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# 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.

## Information for *Notices* Authors

The *Notices* welcomes unsolicited articles for consideration for publication, as well as proposals for such articles. The following provides general guidelines for writing *Notices* articles and preparing them for submission.

**Notices readership.** The *Notices* goes to about 30,000 subscribers worldwide, of whom about 20,000 are in North America. Approximately 8,000 of the 20,000 in North America

are graduate students who have completed at least one year of graduate school. All readers may be assumed to be interested in mathematics research, but they are not all active researchers.

**Notices feature articles.** Feature articles may address mathematics, mathematical news and developments, mathematics history, issues affecting the profession, mathematics education at any level, the AMS and

## 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 Ethical Guidelines**—June/July 2002, p. 706

**AMS Officers 2000 and 2001 (Council, Executive Committee, Publications Committees, Board of Trustees)**—June/July 2002, p. 705

**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**—June/July 2002, p. 697

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

**National Science Board**—February 2002, p. 237

**New Journals for 2001**—June/July 2002, p. 698

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

**NRC Mathematical Sciences Education Board and Staff**—May 2002, p. 583

**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)

its activities, and other such topics of interest to *Notices* readers. Each article is expected to have a large target audience of readers, perhaps 5,000 of the 30,000 subscribers. Authors must therefore write their articles for nonexperts rather than for experts or would-be experts. In particular, the mathematics articles in the *Notices* are expository. The language of the *Notices* is English.

Most feature articles, including those on mathematics, are expected to be of long-term value and should be written as such. Ideally each article should put its topic in a context, providing some history and other orientation for the reader and, as necessary, relating the subject matter to things that readers are likely to understand. In most cases, articles should progress to dealing with contemporary matters, not giving only historical material. The articles that are received the best by readers tend to relate different areas of mathematics to each other.

By design the *Notices* is partly magazine and partly journal, and authors' expository styles should take this into account. For example, many readers want to understand the mathematics articles without undue effort and without consulting other sources.

Mathematics feature articles in the *Notices* are normally six to nine pages, sometimes a little longer. Shorter articles are more likely to be read fully than are longer articles. The first page is 400 or 500 words, and subsequent pages are about 800 words. From this one should subtract an allowance for figures, photos, and other illustrations, and an appropriate allowance for any displayed equations and any bibliography.

**Form of articles.** Except with very short articles, authors are encouraged to use section headings and subsection headings to help orient readers. Normally there is no section heading at the beginning of an article. Despite the encouraged use of internal headings, the assigning of numbers to sections and subsections is not permitted in any article.

The bibliography should be kept short. In the case of mathematics articles, bibliographies are normally lim-

ited to about ten items and should consist primarily of entries like books in which one may do further reading. To help readers who might want lists of recent literature, an author might include a small number of recent publications with good bibliographies.

**Editing process.** Most articles that are destined to be accepted undergo an intensive editing process. The purposes of this process are to ensure that the target audience is as large as practicable, that the content of the article is clear and unambiguous, and that the article is relatively easy to read. Usually it is the members of the editorial board who are involved in this process. Sometimes outside referees are consulted.

**Preparation of articles for submission.** The preferred form for submitted articles is as electronic files. Authors who cannot send articles electronically may send the articles by fax or by postal mail.

Articles with a significant number of mathematical symbols are best prepared in  $\text{T}_\text{E}\text{X}$ ,  $\text{L}^{\text{A}}\text{T}_\text{E}\text{X}$ , or  $\mathcal{A}\text{M}\text{S-}\text{T}_\text{E}\text{X}$ . There are no special style files for the *Notices* because  $\text{T}_\text{E}\text{X}$  code gets converted to something else during the production process. Since the *Notices* is set in narrow columns, keeping displayed formulas relatively short helps to minimize adjustments during the production process; avoiding non-standard supplementary files and complex sequences of  $\text{T}_\text{E}\text{X}$  definitions also helps. For the handling of figures and other illustrations, please consult the editor.

Articles without a significant number of mathematical symbols may be prepared as text files or in Microsoft Word. In the case of files prepared in Microsoft Word, it is advisable to send both the file and a fax of a printout.

### Upcoming Deadlines

**June 30, 2002:** Nominations for the National Medal of Science. See "Mathematics Opportunities" in this issue.

**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.

**July 25, 2002:** Proposals for NSF CAREER Program. See "Mathematics Opportunities" in this issue.

**August 1, 2002:** Applications for Fulbright Lecturing and Research Grants. 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](mailto:rap@nas.edu).

**September 15, 2002:** Nominations for Sloan Research Fellowships. See "Mathematics Opportunities" in this issue.

**October 1, 2002:** Nominations for AWM Hay and Schafer Awards. See "Mathematics Opportunities" in this issue.

**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](mailto:awm@math.umd.edu).

**October 15, 2002:** Applications for spring semester of Math in Moscow and for AMS scholarships. See <http://www.mccme.ru/mathin-moscow> or contact Math in Moscow, P.O. Box 524, Wynnewood, PA 19096; fax +7095-291-65-01; e-mail: [mim@mccme.ru](mailto: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](mailto:prof-serv@ams.org).

**October 18, 2002:** Applications for NSF Postdoctoral Research Fellowships. See the NSF Web site at <http://www.fastlane.nsf.gov/d11/D11Menu.htm>.

