

1. Record Nr.	UNINA9910154745503321
Autore	Deligne Pierre
Titolo	Commensurabilities among Lattices in $PU(1,n)$. (AM-132), Volume 132 // G. Daniel Mostow, Pierre Deligne
Pubbl/distr/stampa	Princeton, NJ : , : Princeton University Press, , [2016] ©1994
ISBN	1-4008-8251-6
Descrizione fisica	1 online resource (196 pages) : illustrations
Collana	Annals of Mathematics Studies ; ; 313
Disciplina	515/.25
Soggetti	Hypergeometric functions Monodromy groups Lattice theory
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.
Nota di contenuto	Frontmatter -- CONTENTS -- ACKNOWLEDGMENTS -- §1. INTRODUCTION -- §2. PICARD GROUP AND COHOMOLOGY -- §3. COMPUTATIONS FOR Q AND Q^+ -- §4. LAURICELLA'S HYPERGEOMETRIC FUNCTIONS -- §5. GELFAND'S DESCRIPTION OF HYPERGEOMETRIC FUNCTIONS -- §6. STRICT EXPONENTS -- §7. CHARACTERIZATION OF HYPERGEOMETRIC-LIKE LOCAL SYSTEMS -- §8. PRELIMINARIES ON MONODROMY GROUPS -- §9. BACKGROUND HEURISTICS -- §10. SOME COMMENSURABILITY THEOREMS -- §11. ANOTHER ISOGENY -- §12. COMMENSURABILITY AND DISCRETENESS -- §13. AN EXAMPLE -- §14. ORBIFOLD -- §15. ELLIPTIC AND EUCLIDEAN 'S, REVISITED -- §16. LIVNE'S CONSTRUCTION OF LATTICES IN $PU(1,2)$ -- §17. LINE ARRANGEMENTS: QUESTIONS -- Bibliography
Sommario/riassunto	The first part of this monograph is devoted to a characterization of hypergeometric-like functions, that is, twists of hypergeometric functions in n -variables. These are treated as an $(n+1)$ dimensional vector space of multivalued locally holomorphic functions defined on the space of $n+3$ tuples of distinct points on the projective line P^1 modulo the diagonal section of $Auto P^1 = m$. For $n=1$, the characterization may be regarded as a generalization of Riemann's classical theorem characterizing hypergeometric functions by their

exponents at three singular points. This characterization permits the authors to compare monodromy groups corresponding to different parameters and to prove commensurability modulo inner automorphisms of $PU(1,n)$. The book includes an investigation of elliptic and parabolic monodromy groups, as well as hyperbolic monodromy groups. The former play a role in the proof that a surprising number of lattices in $PU(1,2)$ constructed as the fundamental groups of compact complex surfaces with constant holomorphic curvature are in fact conjugate to projective monodromy groups of hypergeometric functions. The characterization of hypergeometric-like functions by their exponents at the divisors "at infinity" permits one to prove generalizations in n -variables of the Kummer identities for $n-1$ involving quadratic and cubic changes of the variable.
