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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.ou.edu` in the case of the editor and `notices@ams.org` in the case of the managing editor. The fax numbers are 405-325-7484 for the editor and 401-331-3842 for the managing editor. Postal addresses may be found in the masthead.

## Upcoming Deadlines

**September 15, 2004:** Full proposals for REU sites. See "Mathematics Opportunities" in this issue.

**September 15, 2004:** Nominations for Alfred P. Sloan Foundation fellowships. See [http://www.sloan.org/programs/fellowship\\_brochure.shtml](http://www.sloan.org/programs/fellowship_brochure.shtml) or write to Sloan Research Fellowships, Alfred P. Sloan Foundation, 630 Fifth Avenue, Suite 2550, New York, New York 10111.

**September 16, 2004:** Proposals for NSF Enhancing the Mathematical Sciences Workforce in the Twenty-First Century program (including VIGRE). See the website <http://www.nsf.gov/pubs/2003/nsf03575/nsf03575.htm>.

**September 30, 2004:** Nominations for Information-Based Complexity Young Researcher Award. Contact Joseph F. Traub at `traub@columbia.edu`.

## Where to Find It

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

**AMS Bylaws**—November 2003, p. 1283

**AMS E-mail Addresses**—November 2003, p. 1266

**AMS Ethical Guidelines**—June/July 2004, p. 673

**AMS Officers 2002 and 2003 (Council, Executive Committee, Publications Committees, Board of Trustees)**—May 2004, p. 566

**AMS Officers and Committee Members**—October 2003, p. 1115

**Conference Board of the Mathematical Sciences**—September 2004, p. 921

**Information for Notices Authors**—June/July 2004, p. 668

**Mathematics Research Institutes Contact Information**—August 2004, p. 810

**National Science Board**—January 2004, p. 54

**New Journals for 2003**—June/July 2004, p. 670

**NRC Board on Mathematical Sciences and Their Applications**—March 2004, p. 350

**NRC Mathematical Sciences Education Board**—April 2004, p. 446

**NSF Mathematical and Physical Sciences Advisory Committee**—February 2004, p. 242

**Program Officers for Federal Funding Agencies**—October 2003, p. 1107 (DoD, DoE); December 2003, p. 1429 (NSF)

**October 1, 2004:** Applications for AWM Travel Grants. See "Mathematics Opportunities" in this issue.

**October 1, 2004:** Nominations for the Louise Hay Award and the Alice T. Schafer Mathematics Prize. Contact Hay Award Selection Committee or Alice T. Schafer Award Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, MD 20742-2461; telephone 301-405-7892; e-mail to [awm@math.umd.edu](mailto:awm@math.umd.edu).

**October 1, 2004:** Nominations for CRM-Fields Prize. See [http://www.fields.utoronto.ca/proposals/crm-fields\\_prize.html](http://www.fields.utoronto.ca/proposals/crm-fields_prize.html), or contact the Director, The Fields Institute, 222 College Street, Toronto, Ontario M5T 3J1, Canada.

**October 13, 2004:** Full proposals for NSF Distinguished International Postdoctoral Research Fellowships. See "Mathematics Opportunities" in this issue.

**October 15, 2004:** Applications for support for activities at the Pacific Institute for the Mathematical Sciences. See "Mathematics Opportunities" in this issue.

**October 15, 2004:** Applications for support for activities at Banff International Research Station for Mathematical Innovation and Discovery. See "Mathematics Opportunities" in this issue.

**October 15, 2004:** Proposals for NSA Grant and Sabbatical Programs. See "Mathematics Opportunities" in this issue.

**October 15, 2004:** Applications for NSF Postdoctoral Research Fellowships. See <http://www.nsf.gov/pubs/2001/nsf01126/nsf01126.htm>.

**November 1, 2004:** Applications for NSF International Research Fellow Awards. See "Mathematics Opportunities" in this issue.

