
Reference and Book List

The *Reference* section of the Notices is intended to provide the reader with frequently sought information in an easily accessible manner. New information is printed as it becomes available and is referenced after the first printing. As soon as information is updated or otherwise changed, it will be noted in this section.

Contacting the Notices

The preferred method for contacting the Notices is electronic mail. The editor is the person to whom to send articles and letters for consideration. Articles include feature articles, memorial articles, communications, opinion pieces, and book reviews. The editor is also the person to whom to send news of unusual interest about other people's mathematics research.

The managing editor is the person to whom to send items for "Mathematics People", "Mathematics Opportunities", "For Your Information", "Reference and Book List", and "Mathematics Calendar". Requests for permissions, as well as all other inquiries, go to the managing editor.

The electronic-mail addresses are notices@math.tamu.edu in the case of the editor and notices@ams.org in the case of the managing editor. The fax numbers are 979-845-6028 for the editor and 401-331-3842 for the managing editor. Postal addresses may be found in the masthead.

Upcoming Deadlines

March 31, 2002: Nominations for 2002 Prize for Achievement in Information-Based Complexity. Send nominations to Joseph Traub, traub@santafe.edu.

April 8, 2002: Proposals for 2003 NSF-CBMS Regional Conferences. See "Mathematics Opportunities" in this issue.

April 12, 2002: Applications for Project NExT. See "Mathematics Opportunities" in this issue.

April 15, 2002: Applications for National Research Council Research Associateship Program. See <http://www4.nationalacademies.org/pga/rap.nsf/> or contact the National Research Council, Associateship Programs (TJ 2114), 2101 Constitution Avenue, NW, Washington, DC 20418; telephone 202-334-2760; fax 202-334-2759; e-mail: rap@nas.edu.

April 15, 2002: Proposals for COBASE collaborative grants. For application forms and instructions, visit the website <http://www.>

Where to Find It

A brief index to information that appears in this and previous issues of the Notices.

AMS Bylaws—November 2001, p. 1205

AMS E-mail Addresses—November 2001, p. 1195

AMS Officers 2000 and 2001 (Council, Executive Committee, Publications Committees, Board of Trustees)—May 2001, p. 520

AMS Officers and Committee Members—October 2001, p. 1032

Backlog of Mathematics Research Journals—December 2001, p. 1355, January 2002, p. 46

Conference Board of the Mathematical Sciences—September 2001, p. 843

Information for Notices Authors—January 2002, p. 47

Mathematics Research Institutes Contact Information—August 2001, p. 731

National Science Board—February 2002, p. 237

New Journals for 2000—June/July 2001, p. 612

NRC Board on Mathematical Sciences and Staff—April 2002, p. 492

NRC Mathematical Sciences Education Board and Staff—May 2001, p. 517

NSF Mathematical and Physical Sciences Advisory Committee—March 2002, p. 345

Program Officers for Federal Funding Agencies—October 2001, p. 1009 (DoD, DoE); November 2001, p. 1198 (NSF)

nationalacademies.org/oia/. For more information, telephone 202-334-2644, send a fax to 202-334-2614, or e-mail: occe@nas.edu.

April 30, 2002: Nominations for the Maria Mitchell Women in Science Award. See <http://www.mmo.org/>, or contact the Maria Mitchell Women in Science Award Committee at the Maria Mitchell Association, 2 Vestal Street, Nantucket, MA 02554; telephone 508-228-9198.

May 1, 2002: Applications for Career Awards for Research Addressing Biological Questions. See "Mathematics Opportunities" in this issue.

May 1, 2002: Nominations for Lobachevskii Medal. See <http://www.ksu.ru/lobmed/>.

May 1, October 1, 2002: Applications for NSF/AWM Travel Grants for Women. See <http://www.awm-math.org/travelgrants.html>; telephone 301-405-7892; e-mail: awm@math.umd.edu.

