Record Nr. UNISA996466282903316 Formal Concept Analysis [[electronic resource]]: 15th International **Titolo** Conference, ICFCA 2019, Frankfurt, Germany, June 25-28, 2019, Proceedings / / edited by Diana Cristea, Florence Le Ber, Baris Sertkaya Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2019 **ISBN** 3-030-21462-1 Edizione [1st ed. 2019.] 1 online resource (XIII, 349 p. 560 illus., 33 illus. in color.) Descrizione fisica Lecture Notes in Artificial Intelligence;; 11511 Collana Disciplina 004.0151 Soggetti Artificial intelligence Database management Data mining Mathematical logic Application software Numerical analysis Artificial Intelligence **Database Management** Data Mining and Knowledge Discovery Mathematical Logic and Formal Languages Computer Appl. in Administrative Data Processing **Numeric Computing** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Invited papers -- Elements about Hybrid, Exploratory, and Explainable Nota di contenuto Knowledge Discovery -- Too Much Information: Can Al Cope With Modern Knowledge Graphs -- Learning Implications from Data and from Queries -- Concepts in Application Context -- Theory -- Direct and Binary Direct Bases for One-set Updates of a Closure System --Dualization in lattices given by implicational bases -- Properties of

Finite Lattices -- Joining Implications in Formal Contexts and Inductive Learning in a Horn Description Logic -- Methods and Applications -- On-demand Relational Concept Analysis -- Mining Formal Concepts

using Implications between Items -- Effects of Input Data Formalisation in Relational Concept Analysis for a Data Model with a Ternary Relation -- Parallelization of the GreConD Algorithm for Boolean Matrix Factorization -- Simultaneous, polynomial-time layout of Context Bigraph and Lattice Digraph -- Using Redescriptions and Formal Concept Analysis for Mining Definitions in Linked Data -- Enhanced FCA -- A Formal Context for Closures of Acyclic Hypergraphs -- Concept lattices as a search space for graph compression -- A relational extension of Galois Connections -- Short Papers -- Sampling Representation Contexts with Attribute Exploration -- Discovering Implicational Knowledge in Wikidata -- A characterization theorem for continuous lattices by closure spaces -- On Coupling FCA and MDL in Pattern Mining -- A Study of Boolean Matrix Factorization Under Supervised Settings.

## Sommario/riassunto

This book constitutes the proceedings of the 15th International Conference on Formal Concept Analysis, ICFCA 2019, held in Frankfurt am Main, Germany, in June 2019. The 15 full papers and 5 short papers presented in this volume were carefully reviewed and selected from 36 submissions. The book also contains four invited contributions in full paper length. The field of Formal Concept Analysis (FCA) originated in the 1980s in Darmstadt as a subfield of mathematical order theory, with prior developments in other research groups. Its original motivation was to consider complete lattices as lattices of concepts, drawing motivation from philosophy and mathematics alike. FCA has since then developed into a wide research area with applications much beyond its original motivation, for example in logic, data mining, learning, and psychology.