**December 1, 2004:** Applications for AMS Centennial Research Fellowships. See "Mathematics Opportunities" in this issue.

**December 1, 2004:** Nominations for the Ferran Sunyer i Balaguer Prize. See <http://www.crm.es/Ferran-SunyerBalaguer/ffsb.htm>.

**January 1, 2005:** Entries for *Cryptologia* undergraduate paper

competitions. See <http://www.dean.usma.edu/math/pubs/cryptologia/> or contact *Cryptologia*, Department of Mathematical Sciences, United States Military Academy, West Point, NY 10996; email: [Cryptologia@usma.edu](mailto:Cryptologia@usma.edu).

**February 1, 2005:** Applications for AWM Travel Grants and AWM Mentoring Travel Grants. See "Mathematics Opportunities" in this issue.

**May 1, 2005:** Applications for AWM Travel Grants. See "Mathematics Opportunities" in this issue.

### Conference Board on the Mathematical Sciences

1529 Eighteenth Street, NW  
Washington, DC 20036  
202-293-1170  
<http://www.cbmsweb.org/>

Ronald C. Rosier  
Administrative Officer  
Phone: 202-293-1170  
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Administrative Coordinator  
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### Member Societies

American Mathematical Association of Two-Year Colleges (AMATYC)  
American Mathematical Society (AMS)  
American Statistical Association (ASA)  
Association for Symbolic Logic (ASL)  
Association for Women in Mathematics (AWM)  
Association of Mathematics Teacher Educators (AMTE)  
Association of State Supervisors of Mathematics (ASSM)  
Benjamin Banneker Association (BBA)  
Institute for Operations Research and the Management Sciences (INFORMS)  
Institute of Mathematical Statistics (IMS)  
Mathematical Association of America (MAA)  
National Association of Mathematicians (NAM)  
National Council of Supervisors of Mathematics (NCSM)  
National Council of Teachers of Mathematics (NCTM)  
Society for Industrial and Applied Mathematics (SIAM)  
Society of Actuaries (SOA)

### Book List

*The Book List highlights books that have mathematical themes and are aimed at a broad audience potentially including mathematicians, students, and 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 [notices-booklist@ams.org](mailto:notices-booklist@ams.org).*

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

*Abel's Proof: An Essay on the Sources and Meaning of Mathematical Unsolvability*, by Peter Pesic. MIT Press, May 2003. ISBN 0-262-16216-4. (Reviewed March 2004.)

*Across the Board: The Mathematics of Chessboard Problems*, by John J. Watkins. Princeton University Press, April 2004. ISBN 0-691-11503-6.

*Adam Spencer's Book of Numbers*, by Adam Spencer. Four Walls Eight Windows, January 2004. ISBN 1-568-58289-7.

*After Math*, by Miriam Webster. Zinka Press, June 1997. ISBN 0-9647-1711-5. (Reviewed October 2003.)

*Alan Turing: Life and Legacy of a Great Thinker*, edited by Christof Teuscher. Springer, 2004. ISBN 3-540-20020-7.

*Alpha & Omega: The Search for the Beginning and End of the Universe*, by Charles Seife. Viking, July 2003. ISBN 0-670-03179-8.

*Automated Reasoning and the Discovery of Missing and Elegant Proofs*, by Larry Wos and Gail Pieper. Rinton Press, December 2003. ISBN 1-58949-023-1.

\* *Beyond Coincidence*, by Martin Plimmer and Brian King. Icon Books, March 2004. ISBN 1-840-46534-4.

*Beyond the Limit: The Dream of Sofya Kovalevskaya*, by Joan Spicci. Forge, August 2002. ISBN 0-765-30233-0. (Reviewed January 2004.)

*The Book of My Life*, by Girolamo Cardano. New York Review of Books

Classics Series/Granta. ISBN 1-590-17016-4.

*Calculated Risks: How to Know When Numbers Deceive You*, by Gerd Gigerenzer. Simon & Schuster, March 2003. ISBN 0-743-25423-6.

