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Nota di contenuto	On generalized cluster categories / Claire Amiot -- Module categories for finite group algebras / David J. Benson, Srikanth B. Iyengar, Henning Krause -- On cluster theory and quantum dilogarithm identities / Bernhard Keller -- Quantum loop algebras, quiver varieties, and cluster algebras / Bernard Leclerc -- Weighted projective lines and applications / Helmut Lenzing -- Cohomology of block algebras of finite groups / Markus Linckelmann -- Algebras with separating Auslander-Reiten components / Piotr Malicki, Andrzej Skowronski -- Classification problems in noncommutative algebraic geometry and representation theory / Izuru Mori -- Periodicities in cluster algebras and dilogarithm identities / Tomoki Nakanishi -- The Tits forms of tame algebras and their roots / Jose Antonio Pena, Andrzej Skowronski -- The minimal representation-infinite algebras which are special biserial / Claus Michael Ringel -- Coalgebras of tame comodule type, comodule categories, and a tame-wild dichotomy problem / Daniel Simson -- Singularities of orbit closures in module varieties / Grzegorz Zwara.
Sommario/riassunto	This book is concerned with recent trends in the representation theory of algebras and its exciting interaction with geometry, topology, commutative algebra, Lie algebras, combinatorics, quantum algebras, and theoretical physics. The collection of articles, written by leading researchers in the field, is conceived as a sort of handbook providing easy access to the present state of knowledge and stimulating further

development. The topics under discussion include quivers, quivers with potential, bound quiver algebras, Jacobian algebras, cluster algebras and categories, Calabi-Yau algebras and categories, triangulated and derived categories, quantum loop algebras, Nakajima quiver varieties, Yang-Baxter equations, T-systems and Y-systems, dilogarithm and quantum dilogarithm identities, stable module categories, localizing and colocalizing subcategories, cohomologies of groups, support varieties, fusion systems, Hochschild cohomologies, weighted projective lines, coherent sheaves, Kleinian and Fuchsian singularities, stable categories of vector bundles, nilpotent operators, Artin-Schelter regular algebras, Fano algebras, deformations of algebras, module varieties, degenerations of modules, singularities of orbit closures, coalgebras and comodules, representation types of algebras and coalgebras, Tits and Euler forms of algebras, Galois coverings of algebras, tilting and cluster tilting theory, algebras of small homological dimensions, Auslander-Reiten theory. The book consists of thirteen self-contained expository survey and research articles and is addressed to researchers and graduate students in algebra as well as a broader mathematical community. They contain a large number of examples and open problems and give new perspectives for research in the field.

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