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2011–2012

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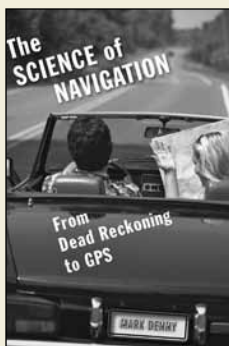
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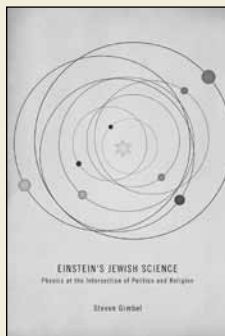
THE SCIENCE OF NAVIGATION

From Dead Reckoning to GPS

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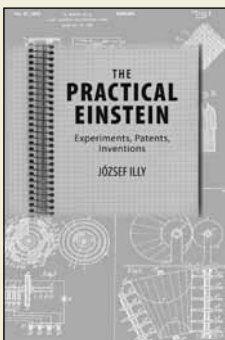
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Physics at the Intersection of Politics and Religion

Steven Gimbel

“A fascinating engagement with the nature of Judaism and of science.”
—Rabbi Michael Lerner

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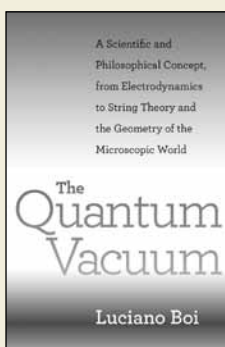
THE PRACTICAL EINSTEIN

Experiments, Patents, Inventions

József Illy

Albert Einstein may be best known as the wire-haired whacky physicist who gave us the theory of relativity, but that's just one facet of this genius's contribution to human knowledge and modern science. As Illy expertly shows in this book, Einstein had an eminently practical side as well.

2012 216 pp., 66 halftones, 6 line drawings
978-1-4214-0457-8 \$60.00 hardcover



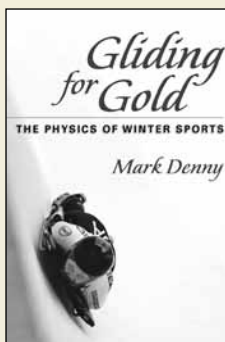
THE QUANTUM VACUUM

A Scientific and Philosophical Concept, from Electrodynamics to String Theory and the Geometry of the Microscopic World

Luciano Boi

Acclaimed mathematical physicist and natural philosopher Boi expounds the quantum vacuum, exploring the meaning of nothingness and its relationship with physical reality.

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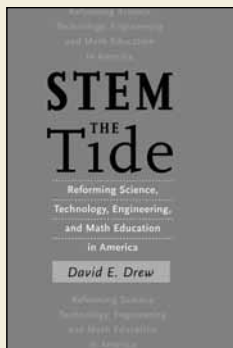
GLIDING FOR GOLD

The Physics of Winter Sports

Mark Denny

As anyone from cold climates knows, living with lots of ice and snow can lead to a special appreciation of sports such as skiing, sledding, and skating. Prolific physics popularizer Denny's take on winter athletics lays out the physical principles that govern glaciated game play.

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978-1-4214-0215-4 \$30.00 paperback



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Reforming Science, Technology, Engineering, and Math Education in America

David E. Drew

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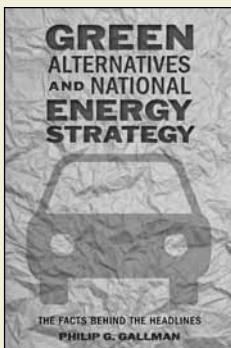
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The Story of Motion and the Limits to Knowledge

Thomas Grissom

How do students learn about physics without picking up a 1,000-page textbook chock-full of complicated equations? *The Physicist's World* is the answer. Grissom explains clearly and succinctly what physics really is: the science of understanding how everything in the universe moves.

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THE AHA! MOMENT

A Scientist's Take on Creativity

David Jones

This book is about having ideas and—a much longer haul—making them work. David Jones, best known for his *Daedalus* column, tells many stories about creators and their creations, including his own fantastical-seeming contributions to mainstream science.

