

Zeitschrift: Helvetica Physica Acta
Band: 69 (1996)
Heft: 1

Buchbesprechung: A survey on knot theory [A. Kawauchi]

Autor: [s.n.]

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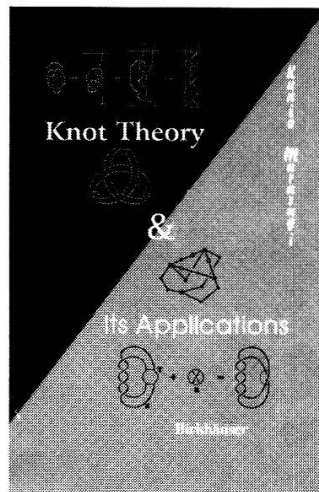
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A Survey on Knot Theory

1996. Approx. 440 pages. Hardcover
Approx. DM 128.-/öS 934.40/sFr. 108.-
ISBN 3-7643-5124-1



Knot theory is a rapidly developing field of research with many applications not only for mathematics. The present volume, written by a well-known specialist, gives a complete survey of knot theory from its very beginnings to today's most recent research results. The topics include Alexander poly-

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With its appendix containing many useful tables and an extended list of references with over 3,500 entries it is an indispensable book for everyone concerned with knot theory.

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Knot Theory and Its Applications

Translated by Bohdan Kurpita

1996. Approx. 341 pages. Hardcover
DM 118.- / öS 861.40 / sFr. 98.-
ISBN 3-7643-3817-2

Knot theory is a concept in algebraic topology that has found applications to a variety of mathematical problems as well as in computer science, biological and medical research, and mathematical physics. This book is directed to a broad audience of research workers and beginning graduate students in these fields. It contains most of the fundamental classical facts about the theory, such as knot diagrams, braid representations, Seifert surfaces, tangles, and Alexander polynomials, as well as more recent developments and special topics such as chord diagrams and covering spaces.

It is an introduction to the fascinating study of knots and provides insight into recent applications to such studies as DNA research and graph theory. The author clearly outlines what is known and what is not known about knots. He has been careful to avoid advanced mathematical terminology and intricate techniques in algebraic topology or group theory. Numerous diagrams and exercises interconnect material from different areas. Developments over the past ten years are described, in particular the study of Jones polynomials and the Vassiliev invariants.

