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Nota di contenuto	Front matter -- Preface -- Contents -- Chapter 1. Krichever-Novikov algebras: basic definitions and structure theory -- Chapter 2. Fermion representations and Sugawara construction -- Chapter 3. Projective flat connections on the moduli space of punctured Riemann surfaces and the Knizhnik-Zamolodchikov equation -- Chapter 4. Lax operator algebras -- Chapter 5. Lax equations with a spectral parameter on Riemann surfaces, and their hierarchies -- Chapter 6. Lax integrable systems and conformal field theory -- Bibliography -- Notation -- Index
Sommario/riassunto	This monograph is an introduction into a new and fast developing field on the crossroads of infinite-dimensional Lie algebra theory and contemporary mathematical physics. It contains a self-consistent presentation of the theory of Krichever-Novikov algebras, Lax operator algebras, their interaction, representation theory, relations to moduli spaces of Riemann surfaces and holomorphic vector bundles on them, to Lax integrable systems, and conformal field theory. For beginners, the book provides a short way to join in the investigations in these fields. For experts, it sums up the recent advances in the theory of almost graded infinite-dimensional Lie algebras and their applications. The book may serve as a base for semester lecture courses on finite-

dimensional integrable systems, conformal field theory, almost graded Lie algebras. Majority of results are presented for the first time in the form of monograph.