May 15, 2002: Applications for fall semester of Math in Moscow and for AMS scholarships. See <http://www.mccme.ru/mathinmoscow/> or contact Math in Moscow, P.O. Box 524, Wynnewood, PA 19096; fax +7095-291-65-01; e-mail: mim@mccme.ru. For information about and application forms for the AMS scholarships, see <http://www.ams.org/careers-edu/mimoscow.html> or contact Math in Moscow Program, Professional Services Department, American Mathematical Society, 201 Charles Street, Providence RI 02904; e-mail: prof-serv@ams.org.

July 15, 2002: Applications for the AAAS Women's International Science Collaboration Program (WISC). See <http://www.aaas.org/international/wiscnew.shtml>, or contact WISC Travel Grant, American Association for the Advancement of Science, Directorate for International Programs, 1200 New York Avenue, NW, Washington, D.C., 20005.

August 15, 2002: Applications for National Research Council Research Associateship Program. See <http://www4.nationalacademies.org/pgarap.nsf/> or contact the National Research Council, Associateship Programs (TJ 2114), 2101 Constitution Avenue, NW, Washington, DC 20418;

telephone 202-334-2760; fax 202-334-2759; e-mail: rap@nas.edu.

October 15, 2002: Applications for spring semester of Math in Moscow and for AMS scholarships. See <http://www.mccme.ru/mathinmoscow/> or contact Math in Moscow, P.O. Box 524, Wynnewood, PA 19096; fax +7095-291-65-01; e-mail: mim@mccme.ru. For information about and application forms for the AMS scholarships, see <http://www.ams.org/careers-edu/mimoscow.html> or contact Math in Moscow Program, Professional Services Department, American Mathematical Society, 201 Charles Street, Providence RI 02904; e-mail: prof-serv@ams.org.

Board on Mathematical Sciences and Their Applications, National Research Council

Peter J. Bickel, (chair), University of California, Berkeley

Dimitris Bertsimas, MIT Sloan School of Management

George Casella, University of Florida

Jennifer Chayes, Microsoft Research

David Eisenbud, Mathematical Sciences Research Institute

Ciprian Foias, Texas A&M University

Raymond L. Johnson, University of Maryland

Iain M. Johnstone, Stanford University

Arjen K. Lenstra, Citibank, NA

Robert Lipshutz, Affymetrix, Inc.

George C. Papanicolaou, Stanford University

Alan S. Perelson, Los Alamos National Laboratory

Linda R. Petzold, University of California, Santa Barbara

Douglas Ravenel, University of Rochester

Stephen M. Robinson, University of Wisconsin, Madison

S. R. Srinivasa Varadhan, New York University

Sallie Keller-McNulty (ex officio), Los Alamos National Laboratory

Scott Weidman, (Director, BMSA), National Academy of Sciences

The postal address for BMSA is: Board on Mathematical Sciences and

Their Applications, National Research Council, Room HA476U, 2101 Constitution Avenue, NW, Washington, DC 20418; World Wide Web, http://www4.nationalacademies.org/cpsma/bms.nsf/web/bmsa_members?OpenDocument/.

U.S. National Committee for Mathematics

The U.S. National Committee for Mathematics (USNCM) is the adhering organization representing the United States in the International Mathematical Union (IMU). The USNCM is convened under the auspices of the National Academy of Sciences. The members of the USNCM are listed below.

Donald G. Saari, (chair), University of California, Irvine

Richard Askey, University of Wisconsin at Madison

Augustin Banyaga, Pennsylvania State University

Lynne Billard, University of Georgia

David Eisenbud, Mathematical Sciences Research Institute

Barbara L. Keyfitz, University of Houston

Joseph Kohn, Princeton University

Donald J. Lewis, University of Michigan

Gilbert Strang, Massachusetts Institute of Technology

Ruth J. Williams, University of California, San Diego

Ex-Officio Members

Secretary, IMU

Phillip A. Griffiths, Institute for Advanced Study

Past President, IMU

David Mumford, Brown University

Chair, Board on Mathematical Sciences

Peter Bickel, University of California, Berkeley

President, International Commission on Mathematical Instruction

Hyman Bass, University of Michigan

Secretary, Commission on Development and Exchanges

Herbert Clemens, University of Utah

Foreign Secretary, NAS
F. Sherwood Rowland (NAS, IOM),
 National Academy of Sciences