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978-1-4214-0331-1 \$25.00 paperback

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A Trip into the Heart of Matter

second edition

Ray Mackintosh, Jim Al-Khalili,
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—*Sesame*

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INVENTING IRON MAN

The Possibility of a Human Machine

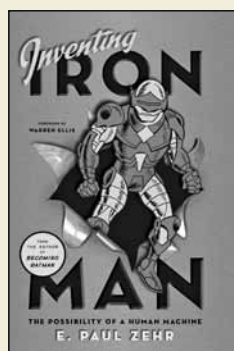
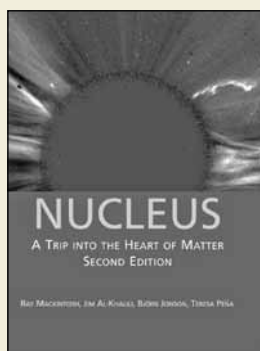
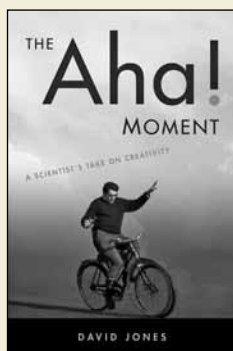
E. Paul Zehr

foreword by Warren Ellis

“Zehr, surely one of the coolest of professors, has done something interesting, enlightening, and maybe just a bit quixotic; he has built a bridge between the fantasy science of superhero comics and the eyes-front innovations of real-life technological innovators.”

—Dennis O'Neil, Iron Man writer and editor

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A Concise Guide

John M. Charap

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2011 184 pp., 3 halftones, 9 line drawings
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THEIR ARROWS
WILL DARKEN
THE SUN
The Evolution and
Science of Ballistics
MARK DENNY

THEIR ARROWS WILL DARKEN THE SUN

The Evolution and Science of Ballistics

Mark Denny

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CHUCK EDMONDSON

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Paul J. Nahin

with a new preface

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—Don Lincoln, author of
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FIZZICCS

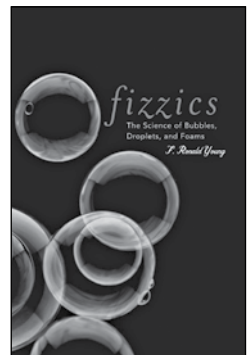
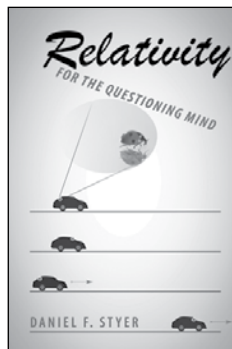
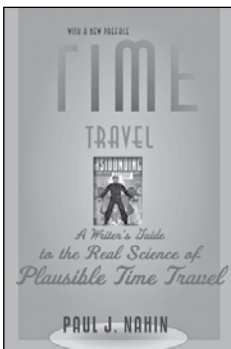
The Science of Bubbles, Droplets, and Foams

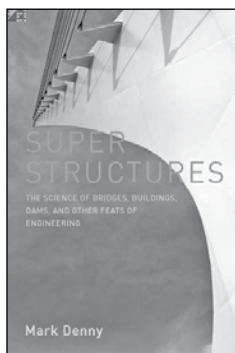
F. Ronald Young

Bubbles are everywhere—in water and in air, made from soap and from gas. They are referenced in literature and sung about in songs, and they're even the subject of great works of art. With easy-to-understand explanations, detailed illustrations, and entertaining anecdotes, Young reveals the *Fizziccs* behind these familiar—yet surprising—objects.

2011 136 pp.
10 color photos, 42 halftones, 22 line drawings
978-0-8018-9892-1 **\$25.00** paperback

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Mark Denny

“The author’s goal in writing this book is ‘to explain, with technical accuracy but minimal math, why our large engineering structures . . . are built the way they are.’ Denny, a theoretical physicist and author of numerous works facilitating an understanding of science concepts . . . does an excellent job with that.” —*Choice*

2010 280 pp., 74 halftones, 59 line drawings
978-0-8018-9437-4 **\$30.00** paperback

FROTH!

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Mark Denny

Best Beer Book in the United States of America, Gourmand World Cookbooks Awards

“A scientific yet extremely accessible investigation of the physics and chemistry of beer.”

—*Beers of the World Magazine*

2009 200 pp., 58 halftones, 11 line drawings
978-0-8018-9132-8 **\$25.95** hardcover

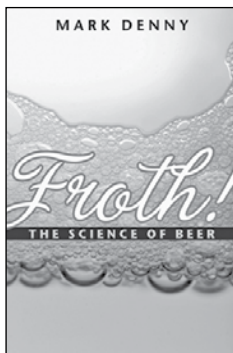
QUANTIFY!

