

NEW IN PAPERBACK

Ludwig Boltzmann*The Man Who Trusted Atoms*

Carlo Cercignani,
Politecnico di Milano
Roger Penrose, University
of Oxford, UK

'...all will feel rewarded in making the acquaintance through Cercignani's work, of Boltzmann's scientific ideas. Most highly recommended to anyone who claims to be interested in the history of science,

and is looking forward to seeking an understanding of Boltzmann and his work in the context of his times. The book is amazingly good value for a paperback version.'

Current Engineering Practice, 48 05-06/\$6

'It is valuable, not only for the wealth and scope of information it provides, but for offering an up-to-date view, accessible to all, of the posterity of Boltzmann's scientific ideas.'

Studies in History and Philosophy of Modern Physics

The book presents the life and personality, the scientific and philosophical work of Ludwig Boltzmann. His tragic life ending with his suicide is described in detail. A substantial part of the book is devoted to discussing his work establishing the atomic structure of matter and his influence on modern physics.

2006 | 352 pages

978-0-19-857064-6, PAPERBACK

£22.50/\$44.50

978-0-19-850154-1, HARDBACK

£39.95/\$84.50

The Unimaginable Mathematics of Borges' Library of Babel

William Goldbloom Bloch, Associate Professor of Mathematics, Wheaton College

The Unimaginable Mathematics of Borges' Library of Babel takes the reader on a mathematical tour through one of Borges' most famous short stories. Beautifully written, original and imaginative, this book sheds light on some of Borges' most difficult literary constructions. A careful explication of Borges' language and the mathematical thought it implies form the foundation of a book that can easily be enjoyed as an introduction to mathematics.

August 2008 | 160 pages | OUPUSA

978-0-19-533457-9, HARDBACK

£10.99/\$19.95

The Architecture of Modern Mathematics*Essays in History and Philosophy*

Edited by **J. Ferreiros**, University of Seville, and **J.-J. Gray**, Open University

Aimed at both students and researchers in philosophy, mathematics and the history of science, this edited volume, authored by leading scholars, highlights foremost developments in both the philosophy and history of modern mathematics.

2006 | 456 pages

978-0-19-856793-6, HARDBACK

£42.00/\$69.50

BIOGRAPHY

Jacqueline Stedall

Jacqueline Stedall studied for her PhD through the Open University. Afterwards she was elected to the Clifford Norton Studentship in the History of Science and later to a Junior Research Fellowship in Mathematics, both at The Queen's College, Oxford. Her special areas of interest are the development of algebra, and the work of Early Modern English mathematicians. In particular she has written on the lives and work of Thomas Harriot and John Pell. She teaches history of mathematics to undergraduates at Oxford. Mathematics emerging developed primarily from a wish to offer students the experience of reading primary source material.

**Mathematics Emerging***A Sourcebook 1540-1900*

Jacqueline Stedall, The Queen's College, University of Oxford

Aimed at graduates and researchers in Mathematics, History of Mathematics and Science, this book examines the development of mathematics from the late 16th Century to the end of the 19th Century. Mathematics has an amazingly long and rich history, it has been practised in every society and culture, with written records reaching back in some cases as far as four thousand years. This book will focus on just a small part of the story, in a sense the most recent chapter of it: the mathematics of western Europe from the sixteenth to the nineteenth centuries. Each chapter will focus on a particular topic and outline its history with the provision of facsimiles of primary source material along with explanatory notes and modern interpretations. Almost every source is given in its original form, not just in the language in which it was first written, but as far as practicable in the layout and typeface in which it was read by contemporaries. This book is designed to provide mathematics undergraduates with some historical background to the material that is now taught universally to students in their final years at school and the first years at college or university: the core subjects of calculus, analysis, and abstract algebra, along with others such as mechanics, probability, and number theory. All of these evolved into their present form in a relatively limited area of western Europe from the mid sixteenth century onwards, and it is there that we find the major writings that relate in a recognizable way to contemporary mathematics.

November 2007 | 744 pages

978-0-19-922690-0, HARDBACK

£39.50/\$80.00



NEW IN PAPERBACK

Jacquard's Web*How a hand-loom led to the birth of the information age*

James Essinger

'Jacquard's web is a special book that explains more than the connection's between loom and computer: it presents a fascinating history of talented and creative people developing and inventing the tools of progress.'

