1.	Record Nr.	UNINA9910300144203321
	Titolo	Conformal field theories and tensor categories : proceedings of a workshop held at Beijing International Center for Mathematical Research / / Chengming Bai [and five others], editors
	Pubbl/distr/stampa	Heidelberg, Germany : , : Springer, , 2014
	ISBN	3-642-39383-7
	Edizione	[1st ed. 2014.]
	Descrizione fisica	1 online resource (ix, 279 pages) : illustrations (some color)
	Collana	Mathematical Lectures from Peking University, , 2197-4209
	Disciplina	285
	Soggetti	Calculus of tensors Quantum groups Conformal geometry
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	"ISSN: 2197-4209."
	Nota di bibliografia	Includes bibliographical references.
	Nota di contenuto	From Hopf algebras to tensor categories -- Pattern-of-zeros approach to Fractional quantum Hall states and a classification of symmetric polynomial of infinite variables -- Virasoro central changes for Nichols algebras -- Logarithmic bulk and boundary conformal field theory and the full centre construction -- Logarithmic tensor category theory for generalized modules for a conformal vertex algebra, I: Introduction and strongly graded algebras and their generalized modules -- C2-cofinite w-algebras and their logarithmic representations -- C1-co_niteness and fusion products of vertex operator algebras.
	Sommario/riassunto	The present volume is a collection of seven papers that are either based on the talks presented at the workshop "Conformal field theories and tensor categories" held June 13 to June 17, 2011 at the Beijing International Center for Mathematical Research, Peking University, or are extensions of the material presented in the talks at the workshop. These papers present new developments beyond rational conformal field theories and modular tensor categories and new applications in mathematics and physics. The topics covered include tensor categories from representation categories of Hopf algebras, applications of conformal field theories and tensor categories to topological phases and gapped systems, logarithmic conformal field theories and the

corresponding non-semisimple tensor categories, and new developments in the representation theory of vertex operator algebras. Some of the papers contain detailed introductory material that is helpful for graduate students and researchers looking for an introduction to these research directions. The papers also discuss exciting recent developments in the area of conformal field theories, tensor categories and their applications and will be extremely useful for researchers working in these areas.