*California Dreaming: Reforming Mathematics Education*, by Suzanne M. Wilson. Yale Univ Press, January 2003. ISBN 0-300-09432-9. (Reviewed November 2003.)

*The Changing Shape of Geometry: Celebrating a Century of Geometry and Geometry Teaching*, edited by Chris Pritchard. Cambridge University Press, January 2003. ISBN 0-521-53162-4.

*Cogwheels of the Mind: The Story of Venn Diagrams*, by A. W. F. Edwards. Johns Hopkins University Press, April 2004. ISBN 0-801-87434-3.

*The Constants of Nature: From Alpha to Omega—The Numbers That Encode the Deepest Secrets of the Universe*, by John D. Barrow. Jonathan Cape, September 2002. Pantheon Books, January 2003. ISBN 0-375-42221-8.

*Correspondance Grothendieck-Serre*, Pierre Colmez and Jean-Pierre Serre, editors. Société Mathématique de France, 2001. ISBN 2-85629-104-X. (Reviewed October 2003.)

*Count Down: Six Kids Vie for Glory at the World's Toughest Math Competition*, by Steve Olson. Houghton Mifflin, April 2004. ISBN 0-618-25141-3. (Reviewed August 2004.)

*The Curious Life of Robert Hooke, the Man Who Measured London*, by Lisa Jardine. HarperCollins, February 2004. ISBN 0-060-53897-X.

*Einstein's Clocks, Poincaré's Maps: Empires of Time*, by Peter Galison. W.W. Norton & Company, August 2003. ISBN 0-393-02001-0.

*Everything and More: A Compact History of Infinity*, by David Foster Wallace. W. W. Norton, October 2003. ISBN 0-393-00338-8. (Reviewed June/July 2004.)

*The Fabric of the Cosmos*, by Brian Greene. Knopf, February 2004. ISBN 0-375-41288-3.

*Fields Medalists' Lectures*, edited by Sir Michael Atiyah and Daniel Iagolnitzer. World Scientific, 2nd edition, December 2003. ISBN 9-812-38259-3.

*Four Colors Suffice: How the Map Problem Was Solved*, by Robin Wilson. Princeton University Press, March 2003. ISBN 0-691-11533-8. (Reviewed February 2004.)

*The Fractal Murders*, by Mark Cohen. Mysterious Press, Warner Books, May 2004. ISBN 0-89296-799-4. (Reviewed October 2003.)

*From Newton to Hawking: A History of Cambridge University's Lucasian Professors of Mathematics*, edited by Kevin C. Knox and Richard Noakes. Cambridge University Press, November 2003. ISBN 0-521-66310-5.

*Galois' Theory of Algebraic Equations*, by Jean-Pierre Tignol. World Scientific Publishing. ISBN 981-02-4541-6

*Gamma: Exploring Euler's Constant*, by Julian Havil. Princeton University Press, May 2003. ISBN 0-691-09983-9. (Reviewed August 2004.)

*Geometry: Our Cultural Heritage*, by Audun Holme. Springer, April 2002. ISBN 3-540-41949-7. (Reviewed May 2004.)

*Gödel's Proof*, by Ernest Nagel and James R. Newman. New York University Press, revised edition, February 2002. ISBN 0-8147-5816-9. (Reviewed March 2004.)

*The Golden Ratio: The Story of Phi, the World's Most Astonishing Number*, by Mario Livio. Broadway Books, October 2002. ISBN 0-767-90815-5.

*A Handbook of Mathematical Discourse*, by Charles Wells. Infinity Publishing Company, 2003. ISBN 0-7414-1685-9. (Reviewed in this issue.)

*How Economics Became a Mathematical Science*, by E. Roy Weintraub. Duke University Press, June 2002. ISBN 0-822-32856-9.

*Imagining Numbers (particularly the square root of minus fifteen)*, by Barry Mazur. Farrar, Straus and Giroux, February 2003. ISBN 0-374-17469-5. (Reviewed November 2003.)

