1. Record Nr. UNINA9910456578403321

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| Autore | Picard R. H (Rainer H.) |
| Titolo | Partial differential equations [[electronic resource] ] : a unified Hilbert space approach / / Rainer Picard, Des McGhee |
| Pubbl/distr/stampa | Berlin ; ; New York, : De Gruyter, c2011 |
| ISBN | 1-283-39993-8<br>9786613399939<br>3-11-025027-6 |
| Descrizione fisica | 1 online resource (488 p.) |
| Collana | De Gruyter expositions in mathematics, , 0938-6572 ; ; 55 |
| Altri autori (Persone) | McGheeD. F |
| Disciplina | 515/.733 |
| Soggetti | Hilbert space<br>Differential equations, Partial<br>Electronic books. |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Frontmatter -- Preface -- Contents -- Nomenclature -- Chapter 1 Elements of Hilbert Space Theory -- Chapter 2 Sobolev Lattices -- Chapter 3 Linear Partial Differential Equations with Constant Coefficients in Rn+1, n  N -- Chapter 4 Linear Evolution Equations -- Chapter 5 Some Evolution Equations of Mathematical Physics -- Chapter 6 A "Royal Road" to Initial Boundary Value Problems of Mathematical Physics -- Conclusion -- Bibliography -- Index |
| Sommario/riassunto | This book presents a systematic approach to a solution theory for linear partial differential equations developed in a Hilbert space setting based on a Sobolev lattice structure, a simple extension of the well-established notion of a chain (or scale) of Hilbert spaces. The focus on a Hilbert space setting (rather than on an apparently more general Banach space) is not a severe constraint, but rather a highly adaptable and suitable approach providing a more transparent framework for presenting the main issues in the development of a solution theory for partial differential equations. In contrast to other texts on partial differential equations, which consider either specific equation types or apply a collection of tools for solving a variety of equations, this book takes a more global point of view by focusing on the issues involved in |

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| | determining the appropriate functional analytic setting in which a solution theory can be naturally developed. Applications to many areas of mathematical physics are also presented. The book aims to be largely self-contained. Full proofs to all but the most straightforward results are provided, keeping to a minimum references to other literature for essential material. It is therefore highly suitable as a resource for graduate courses and also for researchers, who will find new results for particular evolutionary systems from mathematical physics. |

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| Record Nr. | UNINA9910357829403321 |
| Autore | Kumar Narendra |
| Titolo | Nanotechnology for Defence Applications / / by Narendra Kumar, Ambesh Dixit |
| Pubbl/distr/stampa | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019 |
| ISBN | 3-030-29880-9 |
| Edizione | [1st ed. 2019.] |
| Descrizione fisica | 1 online resource (XX, 341 p. 157 illus., 134 illus. in color.) |
| Disciplina | 620.115<br>355.8 |
| Soggetti | Nanotechnology<br>Microtechnology<br>Microelectromechanical systems<br>Security systems<br>Politics and war<br>Microsystems and MEMS<br>Security Science and Technology<br>Military and Defence Studies |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Introduction: A journey from bulk to nanostructures- a new length scale -- Nanotechnology for defence applications -- Explosive and propellants -- CBRN threats, detection & protection -- Camouflage and |

stealth -- Lightweight Armors & Platforms -- A smart soldier -- Future military needs -- Final Remarks.

Sommario/riassunto

This book examines the application of nanoscience and nanotechnology in military defence strategies. Both historical and current perspectives on military technologies are discussed. The book provides comprehensive details on current trends in the application of nanotechnology to ground, air, and naval specializations. Furthermore, nanotechnology-enabled high energy explosives and propellants, chemical, biological, radiation, and nuclear threats and their detection/protection, and camouflage and stealth for signature management of military targets in multispectral wavelength signals are analyzed. The book also covers nanotechnology-enabled armor and platforms, which may serve as lightweight and high mechanical strength options in contrast to conventional systems. Finally, the book also emphasizes future military applications of nanotechnology and its integration into ‘smart’ materials. Provides comprehensive details on trends in the application of nanotechnology to ground, air, and naval defence systems; Examines the application of nanoscience and nanotechnology in military defence strategies; Offers pathways and research avenues for development of nanotechnology and materials applications in military capacities.