Chris Arney, *Mathematical Reviews*

Jacquard's Web tells one of the greatest untold stories of science: how a hand loom invented in Napoleonic France led to the birth of the modern computer age. James Essinger, a master storyteller, traces the 200-year evolution of Jacquard's idea from the studios of 18th century weavers, through the Industrial Revolution to the development of hi-tech computers and the information age today.

March 2007 | 320 pages

978-0-19-280578-2, PAPERBACK

£8.99/\$16.95

Kelvin: Life, Labours and Legacy

Edited by **Raymond Flood**, University of Oxford, **Mark McCartney**, University of Ulster, and **Andrew Whitaker**, The Queen's University, Belfast

A collection of chapters, authored by leading experts, which cover the life and wide-ranging scientific contributions made by William Thomson, Lord Kelvin (1824-1907).

Contributors include: Sir Brian Pippard, Mark McCartney, UU, Grattan-Guinness, Middlesex, Peter Bowler, QUB, Alastair Wood, DCU, Raymond Flood, Oxford, Roche, Oxford, Iwan Rees Morus, Aberystwyth, Liz Garber, SUNY, Patrick Wyse Jackson, TCD, O. Penrose, Heriot Watt, Colin Latimer, QUB, Dennis Weaire, TCD, Francis Everitt, Stanford, Andrew Whitaker, QUB

January 2008 | 352 pages

978-0-19-923125-6, HARDBACK

£55.00/\$110.00

NEW IN PAPERBACK

Music and Mathematics

From Pythagoras to Fractals

John Fauvel, Formerly of the Open University, UK, **Raymond Flood**, Department for Continuing Education, Oxford University, and **Robin Wilson**, Keble College, Oxford University

'An attractive volume that covers almost all of the important aspects of the interplay between mathematics and music.'

Ehrhard Behrends, *The Mathematical Intelligencer*, Vol 28, 3

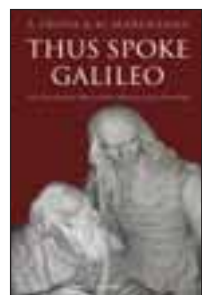
From Ancient Greek times, music has been seen as a mathematical art, and this relationship has fascinated generations. This new in paperback edition of diverse, comprehensive and fully-illustrated papers, authored by leading scholars, links the two fields in a lucid manner that is suitable for students of each subject as well as the general reader.

2006 | 200 pages

978-0-19-929893-8, PAPERBACK £16.95/\$32.50

Thus Spoke Galileo

The Great Scientist's Ideas and their Relevance to the Present Day



Andrea Frova, Università di Roma "La Sapienza", Italy, and **Mariapiera Marenzana**, National Dance Academy, Italy

Translated by **Jim McManus** in collaboration with the authors

'The book is remarkable for its clarity, precision and historical accuracy.'

Numerous drawings, figures and photographs help the reader pick a path through the historical and scientific reconstruction.'

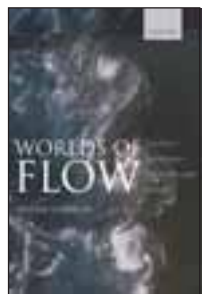
Nature, Vol. 422, 20 July 2006

2006 | 512 pages

978-0-19-856625-0, HARDBACK £19.99/\$39.95

Worlds of Flow

A History of Hydrodynamics from the Bernoullis to Prandtl



Olivier Darrigol, Centre National de la Recherche Scientifique, Paris, France

'A fascinating and well written book.'

Meccanica (2007) 42: 107 - 018

'...by presenting in detail the interactions between many mathematicians and engineers, and by emphasizing the different

styles characteristic of scientists in different countries, Darrigol has provided a fascinating insight into the development of hydrodynamics.'

