

1. Record Nr.	UNINA9910484303303321
Titolo	Formal Concept Analysis : 8th International Conference, ICFCA 2010, Agadir, Morocco, March 15-18, 2010, Proceedings // edited by Léonard Kwuida, Baris Sertkaya
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2010
ISBN	1-280-38579-0 9786613563712 3-642-11928-X
Edizione	[1st ed. 2010.]
Descrizione fisica	1 online resource (XII, 340 p. 91 illus.)
Collana	Lecture Notes in Artificial Intelligence, , 2945-9141 ; ; 5986
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Disciplina	512
Soggetti	Algebra Artificial intelligence Mathematical models Data mining Machine theory Computer science - Mathematics Discrete mathematics Artificial Intelligence Mathematical Modeling and Industrial Mathematics Data Mining and Knowledge Discovery Formal Languages and Automata Theory Discrete Mathematics in Computer Science
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 and index.
Nota di contenuto	Invited Talks -- About the Enumeration Algorithms of Closed Sets -- Mathematics Presenting, Reflecting, Judging -- The Role of Concept, Context, and Component for Dependable Software Development -- Statistical Methods for Data Mining and Knowledge Discovery -- Regular Contributions -- Formal Concept Analysis of Two-Dimensional Convex Continuum Structures -- Counting of Moore Families for n=7

-- Lattice Drawings and Morphisms -- Approximations in Concept Lattices -- Hardness of Enumerating Pseudo-intents in the Lattice Order -- On Links between Concept Lattices and Related Complexity Problems -- An Algorithm for Extracting Rare Concepts with Concise Intents -- Conditional Functional Dependencies: An FCA Point of View -- Constrained Closed Datacubes -- Conceptual Navigation in RDF Graphs with SPARQL-Like Queries -- An Approach to Exploring Description Logic Knowledge Bases -- On Categorical Grammars as Logical Information Systems -- Describing Role Models in Terms of Formal Concept Analysis -- Approaches to the Selection of Relevant Concepts in the Case of Noisy Data -- Concept Analysis as a Framework for Mining Functional Features from Legacy Code -- Concept Neighbourhoods in Lexical Databases -- A Survey of Hybrid Representations of Concept Lattices in Conceptual Knowledge Processing -- History -- Two Basic Algorithms in Concept Analysis.

## Sommario/riassunto

This volume contains selected papers presented at ICFCA 2010, the 8th International Conference on Formal Concept Analysis. The ICFCA conference series aims to be the prime forum for dissemination of advances in applied lattice and order theory, and in particular advances in theory and applications of Formal Concept Analysis. Formal Concept Analysis (FCA) is a field of applied mathematics with its mathematical root in order theory, in particular the theory of complete lattices. Researchers had long been aware of the fact that these fields have many potential applications. FCA emerged in the 1980s from the effort to restructure lattice theory to promote better communication between lattice theorists and potential users of lattice theory. The key theme was the mathematical formalization of concept and conceptual hierarchy. Since then, the field has developed into a growing research area in its own right with a thriving theoretical community and an increasing number of applications in data and knowledge processing including data visualization, information retrieval, machine learning, software engineering, data analysis, data mining in Web 2.0, analysis of social networks, concept graphs, contextual logic and description logics. ICFCA 2010 took place during March 15–18, 2010 in Agadir, Morocco. We received 37 high-quality submissions out of which 17 were chosen as regular papers in these proceedings after a competitive selection process. Less mature works that were still considered valuable for discussion at the conference were collected in the supplementary proceedings. The papers in the present volume cover advances in various aspects of FCA ranging from its theoretical foundations to its applications in numerous other fields. In addition to the regular papers, this volume also contains four keynote papers arising from the seven invited talks given at the conference. We are also delighted to include a reprint of Bernhard Ganter's seminal paper on his well-known algorithm for enumerating closed sets.