CAMBRIDGE

Schur Algebras and Representation Theory

S. MARTIN

Dr Martin covers the basic ideas of classical Schur algebras and their quantum analogues. He also takes the opportunity to investigate the relationship between Schur algebras and other algebraic structures. This book is the only comprehensive and up-to-date treatment of Schur algebras and their quantum analogues.

£30.00 net   HB   0 521 41591 8   248 pp.   1994
Cambridge Tracts in Mathematics 112

The Banach-Tarski Paradox

STAN WAGON

Asserting that a solid ball may be taken apart into many pieces that can be rearranged to form a ball twice as large as the original, the Banach-Tarski paradox is examined in relationship to measure and group theory, geometry and logic.

'… this beautiful book is written with care and is certainly worth reading.'

Mathematical Reviews

'… a readable and stimulating book.'

American Scientist

£15.95 net   PB   0 521 45704 1   253 pp.   1993

Designs and their Codes

E. F. ASSMUS JR. and J. D. KEY

This is a self-contained and up-to-date account of the applications of algebraic coding theory to the study of combinatorial designs. Whilst the book is aimed at mathematicians working in either coding theory or combinatorics, it is designed to be used by non-specialists and so is of value to graduate students or computer scientists working in those areas.

£17.95 net   PB   0 521 45839 0   362 pp.   1994
Cambridge Tracts in Mathematics 103

Numbers and Functions

Steps into Analysis

R. P. BURN

The novel approach to rigorous analysis offered here is designed to enable students to grow in confidence and skill and thus overcome their traditional difficulties. Teachers in sixth forms will find that the beginning questions in every chapter provide ways of preparing those at school for university mathematics. Lecturers in universities will be challenged to rethink their conventions about the best way to introduce the central ideas of analysis to undergraduates.

£14.95 net   PB   0 521 45773 4   352 pp.   1993

Local Representation Theory

Modular Representations as an Introduction to the Local Representation Theory of Finite Groups

J. L. ALPERIN

'… a beautifully written book. Anyone wishing to learn the fundamental facts of Brauer's theory of blocks cannot do better than to begin his study with this text.'

Bulletin of the London Mathematical Society

£14.95 net   PB   0 521 44926 X   192 pp.   1993
Cambridge Studies in Advanced Mathematics 11

Computational Algebraic Geometry and Commutative Algebra

Cortona 1991

Edited by D. EISENBUD and L. ROBBIANO

Includes the most interesting trends and developments in the field, as well as an introduction to the theory of Gröbner bases and their use in computation. Of interest to mathematicians, and to computer scientists interested in symbolic computation.

£29.95 net   HB   0 521 44218 4   308 pp.   1993
Symposia Mathematica 34

Now in paperback

Finite Group Theory

M. ASCHBACHER

The foundations of the theory of finite groups are developed in this book. Unifying themes include the Classification Theorem and the classical linear groups. Lie theory appears in chapters on Coxeter groups, root systems, buildings and Tits systems. There is a new proof of the Solvable Signalizer Functor theorem and a brief outline of the proof of the Classification Theorem itself.

£16.95 net PB   0 521 45826 9   288 pp.   1994
Cambridge Studies in Advanced Mathematics 10

Now in paperback

Some Random Series of Functions

Second Edition

J-P. KAHANE

Kahane's book is more like a ramble through the countryside. At every mile one is rewarded with a singing waterfall or an old farmhouse, and at virtually every step with a new wayside flower.'
Proceedings of the Edinburgh Mathemetical Society
£19.95 net PB   0 521 45602 9   316 pp.   1993
Cambridge Studies in Advanced Mathematics 5

Elementary Probability

D. STIRZAKER

Elementary Probability provides a simple introduction to the theory of probability. This text contains numerous worked examples and exercises necessary for problem solving, as well as demonstrates the concepts involved. The topics covered illustrate the range and power of probability, and include conditional probability, independence, random variables, generating functions, and an introduction to Markov chains.