*Isaac Newton*, by James Gleick. Pantheon Books, May 2003. ISBN 0-375-42233-1. (Reviewed December 2003.)

*Infinity: the Quest to Think the Unthinkable*, by Brian Clegg. Carroll & Graf, December 2003. ISBN 0-786-71285-6.

*Information: The New Language of Science*, by Hans Christian von Baeyer. Weidenfeld & Nicolson, October 2003.

ISBN 0-297-60725-1 (hardcover) 0-753-81782-9 (paperback).

*Kepler's Conjecture: How Some of the Greatest Minds in History Helped Solve One of the Oldest Math Problems in the World*, by George G. Szpiro. John Wiley & Sons, January 2003. ISBN 0-471-08601-0.

*Linked: The New Science of Networks*, by Albert-László Barabási. Perseus Publishing, May 2002. ISBN 0-738-20667-9. (Reviewed February 2004.)

*Masters of Theory: Cambridge and the Rise of Mathematical Physics*, by Andrew Warwick. University of Chicago Press, July 2003. ISBN 0-226-87375-7.

*Math through the Ages: A Gentle History for Teachers and Others*, by William P. Berlinghoff and Fernando Q. Gouvêa. Oxtan House, 2002. ISBN 1-881929-21-3.

\* *The Mathematical Century: The 30 Greatest Problems of the Last 100 Years*, by Piergiorgio Odifreddi. Translated by Arturo Sangalli. Princeton University Press, May 2004. ISBN 0-691-09294-X.

*Mathematical Constants*, by Steven R. Finch. Cambridge University Press, August 2003. ISBN 0-521-81805-2.

*Mathematical Journeys*, by Peter D. Schumer. Wiley-Interscience, February 2004. ISBN 0-471-22066-3.

*Mathematicians as Enquirers: Learning about Learning Mathematics*, edited by Leone Burton. Kluwer, April 2004. Hardbound, ISBN 1-4020-7853-6; paperback, ISBN 1-4020-7859-5; eBook, ISBN 1-4020-7908-7.

*A Mathematician's Survival Guide: Graduate School and Early Career Development*, by Steven G. Krantz. AMS, August 2003. ISBN 0-821-83455-X. (Reviewed April 2004.)

*Mathematicians Under the Nazis*, by Sanford L. Segal. Princeton University Press, July 2003. ISBN 0-691-00451-X.

*Mathematics and Culture I*, edited by Michele Emmer. Springer, January 2004. ISBN 3-540-01770-4.

*Mathematics and War*, by Bernhelm Booss-Bavnbek and Jens Høyrup, editors. Birkhäuser, December 2003. ISBN 3-764-31634-9.

*Mathematics, Art, Technology, and Cinema*, edited by Michele Emmer and Mirella Manaresi. Springer, 2003. ISBN 3-540-00601-X.

*Mathematics by Experiment: Plausible Reasoning in the 21st Century*, by David Bailey, Jonathan Borwein. A K Peters, September 2003. ISBN 1-568-81136-5.

*Mathematics for the Imagination*, by Peter M. Higgins. Oxford University Press, November 2002. ISBN 0-198-60460-2.

*Mathematics in Nature: Modeling Patterns in the Natural World*, by John Adam. Princeton University Press, November 2003. ISBN 0-691-11429-3.

*The Mathematics of Juggling*, by Burkard Polster. Springer, November 2002. ISBN 0-387-95513-5. (Reviewed January 2004.)

*Memoirs of a Proof Theorist: Gödel and Other Logicians*, by Gaisi Takeuti. Translated by Mariko Yasugi and Nicholas Passell. World Scientific, February 2003. ISBN 981-238-279-8.

*Meta Math! The Quest for Omega*, by Gregory J. Chaitin. April 2004. Available at <http://www.cs.umaine.edu/~chaitin/omega.html>.

