1.
Record Nr.	UNINA9910877699103321
Autore	O'Neil Peter V
Titolo	Beginning partial differential equations [[electronic resource] /] / Peter V. O'Neil
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2008
ISBN	1-283-30616-6
	9786613306166
	1-118-03235-7
	1-118-03060-5
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (493 p.)
Collana	Pure and applied mathematics
Classificazione	31.44
	SK 540
Disciplina	515.353
	515/.353
Soggetti	Differential equations, Partial
	Equations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Beginning Partial Differential Equations; Contents; 1 First-Order Equations; 1.1 Notation and Terminology; 1.2 The Linear First-Order Equation; 1.3 The Significance of Characteristics; 1.4 The Quasi-Linear Equation; 2 Linear Second-Order Equations; 2.1 Classification; 2.2 The Hyperbolic Canonical Form; 2.3 The Parabolic Canonical Form; 2.4 The Elliptic Canonical Form; 2.5 Some Equations of Mathematical Physics; 2.6 The Second-Order Cauchy Problem; 2.7 Characteristics and the Cauchy Problem; 2.8 Characteristics as Carriers of Discontinuities; 3 Elements of Fourier Analysis
	3.1 Why Fourier Series?3.2 The Fourier Series of a Function; 3.3 Convergence of Fourier Series; 3.4 Sine and Cosine Expansions; 3.5 The Fourier Integral; 3.6 The Fourier Transform; 3.7 Convolution; 3.8 Fourier Sine and Cosine Transforms; 4 The Wave Equation; 4.1 d'PAlembert Solution of the Cauchy Problem; 4.2 d'TAlembert's Solution as a Sum of Waves; 4.3 The Characteristic Triangle; 4.4 The Wave Equation on a Half-Line; 4.5 A Half-Line with Moving End; 4.6 A Nonhomogeneous Problem on the Real Line; 4.7 A General Problem on

| Sommario/riassunto | A rigorous, yet accessible, introduction to partial differential equations-updated in a valuable new edition Beginning Partial Differential Equations, Second Edition provides a comprehensive introduction to partial differential equations (PDEs) with a special focus on the significance of characteristics, solutions by Fourier series, integrals and transforms, properties and physical interpretations of solutions, and a transition to the modern function space approach to PDEs. With its breadth of coverage, this new edition continues to present a broad introduction to the field, while also addre |