£45.00 net HB   0 521 42028 8   416 pp.   1994
£15.95 net PB   0 521 42183 7

ORDER FORM

To order please send this form to Tom Peacock at the address below, 'phone 0223 325970 or fax 0223 315052.

Qty	Author	ISBN	Price
		Total	

☐ I enclose a sterling cheque/eurocheque
(payable to Cambridge University Press)

☐ Please debit my credit card (Access/Mastercard/
VISA/Amex)*   *Please delete as applicable

Card no. _____

Expiry Date _____

Signature _____

Name of cardholder _____

Address _____

_____

_____

CAMBRIDGE
UNIVERSITY PRESS

FREEPOST, The Edinburgh Building,
Shaftesbury Rd., Cambridge CB2 1BR
E-mail: SCIENCE@CUP.CAM.AC.UK

CAMBRIDGE

Introduction to HOL
A Theorem-Proving Environment for Higher-Order Logic
Edited by MIKE GORDON and T. F. MELHAM

This book provides a coherent and self-contained introduction to HOL. It succeeds in extracting and compressing from various sources most of the material that is needed for day-to-day work with the system.
£27.95 net   Spiral Bound   0 521 44189 7   496 pp.   1993

Logic Programming
Operational Semantics and Proof Theory
J. ANDREWS

Dr Andrews here provides a homogeneous treatment of the semantics of both theoretical and practical logic programming languages. Researchers interested in logic programming or semantics, as well as artificial intelligence search strategies will want to consult this book as the only source for some essential and new ideas in the area.
£25.00 net   HB   0 521 43219 7   116 pp.   1992
Distinguished Dissertations in Computer Science 4

Deduction and Declarative Programming
P. PADAWITZ

Here Dr Padawitz emphasises verification based on logical inference rules, i.e. deduction (in contrast to model-theoretic approaches, deductive methods can be automated). His unique treatment captures the actual styles and applications of programming; neither too general with respect to the underlying logic nor too restrictive for the practice of programming.
£27.95 net   HB   0 521 41723 6   288 pp.   1992
Cambridge Tracts in Theoretical Computer Science 28

Boolean Function Complexity
Edited by M. S. PATERSON

The papers in this book stem from the London Mathematical Society Symposium held at Durham University. The range of topics covered will be of interest to the newcomer to the field as well as the expert, and overall the papers are representative of the research presented at the Symposium.
£22.95 net   PB   0 521 40826 1   216 pp.   1992
London Mathematical Society Lecture Note Series 169

Lectures on Parallel Computation
Edited by A. GIBBONS and P. SPIRAKIS

The foundations of parallel computation are the concern of this book. Distinguished international researchers have contributed fifteen chapters which together form a coherent stream taking the reader who has little prior knowledge of the field to a position of being familiar with leading edge issues. The book may also function as a source of teaching material or reference for researchers.
£25.00 net   HB   0 521 41556 X   448 pp.   1993
Cambridge International Series on Parallel Computation

Information Dispersal and Parallel Computation
Y-D. LYUU

In 1989, Michael Rabin proposed a fundamentally new approach to the problems of fault-tolerant routing and memory management in parallel computation, based on the idea of information dispersal. Yuh-Dauh Lyuu develops this idea in a number of new and exciting ways in this extended and updated printing of this PhD thesis.
£22.95 net   HB   0 521 43226 X   200 pp.   1993
Cambridge International Series on Parallel Computation

Specification and Proof in Real Time CSP
JIM DAVIES

The research contained here represents the very latest work on the specification and verification of real-time systems.
£27.95 net   HB   0 521 45055 1   196 pp.   1993
Distinguished Dissertations in Computer Science 6

An Introduction to Functional Programming Systems Using Haskell
ANTONY J. T. DAVIE

This book serves as an introduction both to functional programming and Haskell. An especially valuable feature are the chapters on programming and implementation, along with large numbers of exercises.
£42.50 net   HB   0 521 25830 8   308 pp.   1992
£14.95 net   PB   0 521 27724 8
Cambridge Computer Science Texts 27

To order or get further information 'phone Tom Peacock on 0223 325782, fax 0223 315052, E mail TW10002@PHX.CAM.AC.UK, or write to the address below.

