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, book reviews and other communications, columns for "Another Opinion", and "Forum" pieces. The editor is also the person to whom to send news of unusual interest about 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.sunysb.edu in the case of the editor and notices@ams.org in the case of the managing editor. The fax numbers are 631-751-5730 for the editor and 401-331-3842 for the managing editor. Postal addresses may be found in the masthead.

Upcoming Deadlines

January 14, 2000: Applications for the 2000–01 "Mathematics in Multimedia" program of the IMA. See the Web site http://www.ima.umn.edu/programs.html, or contact the Institute for Mathematics and its Applications, University of Minnesota, 400 Lind Hall, 207 Church Street, Minneapolis, MN 55455; telephone 612-624-6066; e-mail to Fred Dulles, Associate Program Director, at dulles@ima.umn.edu.

January 15, 2000: First competition for NRC Research Associateships. See the Web site http://www.national-academies.org/rap/, or contact National Research Council, Associateship Programs (TJ 2114/D3), 2101 Constitution Avenue, NW, Washington, DC 20418; telephone 202-334-2760; fax 202-334-2759; e-mail: rap@nas.edu.

January 15, 2000: Applications for NIST/NRC Postdoctoral Research Associateships Program. See the Web site http://www.nist.gov/oiaa/postdoc.htm, or contact Joy Brooks, Information Specialist, NIST, telephone 301-975-3071; or Jack J. Hsia, Chief of Academic Affairs, NIST, telephone 301-975-3067; or write to the National Research Council, Associateship Programs-TJ2114, 2101 Constitution Avenue, NW, Washington, DC 20418; telephone 202-334-2760.

January 18, 2000: NSF SCREMS and MRI research equipment programs. See the Web site http://www.nsf.gov/cgi-bin/getpub?nsf99154. For the MRI competition see http://www.nsf.gov/od/oia/programs/mri/start.htm.

January 31, 2000: Applications for postdoctoral fellowships for the Mittag-Leffler Academic Year in Mathe-

Where to Find It

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

matical Logic. See "Mathematics Opportunities" in this issue.

February 1, May 1, October 1, 2000: Applications for NSF/AWM Travel Grants and Mentoring Travel Grants for Women. See the Web site http://www.awm-math.org/travelgrants.html, or telephone 301-405-7892, or send e-mail to awm@math.umd.edu.

February 7, 2000: A group of mathematical sciences departments has agreed *not to require* applicants to make decisions about postdoctoral job offers prior to this deadline. The list of participating departments (and more information) is available on the Web site http://ams.org/employment/postdoc-offers.html.

February 15, 2000: Nominations for the Richard C. DiPrima Prize. Contact Ronald A. DeVore, Chair, DiPrima Prize Selection Committee, c/o A. G. Bogardo, Society for Industrial and Applied Mathematics, 3600 University City Science Center, Philadelphia, PA 19104-2688; telephone 215-382-9800; fax 215-386-7999; e-mail: bogardo@siam.org.

March 31, 2000: Nominations for the 2000 Prize for Achievement in Information-Based Complexity. Contact Joseph Traub, traub@cs.columbia.edu.

April 14, 2000: Applications for Project NExT for 2000-01. See Project NExT Web site http://archives.math.utk.edu/projnext/. See article on page 217 in this issue

April 15, 2000: Applications for the IMA Workshop on "Mathematical Modeling in Industry". See the Web site http://www.ima.umn.edu/modeling/ or contact ima-staff@ima.umn.edu.

April 15, 2000: Second competition for NRC Research Associateships. See the Web site http://www.national-academies.org/rap/, or contact National Research Council, Associateship Programs (TJ 2114/D3), 2101 Constitution Avenue, NW, Washington, DC 20418; telephone 202-334-2760; fax 202-334-2759; e-mail: rap@nas.edu.

July 31, 2000: Nominations for the Monroe Martin Prize. See "Mathematics Opportunities" in this issue.

August 15, 2000: Third competition for NRC Research Associateships. See the Web site http://www.national-academies.org/rap/, or contact National Research Council, Associateship Programs (TJ 2114/D3), 2101 Constitution Avenue, NW, Washington, DC 20418; telephone 202-334-2760; fax 202-334-2759; e-mail: rap@nas.edu.

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.

The Algorithmic Beauty of Sea Shells (Virtual Laboratory), by Hans Meinhardt, Przemyslaw Prusinkiewicz, and Deborah R. Fowler. Springer-Verlag, May 1998. ISBN 3-540-63919-5.

The Applicability of Mathematics As a Philosophical Problem, by Mark Steiner. Harvard University Press, November 1998. ISBN 0-674-04097-X.

The Arithmetic of Life, by George Shaffner. Ballantine Books, August 1999. ISBN 0-345-42631-2.