Program Director, USNC/Math
Tamae Maeda Wong, National
 Research Council

Book List

The Book List highlights books that have mathematical themes and hold appeal for a wide audience, including mathematicians, students, and a significant portion of the general public. When a book has been reviewed in the Notices, a reference is given to the review. Generally the list will contain only books published within the last two years, though exceptions may be made in cases where current events (e.g., the death of a prominent mathematician, coverage of a certain piece of mathematics in the news) warrant drawing readers' attention to older books. Suggestions for books to include on the list may be sent to the managing editor, e-mail: notices@ams.org.

Battle of Wits: The Complete Story of Codebreaking in World War II, by Stephen Budiansky. Free Press, October 2000. ISBN 0-684-85932-7.

The Bit and the Pendulum: How the New Physics of Information Is Revolutionizing Science, by Tom Siegfried. John Wiley & Sons, February 2000. ISBN 0-47132-174-5.

The Book of Nothing: Vacuums, Voids, and the Latest Ideas about the Origins of the Universe, by John D. Barrow. Pantheon Books, April 2001. ISBN 0-375-42099-1.

Calculated Bets: Computers, Gambling, and Mathematical Modeling to Win, by Steven S. Skiena. Cambridge University Press, September 2001. ISBN 0-521-00962-6.

Chaotic Elections! A Mathematician Looks at Voting, by Donald G. Saari. AMS, April 2001. ISBN 0-8218-2847-9.

The Colossal Book of Mathematics: Classic Puzzles, Paradoxes, and Problems, by Martin Gardner. W.W. Norton & Company, August 2001. ISBN 0-393-02023-1.

Computers Ltd.: What They Really Can't Do, by David Harel. Oxford University Press, November 2000. ISBN 0-198-50555-8.

A Concise History of Mathematics, by Dirk J. Struik. Dover Publications, 1987. ISBN 0-486-60255-9. (Reviewed June/July 2001.)

Conned Again, Watson! Cautionary Tales of Logic, Math, and Probability, by Colin Bruce. Perseus Publishing, January 2001. ISBN 0-7382-0345-9.

Conquering Statistics: Numbers without the Crunch, by Jefferson Hane Weaver. Perseus Publishing, paperback edition, August 2001. ISBN 0-732-820495-1.

Conversations with a Mathematician: Math, Art, Science, and the Limits of Reason, by Gregory J. Chaitin. Springer, November 2001. ISBN 1-85233-549-1.

Creators of Mathematics: The Irish Connection, by Ken Houston. University College Dublin Press, September 2000. ISBN 1-900-62149-5.

Damned Lies and Statistics: Untangling Numbers from the Media, Politicians, and Activists, by Joel Best. University of California Press, May 2001. ISBN 0-520-21978-3.

The Difference Engine: Charles Babbage and the Quest to Build the First Computer, by Doron Swade. Viking Press, September 2001. ISBN 0-670-91020-1.

The Dream Machine: J. C. R. Licklider and the Revolution That Made Computing Personal, by M. Mitchell Waldrop. Viking Press, 2001. ISBN 0-670-89976-3.

The Essential John Nash, Harold Kuhn and Sylvia Nasar, editors. Princeton University Press, December 2001. ISBN 0-691-09527-2.

Euclid's Window: The Story of Geometry from Parallel Lines to Hyperspace, by Leonard Mlodinow. Free Press, April 2001. ISBN 0-684-86523-8.

Exploring Randomness, by Gregory J. Chaitin. Springer, December 2000. ISBN 1-852-33-417-7. (Reviewed October 2001.)

Finite vs. Infinite, Contributions to an Eternal Dilemma, Cristian S. Calude and Gheorghe Paun, editors. Springer, March 2000. ISBN 1-852-33251-4.

Flatterland: Like Flatland, Only More So, by Ian Stewart. Perseus Publishing, May 2001. ISBN 0-7382-0442-0. (Reviewed in this issue.)

