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 1, 2002: Applications for the George Washington University 2002 Summer Program for Women in Mathematics (SPWM). See "Mathematics Opportunities" in this issue.

March 1, 2002: Nominations for Third World Academy of Sciences (TWAS) Awards in Basic Sciences. See `http://www.ictp.trieste.it/~twas/Awards_Info.html`.

March 5, 2002: Proposals for the NSF Program on Exploratory Research on Engineering the Service Sector (ESS). See "Mathematics Opportunities" in this issue.

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

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

Where to Find It

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

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

April 30, 2002: Nominations for the Maria Mitchell Women in Science Award. See "Mathematics Opportunities" in this issue.

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

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 "Mathematics Opportunities" in this issue.

August 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.

October 15, 2002: Applications for spring 2003 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.

MPS Advisory Committee

Following are the names and affiliations of the members of the Advisory Committee for Mathematical and Physical Sciences (MPS) of the National Science Foundation. The date of the expiration of each member's term is given after his or her name. The website for the MPS directorate may be found at http://www.nsf.gov/home/mps/. The postal address is Directorate for the Mathematical and Physical Sciences, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230.

Thomas W. Appelquist (10/04)
Department of Physics
Yale University

Roger D. Blandford (10/04)
Division of Physics, Mathematics, and Astronomy
California Institute of Technology

Ronald Brisbois (10/02)
Chemistry Department
Macalester College

Arturo Bronson (10/02)
Materials Center for Synthesis and Processing
University of Texas, El Paso

Tony Chan (10/02)
Department of Mathematics
University of California, Los Angeles

Billy Joe Evans (10/02)
Department of Chemistry
University of Michigan, Ann Arbor

S. James Gates Jr. (10/03)
Physics Department
University of Maryland

Fiona Goodchild (10/03)
Materials Research Laboratory
University of California, Santa Barbara

Robert C. Hilborn (10/04)
Department of Physics
Amherst College

Lon Mathias (10/03)
Department of Polymer Science
University of Southern Mississippi

Willie Pearson Jr. (ex officio)
School of History, Technology, and Society
Georgia Institute of Technology

Jeanne E. Pemberton (10/04)
Department of Chemistry
University of Arizona

Julia Phillips (10/03)
Materials Science & Technologies
Sandia National Laboratories

William R. Pulleyblank (10/04)
Mathematical Sciences and Deep Computing Institute
IBM T. J. Watson Research Center

Joseph Salah (10/04)
Haystack Observatory
Massachusetts Institute of Technology

David Siegmund (10/03)
Department of Statistics
Stanford University

Neil deGrasse Tyson (10/03)
Hayden Planetarium
American Museum of Natural History

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.

Crypto: How the Code Rebels Beat the Government—Saving Privacy in the Digital Age, by Steven Levy. Viking Press, January 2001. ISBN 0-67085-950-8.

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.

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 Postmodern 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., October 2001. 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 in this issue.)

* *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.

* *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.

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 in this issue.)

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.*