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| Autore                  | Chipot M (Michel)   |
| Titolo                  | Elliptic Equations: An Introductory Course // by Michel Chipot  |
| Pubbl/distr/stampa      | Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2024   |
| ISBN                    | 9783031541230<br>9783031541216  |
| Edizione                | [2nd ed. 2024.]   |
| Descrizione fisica      | 1 online resource (393 pages)   |
| Collana                 | Birkhäuser Advanced Texts Basler Lehrbücher, , 2296-4894  |
| Disciplina              | 515.3533  |
| Soggetti                | Mathematical analysis<br>Analysis<br>Equacions diferencials el·líptiques<br>Equacions de Navier-Stokes<br>Espaces de Sobolev<br>Llibres electrònics   |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Nota di bibliografia    | Includes bibliographical references and index.  |
| Nota di contenuto       | Part I Basic Techniques -- Hilbert Space Techniques -- A Survey of Essential Analysis -- Weak Formulation of Elliptic Problems -- Elliptic Problems in Divergence Form -- Singular Perturbation Problems -- Problems in Large Cylinders -- Periodic Problems -- Homogenization -- Eigenvalues -- Numerical Computations -- Part II More Advanced Theory -- Nonlinear Problems -- L-estimates -- Linear Elliptic Systems -- The Stationary Navier--Stokes System -- Some More Spaces -- Regularity Theory -- p-Laplace Type Equations -- The Strong Maximum Principle -- Problems in the Whole Space -- Large Solutions -- Mountain Pass Techniques. |
| Sommario/riassunto      | The aim of this book is to introduce the reader to different topics of the theory of elliptic partial differential equations by avoiding technicalities and complicated refinements. Apart from the basic theory of equations in divergence form, it includes subjects as singular perturbations, homogenization, computations, asymptotic behavior of problems in cylinders, elliptic systems, nonlinear problems, regularity theory, Navier-Stokes systems, p-Laplace type operators, large solutions, and  |

mountain pass techniques. Just a minimum on Sobolev spaces has been introduced and work on integration on the boundary has been carefully avoided to keep the reader attention focused on the beauty and variety of these issues. The chapters are relatively independent of each other and can be read or taught separately. Numerous results presented here are original, and have not been published elsewhere. The book will be of interest to graduate students and researchers specializing in partial differential equations.

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