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MATHEMATICS OF COMPUTATION

AMERICAN MATHEMATICAL SOCIETY

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ISSN 0025-5718

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This journal publishes research articles in computational mathematics. Areas covered include numerical analysis, the application of computational methods, algorithms for advanced computer architectures, computational number theory and algebra, and related fields. Table errata and reviews of books in areas related to computational mathematics are also included.

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INDEX TO VOLUME 62

INDEX TO VOLUME 62

INDEX TO VOLUME 62

VOLUME 62 1994

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10 9 8 7 6 5 4 3 2 1 99 98 97 96 95 94

MATHEMATICS OF COMPUTATION
CONTENTS

Vol. 62, No. 205 **January 1994**

Vol. 62, No. 206 **April 1994**

Editorial Information

As of February 3, 1994, the backlog for this journal was approximately 1 issue. This estimate is the result of dividing the number of manuscripts for this journal in the Providence office that have not yet gone to the printer on the above date by the average number of articles per issue over the previous twelve months, reduced by the number of issues published in six months (the time necessary for editing and composing a typical issue).

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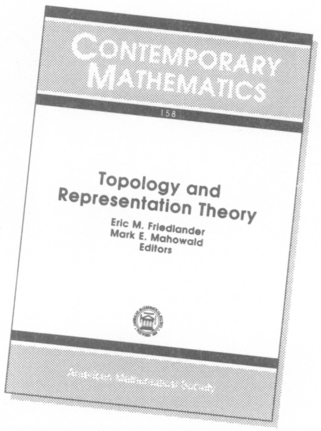

During 1991–1992, Northwestern University conducted a special emphasis on the topic "The Connections between Topology and Representation Theory". The year's activities culminated in a conference in May 1992. This volume contains the papers presented at the conference which were designed to introduce current trends to graduate students and nonspecialists familiar with algebraic topology.

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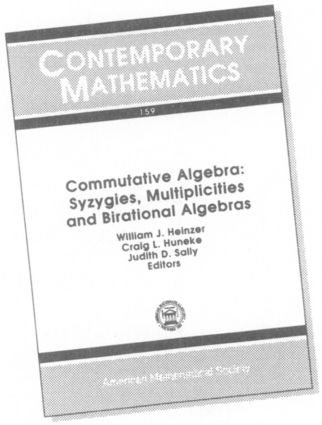

This volume contains refereed papers on themes explored at the AMS-IMS-SIAM Summer Research Conference held at Mount Holyoke College in 1992. The major themes of the conference were tight closure Hilbert functions, birational algebra, free resolutions and the homological conjectures, Rees algebras, and local cohomology.

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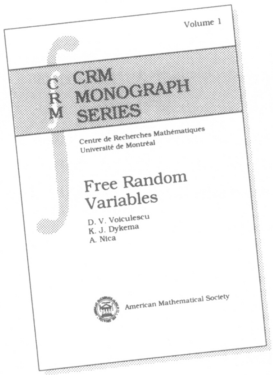

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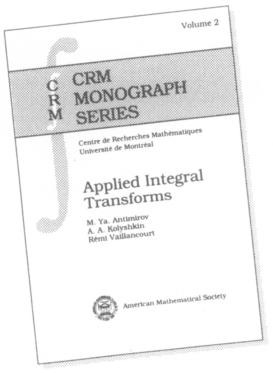

Volume 2

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M. Ya. Antimirov, A. A. Kolyshkin, and Rémi Vaillancourt

The first section of this book, which proceeds mainly by examples and includes exercises, requires little mathematical background and can be considered an introduction to the subject of integral transforms. In the second part of the book, the method of integral transforms is used to solve modern applied problems in convective stability, temperature fields in oil strata, and eddy current testing. The choice of topics reflects the authors' research experience and involvement in industrial applications.

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Michael J. Enos, *Editor*

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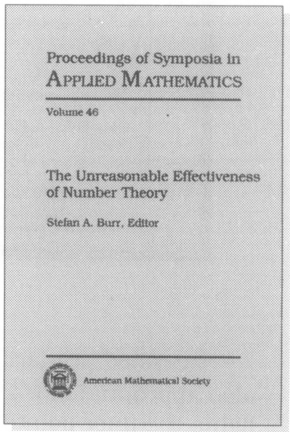
Stefan A. Burr, *Editor*



This book is based on the AMS Short Course, "The Unreasonable Effectiveness of Number Theory", held in Orono, Maine, in August 1991. This short course provided some views into the great breadth of applications of number theory outside cryptology and highlighted the power and applicability of number theoretic ideas. This book will appeal to a general mathematical audience and researchers in other areas of science and engineering who wish to learn how number theory is being applied outside of mathematics. All of the chapters are written by leading specialists in number theory and provide excellent introductions to various applications.

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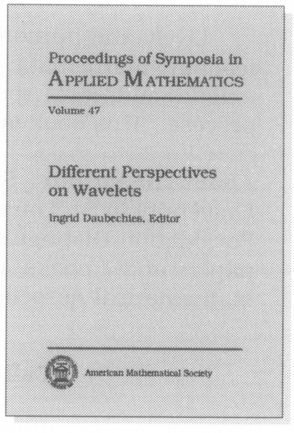
Different Perspectives on Wavelets

Ingrid Daubechies, *Editor*



The wavelet transform can be seen as a synthesis of ideas that have emerged since the 1960s in mathematics, physics, and electrical engineering. The papers in this book attempt to give some theoretical and technical shape to this intuitive picture of wavelets and their uses. The papers collected here were prepared for an AMS Short Course on Wavelets and Applications, held at the Joint Mathematics Meetings in San Antonio in January 1993.

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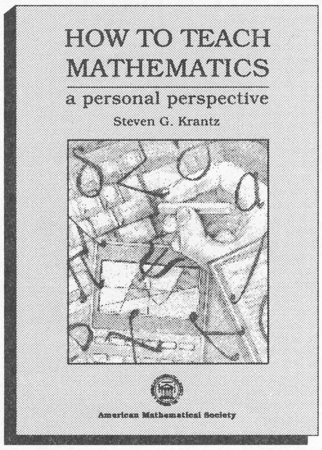

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a personal perspective

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About the author: Stephen G. Krantz is currently a Professor at Washington University in St. Louis, Missouri. Professor Krantz was awarded the UCLA Alumni Foundation Distinguished Teaching Award in 1979, has authored 80 scholarly papers and 7 books, was awarded the Chauvenet Prize for expository writing by the Mathematical Association of America, and is an internationally recognized scholar.

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CONTENTS

Vol. 62, No. 206 **April 1994**

(*Continued on inside back cover*)

0025-5718(199404)62:206;1-M