

1. Record Nr.	UNISA996466051403316
Autore	Bistarelli Stefano
Titolo	Semirings for Soft Constraint Solving and Programming [[electronic resource] /] / by Stefano Bistarelli
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2004
ISBN	1-280-30701-3 9786610307012 3-540-25925-2
Edizione	[1st ed. 2004.]
Descrizione fisica	1 online resource (XII, 284 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2962
Disciplina	005.1/1
Soggetti	Algebra Programming languages (Electronic computers) Computer programming Software engineering Computer logic Artificial intelligence Programming Languages, Compilers, Interpreters Programming Techniques Software Engineering Logics and Meanings of Programs Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	1. Introduction -- 2. Soft Constraint Satisfaction Problems -- 3. Towards SCSPs Solutions -- 4. SCSP Abstraction -- 5. Higher Order Semiring-Based Constraints -- 6. Soft CLP -- 7. SCLP and Generalized Shortest Path Problems -- 8. Soft Concurrent Constraint Programming -- 9. Interchangeability in Soft CSPs -- 10. SCSPs for Modelling Attacks to Security Protocols -- 11. Conclusions and Directions for Future Work.
Sommario/riassunto	Constraint satisfaction and constraint programming have shown to be very simple but powerful ideas, with applications in various areas. Still,

in the last ten years, the simple notion of constraints has shown some deficiencies concerning both theory and practice, typically in the way over-constrained problems and preferences are treated. For this reason, the notion of soft constraints has been introduced with semiring-based soft constraints and valued constraints being the two main general frameworks. This book includes formal definitions and properties of semiring-based soft constraints, as well as their use within constraint logic programming and concurrent constraint programming. Moreover, the author shows how to adapt existing notions and techniques such as abstraction and interchangeability to the soft constraint framework and it is demonstrated how soft constraints can be used in some application areas, such as security. Overall, this book is a great starting point for anyone interested in understanding the basics of semiring-based soft constraints.