### New Journals for 2001

Below is a list of mathematical journals appearing for the first time in

2001, as compiled by *Mathematical Reviews*. This list, as well as the listings for new journals for other years, can be found on the Web at <http://www.ams.org/mathweb/mi-newjs.html>.

*Advances in Geometry*, 1615-715X, de Gruyter.

*Advanced Nonlinear Studies*, 1536-1365, Adv. Nonlinear Stud., San Antonio.

*Algebraic & Geometric Topology*, Geometry & Topology Publications.

*Applied Mathematics E-Notes*, Tsing Hua Univ., Taiwan.

*Discrete and Continuous Dynamical Systems, Series B*, 1531-3492, Southwest Missouri State University.

*Forum Geometricorum*, Florida Atlantic University.

*Foundations of Computational Mathematics*, 1615-3375, Springer.

*Journal of Applied Mathematics*, 1110-757X, Hindawi.

*Journal of Evolution Equations*, 1424-3199, Birkhäuser.

*Journal of Mathematical Logic*, 0219-0613, World Scientific.

*Moscow Mathematical Journal*, 1609-3321, Independent University of Moscow.

*Stochastics and Dynamics*, World Scientific.

*Theory and Practice of Logic Programming*, Cambridge University Press.

## 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](mailto:notices@ams.org).

\* *Algebraic Number Theory and Fermat's Last Theorem*, by Ian Stewart

and David Tall. A K Peters, revised third edition, December 2001. ISBN 1-56881119-5.

\* *The Algorithmic Beauty of Seaweeds, Sponges and Corals*, by Jap Kaandorp and Janet Kübler. Springer Verlag, January 2001. ISBN 3-540-67700-3.

*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. (Reviewed in this issue.)

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

\* *Codes and Ciphers: Julius Caesar, the Enigma, and the Internet*, by Robert Churchhouse. Cambridge University Press, January 2002. ISBN 0-521-81054-X.

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

*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.

\* *Curve Ball: Baseball, Statistics, and the Rules of Chance in the Game*, by Jim Albert and Jay Bennett. Copernicus-Springer Verlag, July 2001. ISBN 0-387-98816-5.

*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.

*Does God Play Dice?: The New Mathematics of Chaos*, by Ian Stewart. Blackwell, revised second edition, January 2002. ISBN 0-631-23251-6.

*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. (Reviewed May 2002.)

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

*Flatterland: Like Flatland, Only More So*, by Ian Stewart. Perseus Publishing, May 2001. ISBN 0-7382-0442-0. (Reviewed April 2002.)

*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.

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

*A Gardner's Workout: Training the Mind and Entertaining the Spirit*, by Martin Gardner. A K Peters, June 2001. ISBN 1-56881-120-9.

*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.)

\* *Gödel's Proof*, by Ernest Nagel and James R. Newman. New York University Press, revised edition, February 2002. ISBN 0-8147-5816-9.

\* *Go To: The Story of the Math Majors, Bridge Players, Engineers, Chess Wizards, Scientists and Iconoclasts who were the Hero Programmers of the Software Revolution*, by Steve Lohr.

Basic Books, October 2001. ISBN 0-465-04225-2.

*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.

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

\* *It Must Be Beautiful: Great Equations of Modern Science*, Graham Farmelo, Editor. Granta Books, February 2002. ISBN 1-862-07479-8.

*The Lady Tasting Tea: How Statistics Revolutionized Science in the Twentieth Century*, by David Salsburg. W. H. Freeman & Co, April 2001. ISBN 0-716-74106-7.

*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.)

*The Mathematical Explorer*, by Stan Wagon. Electronic book, Wolfram Research, Inc., 2001. (Reviewed in this issue.)

\* *Mathematical Vistas*, by Peter Hilton, Derek Holton, and Jean Pedersen. Springer-Verlag, January 2002. ISBN 0-387-95064-8.

*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).

\* *Mathematics in a Postmodern Age: A Christian Perspective*, Russell W. Howell and W. James Bradley, Editors. Wm. B. Eerdmans Publishing Company, May 2001. ISBN 0-802-84910-5.

*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., May 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 & Co., 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.)

\* *Political Numeracy: Mathematical Perspectives on Our Chaotic Constitution*, by Michael Meyerson. W.W. Norton & Company, March 2002. ISBN 0-393-04172-7.

*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.)

*Puzzlers' Tribute: A Feast for the Mind*, Tom Rodgers, David Wolfe, Editors. A K Peters, December 2001. ISBN 1-56881-121-7.

*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.

\* *Science and an African Logic*, by Helen Verran. University of Chicago Press, January 2002. ISBN 0-226-85389-6 (cloth), 0-226-85391-8 (paper).

*The Science of Conjecture: Evidence and Probability before Pascal*, by James Franklin. Johns Hopkins University Press, June 2001. ISBN 0-8018-6569-7.

*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 April 2002.)

\* *Such Silver Currents: The Story of William and Lucy Clifford, 1845-1929*, by M. Chisholm. Lutterworth Press, March 2002. ISBN 0-7188-3017-2.

*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 Unfinished Revolution: Human-Centered Computers and What They Can Do for Us*, by Michael L. Dertouzos. Harperbusiness, January 2001. ISBN 0-066-62067-8.

*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

## Reference and Book List

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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. (Reviewed May 2002.)

*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.)

*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.

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