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| Autore                  | Gottlieb Sigal   |
| Titolo                  | Strong stability preserving Runge-Kutta and multistep time discretizations // Sigal Gottlieb, David Ketcheson, Chi-Wang Shu  |
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| ISBN                    | 1-283-14832-3<br>9786613148322<br>981-4289-27-2  |
| Edizione                | [1st ed.]  |
| Descrizione fisica      | 1 online resource (189 p.)   |
| Altri autori (Persone)  | KetchesonDavid I<br>ShuChi-Wang  |
| Disciplina              | 518/.6   |
| Soggetti                | Runge-Kutta formulas<br>Differential equations - Numerical solutions<br>Stability  |
| 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       | Preface; Contents; 1. Overview: The Development of SSP Methods; 2. Strong Stability Preserving Explicit Runge-Kutta Methods; 3. The SSP Coefficient for Runge-Kutta Methods; 4. SSP Runge-Kutta Methods for Linear Constant Coefficient Problems; 5. Bounds and Barriers for SSP Runge-Kutta Methods; 6. Low Storage Optimal Explicit SSP Runge-Kutta Methods; 7. Optimal Implicit SSP Runge-Kutta Methods; 8. SSP Properties of Linear Multistep Methods; 9. SSP Properties of Multistep Multi-Stage Methods; 10. Downwinding; 11. Applications; Bibliography; Index  |
| Sommario/riassunto      | This book captures the state-of-the-art in the field of Strong Stability Preserving (SSP) time stepping methods, which have significant advantages for the time evolution of partial differential equations describing a wide range of physical phenomena. This comprehensive book describes the development of SSP methods, explains the types of problems which require the use of these methods and demonstrates the efficiency of these methods using a variety of numerical examples. Another valuable feature of this book is that it collects the most useful SSP methods, both explicit and implicit, and presen |