A Crash Course in Smart Thinking

Göran Grimvall

“A wonderful read for everyone, emphasizing how scientists and engineers tend to think about examples from daily life that are expressed by numbers.” —*Choice*

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Richard P. McCall

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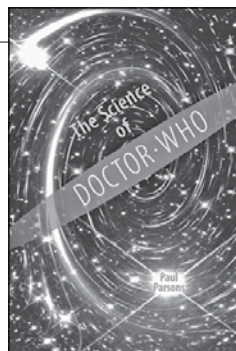
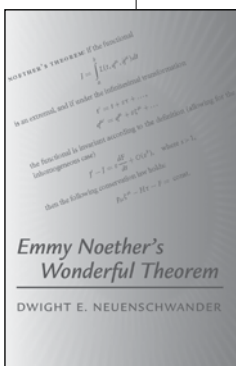
THE SCIENCE OF DOCTOR WHO

Paul Parsons

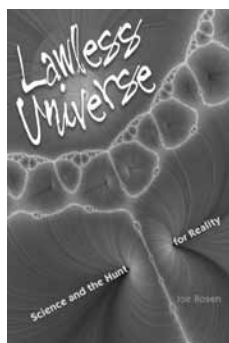
“This exploration of the long-running TV series delivers on its promise to answer the kinds of questions raised by the best of science fiction.”

—*Science News*

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Joe Rosen

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—*GW Magazine/GW Today*

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Ouija, Firewalking, and Other Gibberish

Henri Broch

foreword by Georges Charpak
translated by Bart K. Holland

From horoscopes to telekinesis to the Shroud of Turin, much of what is popularly accepted as a mystical or paranormal phenomenon is, in fact, bunk. Broch's charged deconstruction of these and other acts reveals the hucksterism of pseudoscience.

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978-0-8018-9246-2 **\$26.95** hardcover

GOLD MEDAL PHYSICS

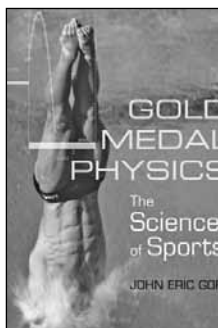
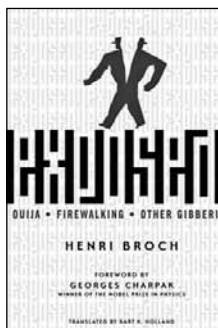
The Science of Sports

John Eric Goff

“Sports fans with a knowledge of geometry and trigonometry will enjoy Goff's cheerful revisiting of memorable athletic events.”

—*Publishers Weekly*

2009 232 pp.
36 b&w photos, 34 b&w illustrations
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Barry Parker

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Don Lincoln

foreword by Leon Lederman

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An Illustrated Guide to Newton's Laws

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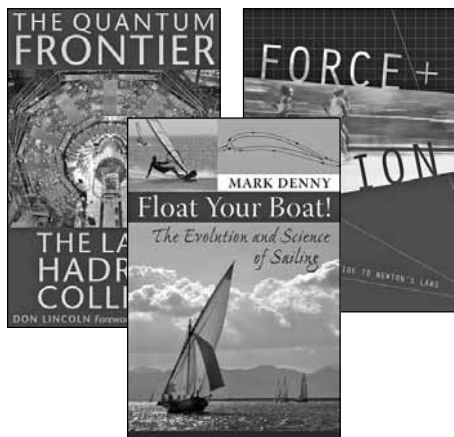
The Evolution and Science of Sailing

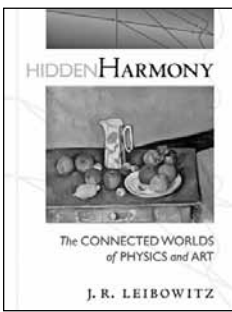
Mark Denny

“A light-hearted yet informative look at the physics of sailing ships . . . Clearly, the connections between physics and sailing run deep; as Denny points out, even Einstein was an avid weekend sailor.”

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Colin Smith

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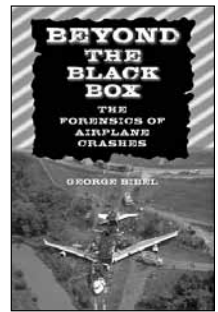
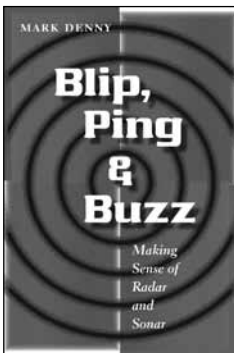
The Forensics of Airplane Crashes

George Bibel

“Offering insights into how aviation accident investigations are conducted, Bibel addresses the causes of such accidents, from in-flight breakup to metal fatigue and combustion, and the lessons learned.”

