

| | |
|-------------------------|---|
| 1. Record Nr. | UNISA996466480803316 |
| Autore | Sabbah Claude |
| Titolo | Introduction to Stokes Structures [[electronic resource] /] / by Claude Sabbah |
| Pubbl/distr/stampa | Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2013 |
| 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, , 0075-8434 ; ; 2060 |
| Disciplina | 516.35 |
| Soggetti | Algebraic geometry Differential equations Approximation theory Sequences (Mathematics) Functions of complex variables Partial differential equations Algebraic Geometry Ordinary Differential Equations Approximations and Expansions Sequences, Series, Summability Several Complex Variables and Analytic Spaces Partial Differential Equations |
| 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.