CAMBRIDGE
UNIVERSITY PRESS
The Edinburgh Building, Cambridge CB2 2RU

INSTRUCTIONS TO AUTHORS

1 Submission of typescripts

Two copies of the manuscript should be submitted to one of the four Executive Editors (addresses on outside front cover). The editor will acknowledge receipt of the manuscripts. **It is important that authors inform the editor of any changes of address** whilst their paper is under consideration.

2 Typescript

Papers should be typed, double-spaced, on one side only and with generous margins. The pages must be numbered.

The first page should give the title, the author's name and institution, and a short abstract intelligible to mathematicians.

The title, while brief, must be informative (e.g. *A new proof of the ergodic theorem*, whereas *Some applications of a theorem of Birkhoff* would be useless).

3 Notation

It is important that mathematicians expressions are clear to a printer (who is not a mathematician). For instance, n_k (n sub k) is common usage, but avoid if possible using c sub n sub k. Fractions are generally best expressed by a solidus. Complicated exponents like

$$\exp \{z^2 \sin \theta/(1 + y^2)\}$$

should be shown in this and no other way.

In the typescript, italics, small capitals and capitals are specified by single, double and triple underlining. Bold-faced types is shown by wavy underlining.

It helps if displayed equations or statements which will be quoted later are numbered in order on the right of their line. They can then be referred to by, for example, 'from (7)'.

The author must enable the printer (if necessary by pencilled notes in the margin) to distinguish between similar symbols such as o, O, o, O, 0; x, X, ×; ϕ, Φ, $\varnothing$; l, 1; ε, $\in$; κ, k.

There is no need to underline Greek or script letters provided these are clearly typed. Any special symbols should be explained on a separate sheet of directions for the printer.

If an author wishes to mark the end of the proof of a theorem, the sign □ may be used.

Footnotes should be avoided.

4 Diagrams

Figures and drawings should be on separate sheets in black ink. Photocopies are acceptable only if they are as clear as the originals. *Symbols, legends and captions should be given on a transparent overlay.* Each text figure must be numbered as Figure 1, Figure 2, ... and its intended position clearly indicated in the typescript. The author's name in pencil must be on all separate sheets of diagrams.

A figure is expensive to reproduce and should be included only when the subject matter demands it, or when it greatly clarifies the exposition.

The publisher recognizes that some authors do not have the facilities for producing drawings of a sufficiently high standard to be reproduced directly and is therefore willing to have such diagrams redrawn, provided that they are clear.

5 Tables

Tables should be numbered (above the table) and set out on separate sheets. Indicate the position of each in the text as for figures.

6 References

References should be collected at the end of the paper numbered in alphabetical order of the author's names. A reference to a book should give the title, in italics, and then in roman type the publisher's name and the place and year of publication;

[4] N. Dunford & J. T. Schwartz *Linear Operators* Part I. Wiley: New York, 1958.

A reference to a paper should give in italics the title of the periodical, the number of the volume and year, and the beginning and end pages of the paper. Titles should be abbreviated as in *Mathematical Reviews*:

[6] J. E. Littlewood. The 'pits effect' for functions in the unit circle. *J. Analyse Math.* **23** (1970), 236–268.

7 Proofs

Authors receive one set of proofs for correction. If excessive alterations to the original manuscript are requested after the paper has been typeset, the author will be charged the cost of resetting. For papers with more than one author the proofs are sent to the first named author unless the editor receives other instructions. **It is important that proofs are corrected and returned promptly**.

8 Reprints

There are 100 reprints, free of charge, for each paper. For papers with several authors these reprints are divided between the authors. There are no page charges.

Ergodic theory and dynamical systems

CONTENTS

Printed in Great Britain