

1. Record Nr.	UNINA9910754097003321
Autore	DiBenedetto Emmanuele
Titolo	Partial Differential Equations [[electronic resource] /] / by Emmanuele DiBenedetto, Ugo Gianazza
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2023
ISBN	3-031-46618-7
Edizione	[3rd ed. 2023.]
Descrizione fisica	1 online resource (768 pages)
Collana	Cornerstones, , 2197-1838
Disciplina	515.35
Soggetti	Differential equations Functional analysis Difference equations Functional equations Integral equations Mathematical models Differential Equations Functional Analysis Difference and Functional Equations Integral Equations Mathematical Modeling and Industrial Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preliminaries -- Quasi-Linear Equations and the Cauchy-Kowalewski Theorem -- The Laplace Equation -- Boundary Value Problems by Double-Layer Potentials -- Integral Equations and Eigenvalue Problems -- The Heat Equation -- The Wave Equation -- Quasi-Linear Equations of First Order -- Linear Elliptic Equations with Measurable Coefficients -- Elliptic De Giorgi Classes -- Navier-Stokes Equations -- Quasi-Linear Hyperbolic First Order Systems -- Non-Linear Equations of the First Order.
Sommario/riassunto	This graduate textbook provides a self-contained introduction to the classical theory of partial differential equations (PDEs). Through its careful selection of topics and engaging tone, readers will also learn

how PDEs connect to cutting-edge research and the modeling of physical phenomena. The scope of the Third Edition greatly expands on that of the previous editions by including five new chapters covering additional PDE topics relevant for current areas of active research. This includes coverage of linear parabolic equations with measurable coefficients, parabolic DeGiorgi classes, Navier-Stokes equations, and more. The “Problems and Complements” sections have also been updated to feature new exercises, examples, and hints toward solutions, making this a timely resource for students. Partial Differential Equations: Third Edition is ideal for graduate students interested in exploring the theory of PDEs and how they connect to contemporary research. It can also serve as a useful tool for more experienced readers who are looking for a comprehensive reference.
