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Nota di contenuto	Finite dimensional Hecke algebras / Susumu Ariki -- Semi-invariants of quivers and their zero sets / Grzegorz Bobinski, Christine Riedtmann, Andrzej Skowronski -- Maximal Cohen-Macaulay modules over surface singularities / Igor Burban, Yuriy Drozd -- Rank varieties / Jon F. Carlson -- Periodic algebras / Karin Erdmann, Andrzej Skowronski -- Preprojective algebras and cluster algebras / Christof Geiss, Bernard Leclerc, Jan Schroer -- Symplectic reflection algebras / Iain G. Gordon -- Auslander-Reiten theory revisited / Osamu Iyama -- Calabi-Yau categories and Poincare duality / Peter Jørgensen -- Representation types of algebras from the model theory point of view / Stanisaw Kasjan -- Calabi-Yau triangulated categories / Bernhard Keller -- A panorama of diagram algebras / Steffen Koenig -- Spectral analysis of finite dimensional algebras and singularities / Helmut Lenzing, Luz de Teresa -- Moduli of representations of quivers / Markus Reineke -- Selfinjective algebras of quasitilted type / Andrzej Skowronski, Kunio Yamagata.
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, quantum groups, homological algebra, invariant theory, combinatorics, model theory 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 diagram algebras, Brauer algebras, cellular algebras, quasi-hereditary algebras, Hall algebras, Hecke algebras, symplectic reflection algebras, Cherednik algebras, Kashiwara crystals, Fock spaces, preprojective algebras, cluster algebras, rank varieties, varieties of algebras and modules, moduli of representations of quivers, semi-invariants of quivers, Cohen-Macaulay modules, singularities, coherent sheaves, derived categories, spectral representation theory, Coxeter polynomials, Auslander-Reiten theory, Calabi-Yau triangulated categories, Poincaré duality spaces, selfinjective algebras, periodic algebras, stable module categories, Hochschild cohomologies, deformations of algebras, Galois coverings of algebras, tilting theory, algebras of small homological dimensions, representation types of algebras, model theory. The book consists of fifteen self-contained expository survey articles and is addressed to researchers and graduate students in algebra as well as a broader mathematical community. They contain a large number of open problems and give new perspectives for research in the field.

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