J. Stewart Turner, Australian National University, Canberra, August 2006, *Physics World* 2006, p54

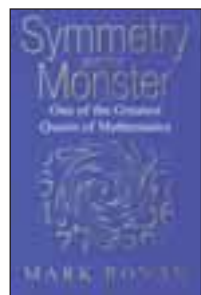
2005 | 376 pages

978-0-19-856843-8, HARDBACK £37.50/\$74.50

NEW IN PAPERBACK

Symmetry and the Monster

One of the Greatest Quests of Mathematics



Mark Ronan, University of Illinois at Chicago, and University College, London

'...accessible, artfully written...it stresses the human side of the drama. Though I have been a long-time participant in the story, I found myself learning much in every chapter and not wanting to put the book down.'

Robert L. Griess Jr.

'Ronan does a good job of describing the mathematics in broad strokes and giving a flavour of what is happening and—more importantly—why mathematicians get excited about these questions.'

The Mathematical Association of America

'This book tells for the first time the fascinating story of the biggest theorem ever to have been proved. Mark Ronan graphically describes not only the last few decades of the chase and the intriguing characters who led it, but also some of the more interesting byways, including my personal favourite, the one I called "Monstrous Moonshine".'

John H. Conway, F.R.S.

'Ronan tells a good story, and in doing so he paints a convincing picture of how mathematicians conduct their research.'

Gareth Jones, London Mathematical Society Newsletter

The 'Monster of Symmetry' is a giant snowflake in 196,884 dimensions—with a beautiful structure which may turn out to unlock the very fabric of our universe. The story of the hunt for the monster, and its eventual discovery, became the biggest joint mathematical project of all time—involving determination, luck, and some very extraordinary characters.

July 2007 | 272 pages

978-0-19-280723-6, PAPERBACK £8.99/\$19.95
978-0-19-280722-9, HARDBACK £14.99/\$27.00

Great Laws of Science and the Minds Behind Them

From Archimedes to Hawking

Clifford Pickover

Archimedes to Hawking takes the reader on a journey across the centuries as it explores the eponymous physical laws—from Archimedes' Law of Buoyancy and Kepler's Laws of Planetary Motion to Heisenberg's Uncertainty Principle and Hubble's Law of Cosmic Expansion—whose ramifications have profoundly altered our everyday lives and our understanding of the universe.

A sweeping survey of scientific discovery as well as an intriguing portrait gallery of some of the greatest minds in history, this superb volume will engage everyone interested in science and the physical world or in the dazzling creativity of these brilliant thinkers.

July 2008 | 480 pages | OUP USA

978-0-19-533611-5, HARDBACK £14.99

REFERENCE

NEW EDITION

Oxford Users' Guide to Mathematics

Edited by **Eberhard Zeidler**, Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany
Translated by **Bruce Hunt**

The Oxford Users' Guide to Mathematics is one of the leading handbooks on mathematics available. It presents a comprehensive modern picture of mathematics and emphasises the relations between the different branches of mathematics, and the applications of mathematics in engineering and the natural sciences.

2004 | 1,308 pages

978-0-19-850763-5, FLEXI COVERS £32.50/\$59.50

NEW EDITION

The Concise Oxford Dictionary of Mathematics

THIRD EDITION

Christopher Clapham, Former Senior Lecturer in Mathematics at Aberdeen University, and **James Nicholson**, Former Head of Mathematics, Belfast Royal Academy

Authoritative and reliable, this is the ideal reference guide for students of mathematics at school or in the first year at university. Updated in line with curriculum and degree requirements, the dictionary covers both pure and applied mathematics as well as statistics. There are entries on major mathematicians and mathematics of more general interest, such as fractals, game theory, and chaos.

Oxford Paperback Reference

2005 | 528 pages | numerous graphs, line drawings and mathematical examples

978-0-19-860742-7, PAPERBACK £9.99/\$16.95

Astrolabes at Greenwich

A Catalogue of the Astrolabes in the National Maritime Museum



Edited by **Koenraad van Cleempoel**, University of Hasselt, Belgium

This beautifully-produced large format book catalogues the astrolabes in the National Maritime Museum collection, and includes accompanying essays written by world experts in their fields. Published in series with 'Globes at

Greenwich' and 'Sundials at Greenwich', this prestigious catalogue will appeal to collectors of such scientific instruments as well as academic historians of science.

2006 | 352 pages

978-0-19-853069-5, HARDBACK £110.00/\$179.50