The Code Book: The Evolution of Secrecy from Mary, Queen of Scots to Quantum Cryptography, by Simon Singh. Doubleday, October 1999. ISBN 0-385-49531-5.

Complexity and Information, by J. F. Traub, Arthur G. Werschulz, and Luigi A. Radicati di Brozolo. Cambridge University Press, December 1998. ISBN 0-52148-005-1 (hardcover), 0-521-48506-1 (paperback).

Cryptonomicon, by Neal Stephenson. Avon Books, May 1999. ISBN 0-380-97346-4. (Reviewed December 1999.)

Drawbridge Up: Mathematics—A Cultural Anathema (Zugbrücke ausser Betrieb: Die Mathematik im Jenseits der Kultur), by Hans Magnus Enzensberger. A K Peters, December 1999. ISBN 1-56881-099-7.

The Eightfold Way: The Beauty of Klein's Quartic Curve, edited by Silvio Levy. Cambridge University Press, March 1999. ISBN 0-521-66066-1.

The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory, by Brian Greene. W. W. Norton & Company, February 1999. ISBN 0-393-04688-5.

Emergence: From Chaos to Order, by John Holland. Perseus Press, April 1999. ISBN 0-738-20142-1.

Euclid: The Creation of Mathematics, by Benno Artmann. Springer-Verlag, June 1999. ISBN 0-387-98423-2.

Fermat's Last Theorem for Amateurs, by Paulo Ribenboim. Springer-Verlag, February 1999. ISBN 0-387-98508-5.

Fragile Dominion: Complexity and the Commons, by Simon Levin. Perseus Books, June 1999. ISBN 0-738-20111-1.

Geometry Civilized: History, Culture, and Technique, by J. L. Heilbron. Oxford University Press, August 1998. ISBN 0-198-50078-5.

A History of the Circle: Mathematical Reasoning and the Physical Universe, by Ernest Zebrowski Jr. Rutgers University Press, August 1999. ISBN 0-813-52677-9.

The Importance of Being Fuzzy and Other Insights from the Border Between Math and Computers, by Arturo Sangalli. Princeton University Press, December 1998. ISBN 0-691-00144-8.

Imaginary Numbers: An Anthology of Marvelous Mathematical Stories, Diversions, Poems, and Musings, edited by William Frucht. John Wiley & Sons, October 1999. ISBN 0-471-33244-5.

An Imaginary Tale: The Story of $\sqrt{-1}$, by Paul J. Nahin. Princeton University Press, November 1998. ISBN 0-691-02795-1. (Reviewed November 1999.)

In the Light of Logic, by Solomon Feferman. Oxford University Press, September 1998. ISBN 0-19-508030-0.

The Invention of Infinity: Mathematics and Art in the Renaissance, by J. V. Field. Oxford University Press,

May 1997. ISBN 0-198-52394-7. (Reviewed January 2000.)

Jacques Hadamard, A Universal Mathematician, by Vladimir Mazýa and Tatyana Shaposhnikova. AMS/London Mathematical Society, January 1998. ISBN 0-8218-0841-9.

James Joseph Sylvester: Life and Work in Letters, by Karen Hunger Parshall. Oxford University Press, October 1998. ISBN 0-198-50391-1.

John von Neumann: The Scientific Genius Who Pioneered the Modern Computer, Game Theory, Nuclear Deterrence, and Much More, by Norman Macrae. AMS, October 1999. ISBN 0-8218-2064-8.

Knowing and Teaching Elementary Mathematics: Teachers' Understanding of Fundamental Mathematics in China and the United States, by Liping Ma. Lawrence Erlbaum Publishers, March 1999. ISBN 0-8058-2908-3 (hardcover), 0-8058-2909-1 (paper). (Reviewed September 1999.)

The Language of Mathematics: Making the Invisible Visible, by Keith Devlin. W. H. Freeman and Company, October 1998. ISBN 0-716-73379-X.

The Magical Maze: Seeing the World through Mathematical Eyes, by Ian Stewart. John Wiley & Sons, April 1998. ISBN 0-471-19297-X.

The Mathemagician and the Pied Puzzler: A Collection in Tribute to Martin Gardner, edited by Elwyn Berlekamp and Tom Rodgers. A K Peters, March 1999. ISBN 1-568-81075-X.

A Mathematical Mystery Tour: Discovering the Truth and Beauty of the Cosmos, by A. K. Dewdney. John Wiley & Sons, March 1999. ISBN 0-471-23847-3. (Reviewed in this issue.)

Mathematics and Mathematicians: Mathematics in Sweden before 1950, by Lars Gårding. AMS/London Mathematical Society, 1998. ISBN 0-8218-0612-2.

Mathematics for the Curious, by Peter M. Higgins. Oxford University Press, July 1998. ISBN 0-192-88072-1.

