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Titolo	An Excursion Through Partial Differential Equations [[electronic resource] /] / by Svetlin G. Georgiev
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ISBN	3-031-48784-2
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (424 pages)
Collana	Problem Books in Mathematics, , 2197-8506
Disciplina	515.35
Soggetti	Differential equations Differential Equations Equacions en derivades parcials Llibres electrònics Problemes i exercicis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- General Introduction -- First Order Partial Differential Equations -- Classifications of Second Order Partial Differential Equations -- Classifications and Canonical Forms for Linear Second Order Partial Differential Equations -- The Laplace Equation -- The Heat Equation -- The Wave Equation -- Solutions, Hints and Answers to the Exercises -- Solutions, Hints and Answers to the Problems -- Index.
Sommario/riassunto	Presenting a rich collection of exercises on partial differential equations, this textbook equips readers with 96 examples, 222 exercises, and 289 problems complete with detailed solutions or hints. It explores a broad spectrum of partial differential equations, fundamental to mathematically oriented scientific fields, from physics and engineering to differential geometry and variational calculus. Organized thoughtfully into seven chapters, the journey begins with fundamental problems in the realm of PDEs. Readers progress through first and second-order equations, wave and heat equations, and finally, the Laplace equation. The text adopts a highly readable and mathematically solid format, ensuring concepts are introduced with clarity and organization. Designed to cater to upper undergraduate and

graduate students, this book offers a comprehensive understanding of partial differential equations. Researchers and practitioners seeking to strengthen their problem-solving skills will also find this exercise collection both challenging and beneficial.

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