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

February 15, 2005: Nominations for Clay Mathematics Institute Liftoff Program. See the website `http://claymath.org/fas/liftoff_fellows/`.

February 28, 2005: Applications for Clay Mathematics Institute 2005 Summer School. See `http://www.claymath.org/summerschool`; telephone: 617-995-2600; email: `summerschool@claymath.org`.

March 1, 2005: Applications for Summer Program for Women in Mathematics. See "Mathematics Opportunities" in this issue.

March 1, 2005: Applications for summer program of the Christine Mirzayan Science and Technology Policy Graduate Fellowship Program of the National Academies. See `http://www7.nationalacademies.org/policyfellows` or contact The National Academies Christine Mirzayan Science and Technology Policy

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—*December 2004, p. 1365*

AMS Ethical Guidelines—*June/July 2004, p. 675*

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

AMS Officers and Committee Members—*October 2004, p. 1082*

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

Information for *Notices* Authors—*June/July 2004, p. 670*

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

National Science Board—*January 2005, p. 76*

New Journals for 2003—*June/July 2004, p. 672*

NRC Board on Mathematical Sciences and Their Applications—*March 2005, p. 361*

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

NSF Mathematical and Physical Sciences Advisory Committee—*February 2005, p. 261*

Program Officers for Federal Funding Agencies—*October 2004, p. 1078 (DoD, DoE); December 2004, p. 1368 (NSF)*

Graduate Fellowship Program, 500 Fifth Street, NW, Room 508, Washington, DC 20001; telephone: 202-334-2455; fax: 202-334-1667.

March 1, 2005: Applications for EDGE Summer Program. See http://www.edgeforwomen.org/index.html.

March 1, 2005: Applications for IMA New Directions visiting professorships at IMA. See http://www.ima.umn.edu/docs/membership.html.

March 14, 2005: Collaboration in Mathematical Geosciences. See "Mathematics Opportunities" in this issue.

March 31, 2005: Nominations for Information-Based Complexity Prize. See "Mathematics Opportunities" in this issue.

April 1, 2005: Applications for IMA New Directions Short Course. See http://www.ima.umn.edu/new-directions/2005NDshort-course/NDcourse-app.php.

April 4, 2005: Scientific Computing Research Equipment in the Mathematical Sciences (SCREMS). See "Mathematics Opportunities" in this issue.

April 8, 2005: Proposals for 2005 NSF-CBMS Regional Conferences. See http://www.cbms.org or contact: Conference Board of the Mathematical Sciences, 1529 Eighteenth Street, NW, Washington, DC 20036; telephone: 202-293-1170; fax: 202-293-3412; email: kolbe@math.georgetown.edu or rosier@math.georgetown.edu.

April 15, 2005: Project NExT Fellowships. See "Mathematics Opportunities" in this issue.

May 1, 2005: Applications for AWM Travel Grants. See the AWM website, http://www.awm-math.org/travelgrants.html; telephone: 301-405-7892; email: awm@math.umd.edu.

May 31, 2005: Registration for International Mathematics Competition for University Students. See "Mathematics Opportunities" in this issue.

June 1, 2005: Applications for fall program of the Christine Mirzayan Science and Technology Policy Graduate Fellowship Program of the National Academies. See http://www7.nationalacademies.org/policyfellows or contact The National Academies Christine Mirzayan Science and Technology Policy Graduate Fellowship Program, 500 Fifth Street, NW, Room 508, Washington, DC 20001; telephone: 202-334-2455; fax: 202-334-1667.

June 2, 2005: Applications for NSF University-Industry Cooperative Research Programs in the Mathematical Sciences (UICRP). See http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf05504.

June 30, 2005: Nominations for the 2005 Fermat Prize. See http://www.ups-tlse.fr/ACTUALITES/Sciences/Prix_Fermat_2004/Areglement.html.

July 31, 2005: Nominations and applications for the Monroe H. Martin Prize. Contact R. Roy, Director, Institute for Physical Science and Technology, University of Maryland, College Park, MD 20742-2431.

August 1, 2005: Submissions for Competition 2005 of the European Mathematical Society. See "Mathematics Opportunities" in this issue.

October 1, 2005: Nominations for Lucien Godeaux Prize. See "Mathematics Opportunities" in this issue.

January 1, 2006: Submissions for Competition 2006 of the European Mathematical Society. See "Mathematics Opportunities" in this issue.

January 1, 2006: Applications for ICM 2006 Travel Grants. See http://www.icm2006.org or email: grants@icm2006.org.

Board on Mathematical Sciences and Their Applications

The Board on Mathematical Sciences and Their Applications (BMSA) was established in November 1984 to lead activities in the mathematical sciences at the National Research Council (NRC). The mission of BMSA is to support and promote the quality and health of the mathematical sciences and their benefits to the nation. Below are the current BMSA members.

Tanya Styblo Beder, Tribeca Investments LLC

Patrick L. Brockett, University of Texas at Austin

Avarinda Chakravarti, Institute of Genetic Medicine

Philip Colella, Lawrence Berkeley National Laboratory

Lawrence Craig Evans, University of California, Berkeley

John E. Hopcroft, Cornell University

Robert E. Kass, Carnegie Mellon University

Kathryn B. Laskey, George Mason University

C. David Levermore, University of Maryland

Robert Lipshutz, Affymetrix, Inc.