*More Mathematical Astronomy Morsels*, by Jean Meeus. Willmann-Bell Inc., 2002. ISBN 0-943396-743.

*The Music of the Primes: Searching to Solve the Greatest Mystery in Mathematics*, by Marcus Du Sautoy. HarperCollins, April 2003. ISBN 0-066-21070-4.

*Newton's Apple: Isaac Newton and the English Scientific Renaissance*, by Peter Aughton. Weidenfeld & Nicolson, October 2003. ISBN 0-297-84321-4.

*The Number  $\pi$* , by Pierre Eymard and Jean-Pierre Lafon. AMS, 2004. ISBN 0-8218-3246-8.

*On the Nature of Human Romantic Interaction*, by Karl Iagnemma. Dial Press, April 2003. ISBN 0-385-33593-8.

*Phase Change: The Computer Revolution in Science and Mathematics*, by Douglas S. Robertson. Oxford University Press, March 2003. ISBN 0-195-15748-6.

*Portraits of the Earth: A Mathematician Looks at Maps*, by Timothy G. Freeman. AMS, September 2002. ISBN 0-8218-3255-7.

*Predicting Presidential Elections and Other Things*, by Ray C. Fair. Stanford University Press, August 2002. ISBN 0-804-74509-9.

*Prime Obsession: Bernhard Riemann and the Greatest Unsolved Problem*, by John Derbyshire. Joseph Henry Press, March 2003. ISBN 0-309-08549-7.

*Probability Theory: The Logic of Science*, by E. T. Jaynes. Edited by G. Larry Bretthorst. Cambridge University Press, April 2003. ISBN 0-521-59271-2.

*Proofs from the Book*, by Martin Aigner and Günter M. Ziegler. Springer Verlag, third edition, December 2003. ISBN 3-540-40460-0.

*The Riemann Hypothesis: The Greatest Unsolved Problem in Mathematics*, by Karl Sabbagh. Farrar Straus & Giroux, April 2003. ISBN 0-374-25007-3.

*The Saga of Mathematics: A Brief History*, by Marty Lewinter and William Widulski. Prentice Hall, January 2002. ISBN 0-130-34079-0.

*Science in the Looking Glass*, by E. Brian Davies. Oxford University Press, August 2003. ISBN 0-19-852543-5.

*Shooting the Sun*, by Max Byrd. Bantam, December 2003. ISBN 0-553-80208-9.

*Signs of the Inka Khipu: Binary Coding in the Andean Knotted-String Records*, by Gary Urton. University of Texas Press, August 2003. ISBN 0-292-78540-2.

*Six Degrees: The Science of a Connected Age*, by Duncan J. Watts. W. W. Norton & Company, February 2003. ISBN 0-393-04142-5. (Reviewed February 2004.)

*Strange Curves, Counting Rabbits, and Other Mathematical Explorations*, by Keith Ball. Princeton University Press, November 2003. ISBN 0-691-11321-1.

*Sync: The Emerging Science of Spontaneous Order*, by Steven Strogatz. Hyperion, February 2003. ISBN 0-786-86844-9. (Reviewed March 2004.)

*Travels in Four Dimensions: The Enigmas of Space and Time*, by Robin Le Poidevin. Oxford University Press, February 2003. ISBN 0-19-875254-7.

*Turing (A Novel about Computation)*, by Christos H. Papadimitriou. MIT Press, November 2003. ISBN 0-262-16218-0.

*What Is Thought?*, by Eric B. Baum. MIT Press, January 2004. ISBN 0-262-02548-5.

*What the Numbers Say: A Field Guide to Mastering Our Numerical World*, by Derrick Niederman and David Boyum. Broadway Books, April 2003. ISBN 0-767-90998-4.

*When Least Is Best: How Mathematicians Discovered Many Clever Ways to Make Things as Small (or as Large) as Possible*, by Paul J. Nahin. Princeton University Press, November 2003. ISBN 0-691-07078-4.