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Nota di contenuto	Frontmatter -- CONTENTS -- PREFACE -- I. INTRODUCTION -- II. LINKING NUMBERS AND REIDEMEISTER MOVES -- III. THE CONWAY POLYNOMIAL -- IV. EXAMPLE S AND SKEIN THEORY -- V. DETECTING SLICES AND RIBBONS- A FIRST PASS -- VI. MISCELLANY -- VII. SPANNING SURFACES AND THE SEIFERT PAIRING -- VIII. RIBBONS AND SLICES -- IX. THE ALEXANDER POLYNOMIAL AND BRANCHED COVERINGS -- X. THE ALEXANDER POLYNOMIAL AND THE ARF INVARIANT -- XI. FREE DIFFERENTIAL CALCULUS -- XII. CYCLIC BRANCHED COVERINGS -- XIII. SIGNATURE THEOREMS -- XIV. G-SIGNATURE THEOREM FOR FOUR MANIFOLDS -- XV. SIGNATURE OF CYCLIC BRANCHED COVERINGS -- XVI. AN INVARIANT FOR COVERINGS -- XVII. SLICE KNOTS -- XVIII. CALCULATING $r$ FOR GENERALIZED STEVEDORE'S KNOT -- XIX. SINGULARITIES, KNOTS AND BRIESKORN VARIETIES -- APPENDIX. GENERALIZED POLYNOMIALS AND A STATE MODEL FOR THE JONES POLYNOMIAL -- KNOT TABLES AND THE L-POLYNOMIAL -- REFERENCES
Sommario/riassunto	On Knots is a journey through the theory of knots, starting from the simplest combinatorial ideas--ideas arising from the representation of weaving patterns. From this beginning, topological invariants are constructed directly: first linking numbers, then the Conway polynomial and skein theory. This paves the way for later discussion of the recently discovered Jones and generalized polynomials. The central chapter, Chapter Six, is a miscellany of topics and recreations. Here the reader

will find the quaternions and the belt trick, a devilish rope trick, Alhambra mosaics, Fibonacci trees, the topology of DNA, and the author's geometric interpretation of the generalized Jones Polynomial. Then come branched covering spaces, the Alexander polynomial, signature theorems, the work of Casson and Gordon on slice knots, and a chapter on knots and algebraic singularities. The book concludes with an appendix about generalized polynomials.

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