Record Nr. UNINA9910139142003321 Autore Schiesser W. E. Titolo Differential equation analysis in biomedical science and engineering: partial differential equation applications with R / / William E. Schiesser Pubbl/distr/stampa Hoboken, New Jersey:,: Wiley,, 2014 ©2014 **ISBN** 1-118-70516-5 1-118-70529-7 1-118-70532-7 Descrizione fisica 1 online resource (344 p.) Disciplina 610.280285 Soggetti Biomedical engineering - Computer simulation Developmental biology - Simulation methods Chemotaxis - Data processing Differential equations 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 at the end of each chapters and index. Nota di contenuto Introduction to partial differential equation analysis chemotaxis --Pattern formation -- Belousov-Zhabotinskii reaction system --Hodgkin-Huxley and Fitzhugh-Nagumo models -- Anesthesia spatiotemporal distribution -- Influenza with vaccination and diffusion -- Drug release tracking -- Temperature distributions in cryosurgery. Sommario/riassunto Features a solid foundation of mathematical and computational tools to formulate and solve real-world PDE problems across various fields With a step-by-step approach to solving partial differential equations (PDEs), Differential Equation Analysis in Biomedical Science and Engineering: Partial Differential Equation Applications with R successfully applies computational techniques for solving real-world PDE problems that are found in a variety of fields, including chemistry, physics, biology, and physiology. The book provides readers with the

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