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Nota di contenuto	Frontmatter -- Contents -- Introduction -- CHAPTER 1. Results from Representation Theory -- CHAPTER 2. D.E.'s and D-modules -- CHAPTER 3. The Generalized Hypergeometric Equation -- CHAPTER 4. Detailed Analysis of the Exceptional Cases -- CHAPTER 5. Convolution of D-modules -- CHAPTER 6. Fourier Transforms of Kummer Pullbacks of Hypergeometrics -- CHAPTER 7. The - adic Theory -- CHAPTER 8. -adic Hypergeometrics -- CHAPTER 9. G2 Examples, Fourier Transforms, and Hypergeometrics -- CHAPTER 10. -adic Exceptional Cases -- CHAPTER 11. Reductive Tannakian Categories -- CHAPTER 12. Fourier Universality -- CHAPTER 13. Stratifications and Convolution -- CHAPTER 14. The Fundamental Comparison Theorems -- References
Sommario/riassunto	This book is concerned with two areas of mathematics, at first sight disjoint, and with some of the analogies and interactions between them. These areas are the theory of linear differential equations in one complex variable with polynomial coefficients, and the theory of one parameter families of exponential sums over finite fields. After reviewing some results from representation theory, the book discusses results about differential equations and their differential galois groups (G) and one-parameter families of exponential sums and their geometric monodromy groups (G). The final part of the book is devoted to comparison theorems relating G and G of suitably "corresponding" situations, which provide a systematic explanation of the remarkable

"coincidences" found "by hand" in the hypergeometric case.
