

1. Record Nr.	UNINA990000890430403321
Autore	Nonlinear functional analysis and applications : 1970
Titolo	Nonlinear functional analysis and applications : proceedings of an advanced seminar conducted by the mathematics research center, the University of Wisconsin, Madison, October 12-14, 1970 / edited by Louis B. Rall
Pubbl/distr/stampa	New York : Academic press, 1971
Descrizione fisica	p.520 : ill. ; cm 20
Disciplina	515.7248
Locazione	IINTC MA1 FINBN
Collocazione	03 M.0,143 202-E-7 02 23 d 14
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr.	UNINA9910784824003321
Autore	Jablan Slavik V
Titolo	LinKnot [[electronic resource]] : knot theory by computer / / Slavik Jablan, Radmila Sazdanovic
Pubbl/distr/stampa	Hackensack, NJ, : World Scientific, c2007
ISBN	1-281-91198-4 9786611911980 981-277-224-3
Descrizione fisica	1 online resource (500 p.)
Collana	K & E series on knots and everything ; ; 21
Altri autori (Persone)	SazdanovicRadmila
Disciplina	514.2242
Soggetti	Knot theory - Data processing Link theory - Data processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 459-474) and index.
Nota di contenuto	Contents; Preface; 1. Notation of Knots and Links; 1.1 Basic graph theory; 1.2 Shadows of KLs; 1.2.1 Gauss and Dowker code; 1.3 KL diagrams; 1.4 Reidemeister moves; 1.5 Conway notation; 1.6 Classification of KLs; 1.7 LinKnot functions and KL notation; 1.8 Rational world and KL invariants; 1.8.1 Chirality of rational KLs; 1.9 Unlinking number and unlinking gap; 1.10 Prime and composite KLs; 1.11 Non-invertible KLs; 1.11.1 Tangle types; 1.11.2 Non-invertible pretzel knots; 1.11.3 Non-invertible arborescent knots; 1.11.4 Non-invertible polyhedral knots; 1.12 Reduction of R-tangles 1.12.1 KLs with unlinking number one1.13 Braids; 1.13.1 KLs and braids; 1.14 Braid family representatives; 1.14.1 Applications of minimum braids and braid family representatives; 1.15 More KL invariants; 1.16 Borromean links; 2. Recognition and Generation of Knots and Links; 2.1 Recognition of KLs; 2.1.1 Group of KL; 2.2 Polynomial invariants; 2.3 Vassiliev invariants; 2.4 Experimenting with KLs; 2.5 Derivation and classification of KLs; 2.6 Basic polyhedra and polyhedral KLs; 2.7 Basic polyhedra and non-algebraic tangles; 2.7.1 Generalized tangles; 2.7.2 n-tangles and basic polyhedra 2.7.3 Non-algebraic tangle compositions and component algebra2.8 KL tables; 2.8.1 Non-alternating and almost alternating KLs; 2.9 Projections of KLs and chirality; 2.10 Families of undetectable KLs;

2.10.1 Detecting chirality of KLs by polynomial invariants; 2.11 A dream- new KL tables; 3. History of Knot Theory and Applications of Knots and Links; 3.1 History of knot theory; 3.2 Mirror curves; 3.2.1 Tamil threshold designs; 3.2.2 Tchokwe sand drawings; 3.2.3 Construction of mirror curves; 3.2.4 Enumeration of mirror curves; 3.2.5 Lunda designs; 3.2.6 Polyominoes 3.2.6.1 Lunda polyominoes and Lunda animals 3.2.7 KLs and mirror curves; 3.2.8 Mirror curves on different surfaces; 3.2.9 Mirror curves in art; 3.2.10 KLs and self-avoiding curves; 3.3 KLs and fullerenes; 3.3.1 General fullerenes, graphs, symmetry and isomers; 3.3.2 5/6 fullerenes; 3.3.3 Knot theory and fullerenes; 3.3.4 Nanotubes, conical and biconical fullerenes and their symmetry; 3.3.5 Fullerenes on other surfaces; 3.4 KLs and logic; 3.5 Waveforms; 3.6 Knot automata; Bibliography; Index

Sommario/riassunto

$\text{LinKnot - Knot Theory by Computer}$ provides a unique view of selected topics in knot theory suitable for students, research mathematicians, and readers with backgrounds in other exact sciences, including chemistry, molecular biology and physics. The book covers basic notions in knot theory, as well as new methods for handling open problems such as unknotting number, braid family representatives, invertibility, amphicheirality, undetectability, non-algebraic tangles, polyhedral links, and (2,2)-moves. Hands-on computations using *Mathematica* or the *webMathematica* package <
