Record Nr. UNINA9910140288103321 Autore Schiesser W. E. Titolo Differential equation analysis in biomedical science and engineering: ordinary differential equation applications with R / / William E. Schiesser Pubbl/distr/stampa Hoboken, New Jersey:,: Wiley,, 2014 ©2014 **ISBN** 1-118-70523-8 1-118-70507-6 1-118-70539-4 Descrizione fisica 1 online resource (439 p.) Disciplina 610.280285 Soggetti Biomedical engineering - Mathematics **Biomathematics** Bioreactors - 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 ordinary differential equation analysis bioreactor dynamics -- Diabetes glucose tolerance test -- Apoptosis (programmed cell death) -- Dynamic neuron model -- Stem cell dfferentiation -- Acetylcholine neurocycle -- Tuberculosis with dfferential infectivity -- Corneal curvature -- Stiff ode integration. Sommario/riassunto Features a solid foundation of mathematical and computational tools to formulate and solve real-world ODE problems across various fields With a step-by-step approach to solving ordinary differential equations (ODEs), Differential Equation Analysis in Biomedical Science and Engineering: Ordinary Differential Equation Applications with R successfully applies computational techniques for solving realworldODE problems that are found in a variety of fields, including chemistry, physics, biology, and physiology. The book provides readers

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