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| Autore                  | Vajravelu Kuppalapalle  |
| Titolo                  | Keller-box method and its application / / by Kuppalapalle Vajravelu, Kerehalli V. Prasad  |
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| Descrizione fisica      | 1 online resource (414 p.)  |
| Collana                 | De Gruyter studies in mathematical physics, , 2194-3532 ; ; volume 8  |
| Classificazione         | UF 4000   |
| Disciplina              | 530.15/5355   |
| Soggetti                | Differential equations, Nonlinear - Numerical solutions<br>Finite differences<br>Nonlinear boundary value problems<br>Fluid mechanics   |
| 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       | Basics of the finite difference approximations -- Principles of the implicit Keller-box method -- Stability and convergence of the implicit Keller-box method -- Application of the Keller-box method to boundary layer problems -- Application of the Keller-box method to fluid flow and heat transfer problems -- Application of the Keller-box method to more advanced problems.  |
| Sommario/riassunto      | Most of the problems arising in science and engineering are nonlinear. They are inherently difficult to solve. Traditional analytical approximations are valid only for weakly nonlinear problems, and often break down for problems with strong nonlinearity. This book presents the current theoretical developments and applications of the Keller-box method to nonlinear problems. The first half of the book addresses basic concepts to understand the theoretical framework for the method. In the second half of the book, the authors give a number of examples of coupled nonlinear problems that have been solved by means of the Keller-box method. The particular area of focus is on fluid flow problems governed by nonlinear equation. |