—*Library Journal*

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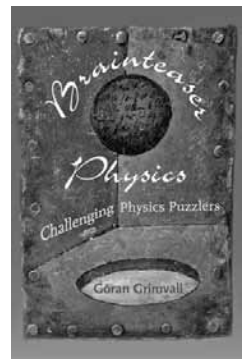
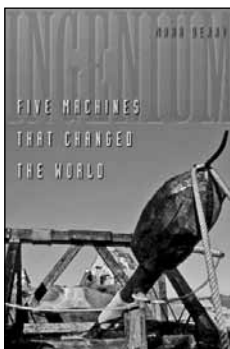
Challenging Physics Puzzlers

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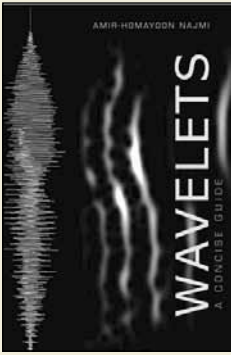
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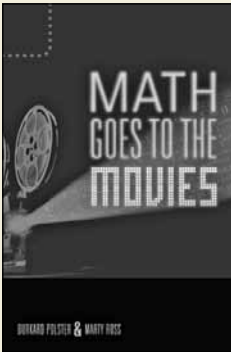
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A Concise Guide

Amir-Homayoon Najmi

Introduced nearly three decades ago as a variable resolution alternative to the Fourier transform, a wavelet is a short oscillatory waveform for analysis of transients. Najmi's introduction to wavelet theory explains this mathematical concept clearly and succinctly.

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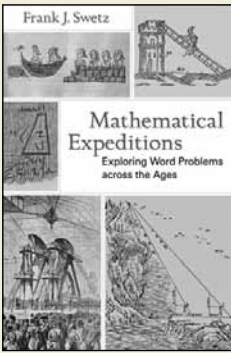
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Exploring Word Problems across the Ages

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UNBIASED STEREOLOGY

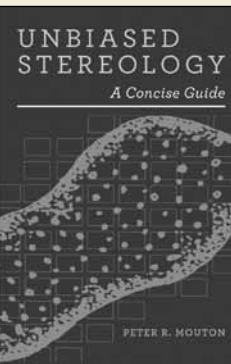
A Concise Guide

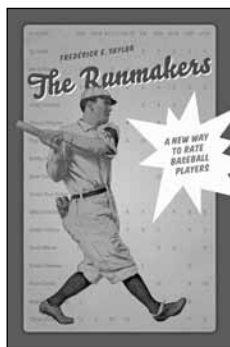
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—Arun M. Gokhale, Georgia Institute of Technology

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A New Way to Rate Baseball Players

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second edition

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“A charming, well-written, useful book. The conversational tone, the comparisons with everyday concepts and familiar objects, and the very gradual, simple, straightforward development of all topics will reassure those with a fear of math.”

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REGRESSION ESTIMATORS

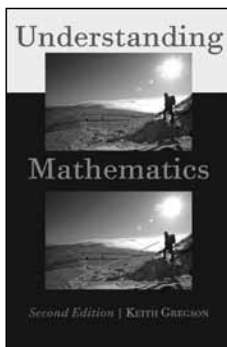
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In this updated and expanded edition of his 1990 treatise on the subject, Gruber presents, compares, and contrasts the development and properties of ridge-type estimators from both Bayesian and frequentist points of view.

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Fuzhen Zhang

Outstanding Academic Title, Choice Magazine

This fully updated and revised text defines linear algebra’s main terms, explains its key theorems, and provides over 425 example problems ranging from the elementary to some that may baffle even the most seasoned mathematicians.

