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| Autore                  | Chen Shuxing  |
| Titolo                  | Analysis of singularities for partial differential equations [[electronic resource] /] / Shuxing Chen   |
| Pubbl/distr/stampa      | Singapore ; ; Hackensack, N.J., : World Scientific, c2011   |
| ISBN                    | 1-283-14451-4<br>9786613144515<br>981-4304-84-0   |
| Descrizione fisica      | 1 online resource (300 p.)  |
| Collana                 | Series in applied and computational mathematics ; ; v. 1  |
| Disciplina              | 515.353   |
| Soggetti                | Singularities (Mathematics)<br>Differential equations, Partial<br>Electronic books.   |
| 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 (p. 191-198).   |
| Nota di contenuto       | Contents; Preface; 1. Introduction to problems on singularity analysis; 2. Singularity analysis for linear equations; 3. Singularity analysis for semilinear equations; 4. Propagation of singularities for fully nonlinear equations; 5. Propagation of strong singularities for nonlinear equations; 6. Formation of shocks for quasilinear hyperbolic equations; Appendix A Brief review on parabolic differential operators; Bibliography |
| Sommario/riassunto      | The book provides a comprehensive overview on the theory on analysis of singularities for partial differential equations (PDEs). It contains a summarization of the formation, development and main results on this topic. Some of the author's discoveries and original contributions are also included, such as the propagation of singularities of solutions to nonlinear equations, singularity index and formation of shocks.            |