

| | |
|-------------------------|---|
| 1. Record Nr. | UNINA9910438153003321 |
| Autore | Sabbah Claude |
| Titolo | Introduction to stokes structures / / Claude Sabbah |
| Pubbl/distr/stampa | Berlin, : Springer, c2013 |
| ISBN | 3-642-31695-6 |
| Edizione | [1st ed. 2013.] |
| Descrizione fisica | 1 online resource (XIV, 249 p. 14 illus., 1 illus. in color.) |
| Collana | Lecture notes in mathematics, , 1617-9692 ; ; 2060 |
| Disciplina | 515/.354 |
| Soggetti | Differential equations, Linear Stokes' theorem |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Bibliographic Level Mode of Issuance: Monograph |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | ; 1. T-filtrations -- ; 2. Stokes-filtered local systems in dimension one -- ; 3. Abelianity and strictness -- ; 4. Stokes-perverse sheaves on Riemann surfaces -- ; 5. The Riemann-Hilbert correspondence for holonomic D-modules on curves -- ; 6. Applications of the Riemann-Hilbert correspondence to holonomic distributions -- ; 7. Riemann-Hilbert and Laplace on the affine line (the regular case) -- ; 8. Real blow-up spaces and moderate de Rham complexes -- ; 9. Stokes-filtered local systems along a divisor with normal crossings -- ; 10. The Riemann-Hilbert correspondence for good meromorphic connections (case of a smooth divisor) -- ; 11. Good meromorphic connections (formal theory) -- ; 12. Good meromorphic connections (analytic theory) and the Riemann-Hilbert correspondence -- ; 13. Push-forward of Stokes-filtered local systems -- ; 14. Irregular nearby cycles -- ; 15. Nearby cycles of Stokes-filtered local systems. |
| Sommario/riassunto | This research monograph provides a geometric description of holonomic differential systems in one or more variables. Stokes matrices form the extended monodromy data for a linear differential equation of one complex variable near an irregular singular point. The present volume presents the approach in terms of Stokes filtrations. For linear differential equations on a Riemann surface, it also develops the related notion of a Stokes-perverse sheaf. This point of view is generalized to holonomic systems of linear differential equations in the complex domain, and a general Riemann-Hilbert correspondence is |

proved for vector bundles with meromorphic connections on a complex manifold. Applications to the distributions solutions to such systems are also discussed, and various operations on Stokes-filtered local systems are analyzed.