The Mathematics of Ciphers: Number Theory and RSA Cryptography, by S. C. Coutinho. A K Peters, November 1998. ISBN 1-568-81082-2.

Mathematics Without Borders: A History of the International Mathematical Union, by Olli Lehto. Springer-Verlag, February 1998. ISBN 0-387-98358-9. (Reviewed November 1999.)

The Moment of Proof: Mathematical Epiphanies, by Donald C. Benson. Oxford University Press, March 1999. ISBN 0-195-11721-2.

Moral Calculations: Game Theory, Logic, and Human Frailty, by László Mérő. Copernicus-Springer Verlag, July 1998. ISBN 0-387-98419-4.

Mystic, Geometer, and Intuitionist: The Life of L. E. J. Brouwer, by Dirk Van Dalen. Oxford University Press, April 1999. ISBN 0-198-50297-4.

The Nature of Mathematical Modeling, by Neil Gershenfeld. Cambridge University Press, February 1999. ISBN 0-521-57095-6.

New Directions in the Philosophy of Mathematics: An Anthology, Thomas Tymoczko, Editor. Princeton University Press, revised edition, January 1998. ISBN 0-691-03498-2.

Noeuds: Genèse d'une théorie mathématique (Knots: Genesis of a Mathematical Theory), by Alexei Sossinsky (in French). Seuil, 1999. ISBN 2-02-032089-4.

The Number Devil, by Hans Magnus Enzensberger. Metropolitan Books, October 1998. ISBN 0-805-05770-6. (Reviewed January 2000.)

The Number Sense: How the Mind Creates Mathematics, by Stanislas Dehaene. Oxford University Press, October 1997. ISBN 0-195-11004-8.

Once Upon a Number: The Hidden Mathematical Logic of Stories, by John Allen Paulos. Basic Books, November 1998. ISBN 0-465-05158-8. (Reviewed September 1999.)

Philosophy of Mathematics: An Introduction to a World of Proofs and Pictures, by James Robert Brown. Routledge, August 1999. ISBN 0-415-12274-0.

Pioneers of Representation Theory: Frobenius, Burnside, Schur, and Brauer, by Charles W. Curtis. AMS/London Mathematical Society, October 1999. ISBN 0-8218-9002-6.

The Queen of Mathematics: A Historically Motivated Guide to Number Theory, by Jay R. Goldman. A K Peters, November 1997. ISBN 1-568-81006-7.

Reasoning with the Infinite: From the Closed World to the Mathematical Universe, by Michel Blay (translated by M. B. DeBevoise). University of Chicago Press, December 1998. ISBN 0-226-05834-4.

Shadows of the Circle: Conic Sections, Optimal Figures and Non-Euclidean Geometry, by Vagn Lundsgaard Hansen. World Scientific Publishing Company, November 1998. ISBN 9-810-23418-X.

Slicing Pizzas, Racing Turtles, and Further Adventures in Applied Mathematics, by Robert B. Banks. Princeton University Press, September 1999. ISBN 0-691-05947-0.

Small Worlds: The Dynamics of Networks between Order and Randomness, by Duncan J. Watts. Princeton University Press, November 1999. ISBN 0-691-00541-9.

Statistics on the Table: The History of Statistical Concepts and Methods, by Stephen M. Stigler. Harvard University Press, November 1999. ISBN 0-674-83601-4.

Stephen Smale: The Mathematician Who Broke the Dimension Barrier, by Steve Batterson. AMS, February 2000. ISBN 0-8218-2045-1.

Tracking the Automatic Ant, and Other Mathematical Explorations, by David Gale. Springer-Verlag, June 1998. ISBN 0-387-98272-8.

Turing and the Computer (The Big Idea), by Paul Strathern. Anchor Books, April 1999. ISBN 0-385-49243-X.

What Counts: How Every Brain Is Hardwired for Math, by Brian Butterworth. Free Press, August 1999. ISBN 0-684-85417-1.

What Is Mathematics, Really?, by Reuben Hersh. Oxford University Press, August 1997. ISBN 0-19-511368-3. (Reviewed October 1999.)

What Is Random?: Discovering Chance and Order in Mathematics and the World by Edward J. Beltrami. Springer-Verlag, August 1999. ISBN 0-387-98737-1.

What's Happening in the Mathematical Sciences, 1998-1999, by Barry Cipra. AMS, December 1998. ISBN 0-821-80766-8.

Why Do Buses Come in Threes?, by Rob Eastaway and Jeremy Wyndham. John Wiley & Sons, May 1999. ISBN 0-471-34756-6.

The World According to Wavelets, by Barbara Burke Hubbard. A K Peters, second edition, April 1998. ISBN 1-568-81072-5. (Reviewed October 1999).