Fooled by Randomness: The Hidden Role of Chance in the Markets and Life, by Nassim Nicholas Taleb. Texere, October 2001. ISBN 1-587-99071-7.

The Fractal Murders, by Mark Cohen. E-book published by Southern Cross Review, 2001. World Wide Web: www.southerncrossreview.org/.

Fragments of Infinity: A Kaleidoscope of Math and Art, by Ivars Peterson. John Wiley & Sons, October 2001. ISBN 0-471-16558-1.

Geometry: Our Cultural History, by Audun Holme. Springer, to appear March 2002. ISBN 3-540-41949-7.

Gödel: A Life of Logic, by John L. Casti and Werner DePauli. Perseus Publishing, August 2000. ISBN 0-7382-0274-6. (Reviewed September 2001.)

The Hilbert Challenge, by Jeremy J. Gray. Oxford University Press, December 2000. ISBN 0-198-50651-1.

The Hole in the Universe: How Scientists Peered over the Edge of Emptiness and Found Everything, by K. C. Cole. Harcourt Brace, January 2001. ISBN 0-151-00398-X.

How the Other Half Thinks: Adventures in Mathematical Reasoning, by Sherman Stein. McGraw-Hill, July 2001. ISBN 0-071-37339-X.

How to Solve It: Modern Heuristics, by Zbigniew Michalewicz and David B. Fogel. Springer, December 1999. ISBN 3-540-66061-5.

In Code: A Mathematical Journey, by Sarah Flannery and David Flannery. Workman Publishing, May 2001. ISBN 0-761-12384-9.

Lebesgue's Theory of Integration: Its Origins and Development, by Thomas Hawkins. AMS, September 2001. ISBN 0-8218-2963-7.

Logical Dilemmas: The Life and Work of Kurt Gödel, by John Dawson. A K Peters, December 1997. ISBN 1-56881-025-3. (Reviewed September 2001.)

Mathematical Mountaintops: The Five Most Famous Problems of All Time, by John Casti. Oxford University Press, October 2001. ISBN 0-195-14171-7.

The Mathematician Sophus Lie: It Was the Audacity of My Thinking, by Arild Stubhaug. Springer, 2002. ISBN 3-540-42137-8.

Mathematics and the Roots of Post-modern Thought, by Vladimir Tasic. Oxford University Press, 2001. ISBN 0-195-13967-4.

Mathematics Galore: Masterclasses, Workshops, and Team Projects in Mathematics and Its Applications, by C. J. Budd and C. J. Sangwin. Oxford University Press, June 2001. ISBN 0-198-50769-0 (hardcover), 0-198-50770-4 (paperback).

The Measure of the World, by Denis Guedj. University of Chicago Press, October 2001. ISBN 0-226-31030-2.

A New Kind of Science, by Stephen Wolfram. Wolfram Media, Inc., (to appear March 2002). ISBN 1-579-55008-8.

Newton's Tyranny: The Suppressed Scientific Discoveries of John Flamsteed and Stephen Gray, by David H. Clark and Stephen P. H. Clark. W. H. Freeman, October 2000. ISBN 0-716-74215-2.

Number: From Ahmes to Cantor, by Midhat Gazalé. Princeton University Press, March 2000. ISBN 0-691-00515-X. (Reviewed August 2001.)

Proofs from THE BOOK, by M. Aigner and G. M. Ziegler. Revised and expanded second edition, Springer, January 2001. ISBN 3-540-67865-4. (First edition reviewed August 1999.)

Ptolemy's Geography, translated by J. Lennart Berggren and Alexander Jones. Princeton University Press, November 2000. ISBN 0-691-01042-0.

The Quest for the Quantum Computer, by Julian Brown. Touchstone Books, August 2001. ISBN 0-684-87004-5.

Radical Equations: Math Literacy and Civil Rights, by Robert P. Moses and Charles E. Cobb Jr. Beacon Press, February 2001. ISBN 0-807-03126-7. (Reviewed March 2002.)

The Riddle of the Compass, by Amir Aczel. Harcourt Brace, August 2001. ISBN 0-151-00506-0.

