone, and another about the existence of bounded weak solutions. Researchers and advanced graduate students will appreciate this compact compilation of new material in the field.

---