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Autore	Abramovich Dan
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Altri autori (Persone)	ühbis-KrügerAnne TemkinMichael WodarczykJarosaw
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Nota di contenuto	A Computational View on Hironaka's Resolution of Singularities -- Stacks for Everyone Who Cares About Varieties and Singularities -- Introduction to Logarithmic Geometry -- Birational Geometry Using Weighted Blowing Up -- Relative and Logarithmic Resolution of Singularities -- Weighted Resolution of Singularities. A Rees Algebra Approach -- New Techniques in Resolution of Singularities: Open Problems.
Sommario/riassunto	Resolution of singularities is notorious as a difficult topic within algebraic geometry. Recent work, aiming at resolution of families and semistable reduction, infused the subject with logarithmic geometry and algebraic stacks, two techniques essential for the current theory of moduli spaces. As a byproduct a short, a simple and efficient functorial resolution procedure in characteristic 0 using just algebraic stacks was produced. The goals of the book, the result of an Oberwolfach Seminar, are to introduce readers to explicit techniques of resolution of singularities with access to computer implementations, introduce readers to the theories of algebraic stacks and logarithmic structures, and to resolution in families and semistable reduction methods.