Sacred Geometry, by Miranda Lundy. Walker & Company, April 2001. ISBN 0-802-71382-3.

The Science of Conjecture: Evidence and Probability before Pascal, by James

Franklin. Johns Hopkins University Press, June 2001. ISBN 0-8018-6569-7.

The Search for Mathematical Roots, 1870-1940: Logics, Set Theories, and the Foundations of Mathematics from Cantor through Russell to Gödel, by I. Grattan-Guinness. Princeton University Press, February 2001. ISBN 0-691-0587-1.

**Signs of Life: How Complexity Permeates Biology*, by Richard Solé and Brian Goodwin. Basic Books, January 2001. ISBN 0-465-01927-7.

Statisticians of the Centuries, edited by C. C. Heyde and E. Seneta. Springer, September 2001. ISBN 0-387-953283-7.

The Story of Mathematics, by Richard Mankiewicz. Princeton University Press, February 2001. ISBN 0-691-08808-X. (Reviewed in this issue.)

Things a Computer Scientist Rarely Talks About, by Donald Knuth. Center for the Study of Language and Information, July 2001. ISBN 1-57586-327-8.

Thinks, by David Lodge. Viking Press, May 2001. ISBN 0-670-89984-4.

Triangle of Thoughts, by Alain Connes, André Lichnerowicz, and Marcel Paul Schützenberger. AMS, July 2001. ISBN 0-8218-2614-X. (Reviewed March 2002.)

Turing and the Universal Machine: The Making of the Modern Computer, by Jon Agar. June 2001, Totem Books. ISBN 1-840-46250-7.

Understanding Mathematics for Aircraft Navigation, by James S. Wolper. McGraw-Hill, May 2001. ISBN 0-07-137572-4.

The Universal Computer: The Road from Leibniz to Turing, by Martin Davis. W.W. Norton & Company, October 2000. ISBN 0-393-04785-7. (Reviewed May 2001.)

The Universal History of Computing: From the Abacus to the Quantum Computer, by Georges Ifrah; translated from the French and with notes by E. F. Harding, assisted by Sophie Wood, Ian Monk, Elizabeth Clegg, and Guido Waldman. John Wiley & Sons, November 2000. ISBN 0-471-39671-0. (Reviewed in two parts, January 2002 and February 2002.)

The Universal History of Numbers: From Prehistory to the Invention of

the Computer, by Georges Ifrah; translated from the French by David Bellos, E. F. Harding, Sophie Wood, and Ian Monk. John Wiley & Sons, December 1999. ISBN 0-471-37568-3. (Reviewed in two parts, January 2002 and February 2002.)

The Universe in a Nutshell, by Stephen Hawking. Bantam Doubleday Dell, November 2001. ISBN 0-553-80202-X.

The Unknowable, by Gregory J. Chaitin. Springer, August 1999. ISBN 9-814-02172-5. (Reviewed October 2001.)

What Is Mathematics? An Elementary Approach to Ideas and Methods, by Richard Courant and Herbert Robbins; second edition, revised by Ian Stewart. Oxford University Press, August 1996. ISBN 0-195-10519-2. (Reviewed December 2001.)

What Shape is a Snowflake?, by Ian Stewart. W. H. Freeman & Co, November 2001. ISBN 0-716-74794-4.

Where Mathematics Comes From: How the Embodied Mind Brings Mathematics into Being, by George Lakoff and Rafael Núñez. Basic Books, October 2000. ISBN 0-465-03770-4. (Reviewed November 2001.)

White Light, by Rudy Rucker. Four Walls Eight Windows, April 2001. ISBN 1-56858-198-X.

Women Becoming Mathematicians: Creating a Professional Identity in Post-World War II America, by Margaret A. M. Murray. MIT Press, September 2000. ISBN 0-262-13369-5. (Reviewed August 2001.)

The Zen of Magic Squares, Circles, and Stars: An Exhibition of Surprising Structures across Dimensions, by Clifford A. Pickover. Princeton University Press, January 2001. ISBN 0-691-07041-5.

*Added to "Book List" since the list's last appearance.