

Springer Series in Information Sciences

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Volume 7

M. R. Schroeder

Number Theory in Science and Communication

With Applications in Cryptography, Physics, Digital Information, Computing, and Self-Similarity

2nd enlarged edition 1986. 81 figures.

XIX, 374 pages.

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The subject of this book is the application of number theory to practical problems in physics, digital information processing, computing, cryptography, acoustics, crystallography (quasicrystals), fractals and self-similarity. The purpose of the book is to widen the horizon of readers with a minimum of mathematical training to the basic facts of number theory. The topic is treated informally, stressing intuition rather than formal proofs.

The most important and surprising feature of the book is that there are so many applications of a field which is traditionally considered rather abstract. The benefit that the reader can expect to derive from the book is a deep appreciation of the usefulness of finite mathematics and its multi-faceted interactions with the real world.

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Volume 14

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Volume 17

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with Real-Time Applications

1987. 18 figures. XV, 191 pages.

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8663/5/14

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Printers
Printed in Germany

E. Lückermann, M. Stresow, Heidelberger Platz 3, D-1000 Berlin 33
Telephone: (030) 8207-0, Telex 01-85411
Berlin Heidelberg New York Tokyo
Brühlsche Universitätsdruckerei, Gießen
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