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978-0-8018-9126-7 **\$28.00** paperback

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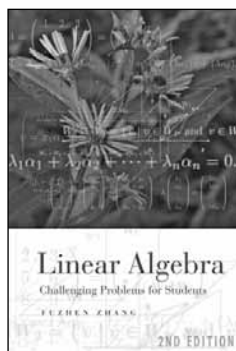
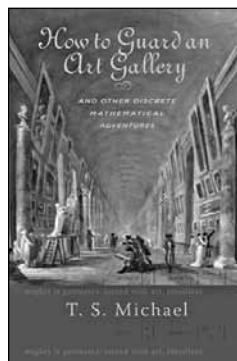
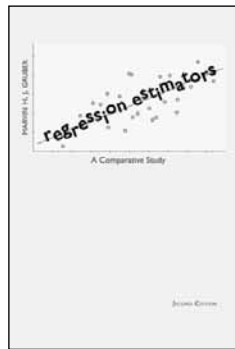
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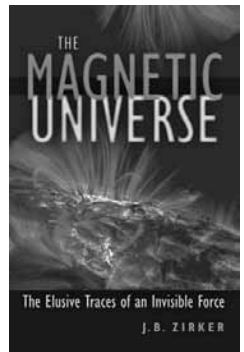
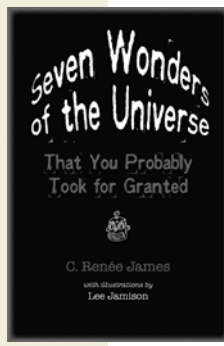
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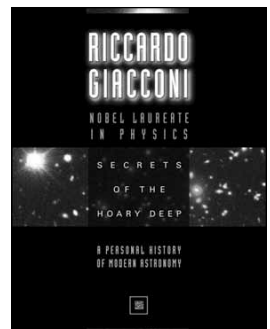
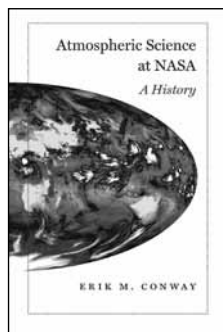
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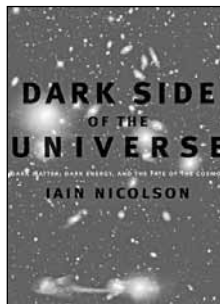
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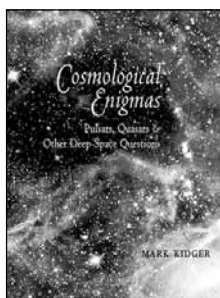


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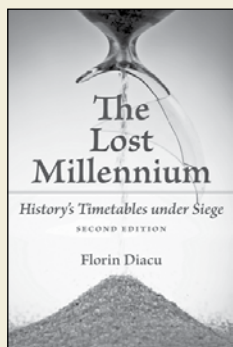
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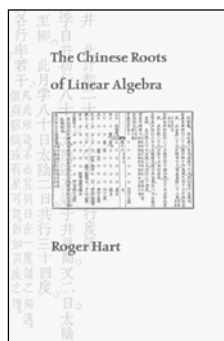
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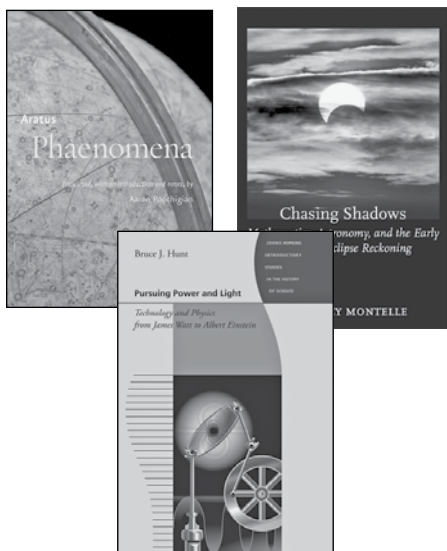
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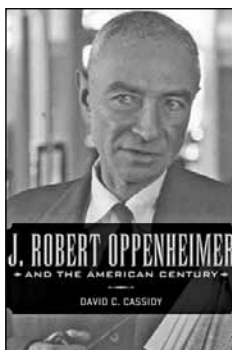
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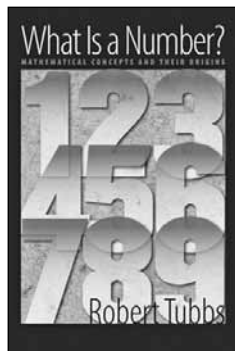
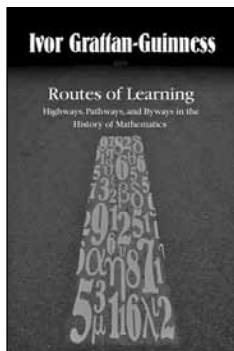
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