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Titolo	Complexity of Constraints [[electronic resource]] : An Overview of Current Research Themes / / edited by Nadia Creignou, Phokion G. Kolaitis, Heribert Vollmer
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Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 5250
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Soggetti	Computer programming Algorithms Artificial intelligence—Data processing Computer science—Mathematics Discrete mathematics Artificial intelligence Computer graphics Programming Techniques Data Science Discrete Mathematics in Computer Science Artificial Intelligence Computer Graphics
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Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Boolean Constraint Satisfaction Problems: When Does Post's Lattice Help? -- Basics of Galois Connections -- Recent Results on the Algebraic Approach to the CSP -- Dualities for Constraint Satisfaction Problems -- A Logical Approach to Constraint Satisfaction -- Uniform Constraint Satisfaction Problems and Database Theory -- Constraint Satisfaction Problems with Infinite Templates -- Partial Polymorphisms and Constraint Satisfaction Problems -- to the Maximum Solution Problem -- Present and Future of Practical SAT Solving.
Sommario/riassunto	Nowadays constraint satisfaction problems (CSPs) are ubiquitous in

many different areas of computer science, from artificial intelligence and database systems to circuit design, network optimization, and theory of programming languages. Consequently, it is important to analyze and pinpoint the computational complexity of certain algorithmic tasks related to constraint satisfaction. The complexity-theoretic results of these tasks may have a direct impact on, for instance, the design and processing of database query languages, or strategies in data-mining, or the design and implementation of planners. This state-of-the-art survey contains the papers that were invited by the organizers after conclusion of an International Dagstuhl-Seminar on Complexity of Constraints, held in Dagstuhl Castle, Germany, in October 2006. A number of speakers were solicited to write surveys presenting the state of the art in their area of expertise. These contributions were peer-reviewed by experts in the field and revised before they were collated to the 9 papers of this volume. In addition, the volume contains a reprint of a survey by Kolaitis and Vardi on the logical approach to constraint satisfaction that first appeared in 'Finite Model Theory and its Applications', published by Springer in 2007.
