1. Record Nr.   UNINA9911006650303321

   Autore   Beers Kenneth J

   Titolo   Numerical methods for chemical engineering : applications in Matlab /
                     / Kenneth J. Beers

   Pubbl/distr/stampa Cambridge, UK ; ; New York, : Cambridge University Press, 2007

   ISBN   9780511812194 (e-book)
                     9780521859714 (hbk.)

   Descrizione fisica 1 online resource (xi, 474 pages) : digital, PDF file(s)

   Disciplina   660.0151

   Soggetti   Chemical engineering - Mathematics
                     Chemistry, Technical

   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 (p. 461-463) and index.

   Nota di contenuto Linear algebra -- Nonlinear algebraic systems -- Matrix eigenvalue
                     analysis -- Initial value problems -- Numerical optimization --
                     Boundary value problems -- Probability theory and stochastic
                     simulation -- Bayesian statistics and parameter estimation -- Fourier
                     analysis.

   Sommario/riassunto Suitable for a first year graduate course, this textbook unites the
                     applications of numerical mathematics and scientific computing to the
                     practice of chemical engineering. Written in a pedagogic style, the book
                     describes basic linear and nonlinear algebric systems all the way
                     through to stochastic methods, Bayesian statistics and parameter
                     estimation. These subjects are developed at a level of mathematics
                     suitable for graduate engineering study without the exhaustive level of
                     the theoretical mathematical detail. The implementation of numerical
                     methods in MATLAB is integrated within each chapter and numerous
                     examples in chemical engineering are provided, with a library of
                     corresponding MATLAB programs. This book will provide the graduate
                     student with essential tools required by industry and research alike.
                     Supplementary material includes solutions to homework problems set
                     in the text, MATLAB programs and tutorial, lecture slides, and
                     complicated derivations for the more advanced reader. These are
                     available online at www.cambridge.org/9780521859714.