

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

December 15, 2004: Applications for NRC-Ford Foundation Postdoctoral Fellowships. See "Mathematics Opportunities" in this issue.

December 20, 2004: NSA grants in quantum computing algorithms. See <http://www.nas.gov/msp/msp00002.cfm>.

December 31, 2004: Supporting references for nominations for Alan T. Waterman Award. See the website

<http://www.nsf.gov/pubs/2004/nsf0451/nsf0451.pdf>.

January 1, 2005: Entries for *Cryptologia* undergraduate paper competitions. See <http://www.dean.usma.edu/math/pubs/cryptologia/>.

January 5, 2005: Applications for fellowships for the IMA 2005-2006 thematic program. See <http://www.ima.umn.edu/docs/membership.html>.

January 7, 2005: Applications for National Defense Science and

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 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 2004, p. 1078 (DoD, DoE); December 2004, p. 1368 (NSF)

Engineering Graduate Fellowships. See the website <http://www.asee.org/ndseg/preface.cfm>.

January 10, 2005: Applications for AAUW Selected Professions Fellowships. See http://www.aauw.org/fga/fellowships_grants/selected.cfm or contact the AAUW Educational Foundation, 1111 Sixteenth St. N.W., Washington, DC 20036; telephone: 800-326-2289 (AAUW); fax: 202-872-1425; email: info@aauw.org.

January 13, 2005: Proposals for ONR Young Investigator Program. See "Mathematics Opportunities" in this issue.

January 31, 2005: Applications for postdoctoral fellowships at the Mittag-Leffler Institute. See the website <http://www.ml.kva.se/grants>.

February 1, 2005: Applications for AWM Collaborative Research Grants for Women. See "Mathematics Opportunities" in this issue.

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

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

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

March 1, 2005: Applications for IMA New Directions visiting professorships at IMA. See "Mathematics Opportunities" in this issue.

April 1, 2005: Applications for IMA New Directions Short Course. 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.

June 2, 2005: Applications for NSF University-Industry Cooperative Research Programs in the Mathematical Sciences (UICRP). See "Mathematics Opportunities" in this issue.

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: Applications or nominations for Monroe H. Martin Prize. 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.

National Science Board

The National Science Board is the policymaking body of the National Science Foundation. Listed below are the current members of the NSB. For further information, visit the website <http://www.nsf.gov/nsb/>.

Dan Arvizu (consultant)
Chief Technology Officer for
Industrial and Federal Businesses
CH2M Hill Companies, Ltd.
Executive Director for Energy
and Technologies
University of Chicago

Barry C. Barish
Linde Professor of Physics
California Institute of Technology

Steven Beering
President Emeritus
Purdue University

Ray Bowen
Former President
Texas A&M University

G. Wayne Clough
President
Georgia Institute of Technology

Kelvin K. Droegemeier
Regents' Professor of Meteorology
Roger and Sherry Teigen
Presidential Professor
Director, Center for Analysis
and Prediction of Storms
University of Oklahoma

Delores M. Etter
Professor of Electrical Engineering
United States Naval Academy

Nina V. Fedoroff
Willaman Professor of Life

Sciences
Director, Life Sciences Consortium
Director, Biotechnology Institute
Pennsylvania State University

Kenneth M. Ford
Director, Institute for Human
and Machine Cognition
University of West Florida

Daniel E. Hastings
Associate Director, Engineering
Systems Division
Massachusetts Institute of
Technology

Elizabeth Hoffman
President
University of Colorado System

Louis Lanzerotti
Distinguished Professor of Physics
Center for Solar Terrestrial
Research
Department of Physics
New Jersey Institute of Technology

Alan I. Leshner
Chief Executive Officer
American Association for the
Advancement of Science

Jane Lubchenco
Wayne and Gladys Valley Professor
of Marine Biology
Distinguished Professor
of Zoology
Oregon State University

Diana S. Natalicio (vice chair)
President
University of Texas at El Paso

Douglas D. Randall
Professor of Biochemistry
Director, Interdisciplinary Program
on Plant Biochemistry-Physiology
University of Missouri

Michael G. Rossmann
Hanley Distinguished Professor
of Biological Sciences
Purdue University

Daniel Simberloff
Nancy Gore Hunger Professor of
Environmental Science
Department of Ecology and
Evolutionary Biology

University of Tennessee

Jon C. Strauss
President
Harvey Mudd College
Kathryn D. Sullivan
President and CEO
Center of Science and Industry

Jo Anne Vasquez
Mesa Public Schools (Retired)

Warren M. Washington (chair)
Senior Scientist and Section Head
National Center for Atmospheric
Research

John A. White Jr.
Chancellor
University of Arkansas

Mark S. Wrighton
Chancellor
Washington University in St. Louis

Arden L. Bement Jr.
(member ex officio)
Acting Director and Director-
Designate
National Science Foundation

The contact information for the Board is: National Science Board, National Science Foundation, 4201 Wilson Boulevard, Suite 1225, Arlington, VA 22230; telephone: 703-292-5111; World Wide Web: <http://www.nsf.gov/nsb/>.

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.

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.

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

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 Jagolnitzer. 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.)

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.)

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 September 2004.)

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

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).

Just Six Numbers: The Deep Forces That Shape the Universe, by Martin Rees. Basic Books, May 2001. ISBN 0-465-03673-2. (Reviewed November 2004.)

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. John Wiley & Sons, January 2003. ISBN 0-471-08601-0. (Reviewed in this issue.)

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

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

Mathematics and War, edited by Bernhelm Booss-Bavnbek and Jens Høyrup. 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 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>.

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. Harper-Collins, 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 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.

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. Feeman. 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 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.

Six Degrees: The Science of a Connected Age, by Duncan J. Watts. W. W. Norton, 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. (Reviewed in December 2004.)

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

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