

1. Record Nr.	UNINA9910465198803321
Autore	Robinson James C (James Cooper), <1969->
Titolo	An introduction to ordinary differential equations // James C. Robinson [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2004
ISBN	1-107-14689-5 1-139-63704-5 0-511-16598-6 0-511-16483-1 0-511-80120-3 0-511-56639-5 0-511-16403-3 0-521-53391-0
Descrizione fisica	1 online resource (xiv, 399 pages) : digital, PDF file(s)
Disciplina	515/.352
Soggetti	Differential equations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	First order differential equations -- Second order linear equations with constant coefficients -- Linear second order equations with variable coefficients -- Numerical methods and difference equations -- Coupled linear equations -- Coupled nonlinear equations.
Sommario/riassunto	This refreshing, introductory textbook covers both standard techniques for solving ordinary differential equations, as well as introducing students to qualitative methods such as phase-plane analysis. The presentation is concise, informal yet rigorous; it can be used either for 1-term or 1-semester courses. Topics such as Euler's method, difference equations, the dynamics of the logistic map, and the Lorenz equations, demonstrate the vitality of the subject, and provide pointers to further study. The author also encourages a graphical approach to the equations and their solutions, and to that end the book is profusely illustrated. The files to produce the figures using MATLAB are all provided in an accompanying website. Numerous worked examples provide motivation for and illustration of key ideas and show how to

make the transition from theory to practice. Exercises are also provided to test and extend understanding: solutions for these are available for teachers.