Charles M. Lucas, American International Companies

Charles Manski, Northwestern University

David McLaughlin, New York University (chair)

Joyce R. McLaughlin, Rensselaer Polytechnic Institute

Prabhakar Raghavan, Stanford University

Stephen M. Robinson, University of Wisconsin, Madison

Edward J. Wegman, George Mason University

Detlof von Winterfeldt, University of Southern California

The postal address for BMSA is: Board on Mathematical Sciences and Their Applications, National Academy of Sciences, Room K974, 500 Fifth Street, NW, Washington, DC 20001; telephone: 202-334-2421; fax: 202-334-2422/2101; email: bms@nas.edu; World Wide Web: http://www7.nationalacademies.org/bms/BMSA_Members.html.

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.

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

13: The Story of the World's Most Popular Superstition, by Nathaniel Lachenmeyer. Thunder's Mouth Press, October 2004. ISBN 1-568-58306-0.

1089 and All That. A Journey into Mathematics, by David Acheson. Oxford University Press, July 2002. ISBN 0-19-851623-1. (Reviewed February 2005.)

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.

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

Alfred Tarski: Life and Logic, by Anita Burdman Feferman and Solomon Feferman. Cambridge University Press, October 2004. ISBN 0-521-80240-7.

Alpha and 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.

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.

Constantin Carathéodory: Mathematics and Politics in Turbulent Times, by M. Georgiadou. Springer, September 2004. ISBN 3-540-44258-8.

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. (Reviewed November 2004.)

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.

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.

From Eudoxus to Einstein: A History of Mathematical Astronomy, by C. M. Linton. Cambridge University Press, August 2004. ISBN 0-521-82750-7.

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.

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.)

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. (Reviewed in this issue.)

A Handbook of Mathematical Discourse, by Charles Wells. Infinity Publishing Company, 2003. ISBN 0-7414-1685-9. (Reviewed September 2004.)

The Heart of Mathematics: An Invitation to Effective Thinking, by Edward B. Burger and Michael Starbird. Key College Publishing (Springer-Verlag), April 2000. ISBN 0-555953-407-9. (Reviewed February 2005.)

Karl Pearson: The Scientific Life in a Statistical Age, by Theodore M. Porter. Princeton University Press, February 2004. ISBN 0-691-11445-5.

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. Wiley, January 2003. ISBN 0-471-08601-0. (Reviewed January 2005.)

The Knot Book: An Elementary Introduction to the Mathematical Theory of Knots, Colin C. Adams. AMS, September 2004. ISBN 0-8218-3678-1.

The Liar Paradox and the Towers of Hanoi: The Ten Greatest Math Puzzles of All Time, by Marcel Danesi. Wiley, August 2004. ISBN 0-471-64816-7.

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 Magic: How to Master Everyday Math Problems, by Scott Flansburg. Perennial Currents, revised edition, August 2004. ISBN 0-060-72635-0.

Math through the Ages: A Gentle History for Teachers and Others, by William P. Berlinghoff and Fernando Q. Gouvêa. Oxton House, 2002. ISBN 1-881929-21-3. (Reviewed October 2004.)

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

* *A Mathematician at the Ballpark: Odds and Probabilities for Baseball Fans*, by Ken Ross. Pi Press, July 2004. ISBN 0-131-47990-3.

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 0-8218-3455-X. (Reviewed April 2004.)

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

Mathematics: A Very Short Introduction, by Timothy Gowers. Oxford University Press, October 2002. ISBN 0-192-85361-9. (Reviewed February 2005.)

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

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

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

* *The (Mis)Behavior of Markets: A Fractal View of Risk, Ruin and Reward*, by Benoit Mandelbrot and Richard Hudson. Basic Books, August 2004. ISBN 0-465-04355-0.

* *More Damned Lies and Statistics: How Numbers Confuse Public Issues*, by Joel Best. University of California Press, August 2004. ISBN 0-520-23830-3.

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.

The Number π, by Pierre Eymard and Jean-Pierre Lafon. AMS, 2004. ISBN 0-8218-3246-8.

Number Theory from an Analytic Point of View, by Badih Ghusayni. Komati, December 2003. ISBN 9953-0-0282-7.

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. Feeman. AMS, September 2002. ISBN 0-8218-3255-7.

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.

The Reader of Gentlemen's Mail: Herbert O. Yardley and the Birth of American Codebreaking, by David Kahn. Yale University Press, March 2004. ISBN 0-300-09846-4.

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.

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.

Strange Curves, Counting Rabbits, and Other Mathematical Explorations, by Keith Ball. Princeton University Press, November 2003. ISBN 0-691-11321-1. (Reviewed in December 2004.)

Towards a Philosophy of Real Mathematics, by David Corfield. Oxford University Press, April 2003. ISBN 0-521-81722-6.

The Universal Book of Mathematics: From Abracadabra to Zeno's Paradoxes, by David Darling. Wiley, July 2004. ISBN 0-471-27047-4.

* *A World without Time: The Forgotten Legacy of Gödel and Einstein*, by Palle Yourgrau. Basic Books, January 2005. ISBN 0-465-09293-4.

You Can Do the Math: Overcome Your Math Phobia and Make Better Financial Decisions, by Ron Lipsman. Praeger Publishers, November 2004. ISBN 0-275-98341-2.