
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 ams.org in the case of the managing editor. The fax numbers are 516-751-5730 for the editor and 401-331-3842 for the managing editor. Postal addresses may be found in the masthead.

Upcoming Deadlines

November 1, 1999: Deadline for applications for the Fulbright Scholar

Program international education and academic administrator seminars. For more information contact the USIA Fulbright Scholar Program, Council for International Exchange of Scholars, 3007 Tilden Street, NW, Suite 5L, Box GNEWS, Washington, DC 20008-3009; telephone: 202-686-7877; World Wide Web: <http://www.cies.org/>.

November 1, 1999: Deadline for applications for travel grants to ICME-9. Further information on application and selection criteria are available from the NCTM, Department E, 1906 Association Drive, Reston, VA 20191-1593 (telephone: 703-620-9840, extension 2112); or from the NCTM Web site at <http://www.nctm.org/icme9/>.

December 1, 1999: Deadline for applications for American Mathematical Society Centennial Fellowships. For more information and application

forms, write to the Executive Director, American Mathematical Society, P.O. Box 6248, Providence, RI 02940-6248; or send electronic mail to ams@ams.org; or call 401-455-4106. Application forms are also available via the Internet at <http://www.ams.org/employment/>.

December 15, 1999: Deadline for applications for support for summer 2000 programs for the AMS Epsilon Program. For details see "Mathematics Opportunities" in this issue.

January 1, 2000: Deadline for applications for the Fulbright Scholar Program NATO advanced research fellowships and institutional grants. For more information contact the USIA Fulbright Scholar Program, Council for International Exchange of Scholars, 3007 Tilden Street, NW, Suite 5L, Box GNEWS, Washington, DC 20008-3009;

Where to Find It

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

AMS e-mail addresses

November 1999, p. 1267

AMS Ethical Guidelines

June 1995, p. 694

AMS officers and committee members, November 1999, p. 1269

Board on Mathematical Sciences and Staff

April 1999, p. 479; June/July 1999, p. 696

Bylaws of the American Mathematical Society

November 1999, p. 1250

Mathematics Research Institutes contact information

May 1999, p. 580; August 1999, p. 804

National Science Board

March 1999, p. 361

NSF Mathematical and Physical Sciences Advisory Committee

March 1999, p. 362

Officers of the Society 1997 and 1998 (Council, Executive Committee, Publications Committees, Board of Trustees)

May 1999, p. 583

Program officers for federal funding agencies (DoD, DoE, NSF)

October 1999, p. 1075, November 1999, p. 1247

telephone: 202-686-7877; World Wide Web: <http://www.cies.org/>.

January 14, 2000: Deadline for applications for the 2000-01 "Mathematics in Multimedia" program of the IMA. For details, see the IMA's Web site at <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: Deadline for applications for NIST/NRC Postdoctoral Research Associateships Program. Further information may be obtained from the NIST Web site, <http://www.nist.gov/oiaa/postdoc.htm>; or by contacting 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 31, 2000: Deadline for applications for travel grant support for the special meeting Mathematical Challenges of the 21st Century, August 7-12, 2000, in Los Angeles. For details see "Mathematics Opportunities" in this issue.

February 1, 2000: Deadline for applications for NSF/AWM Mentoring Travel Grants for Women. Further information may be obtained by telephone at 301-405-7892; or by e-mail at awm@math.umd.edu.

February 1, 2000: Deadline for applications for NSF/AWM Travel Grants for Women. For further information and details on applying, see the AWM Web site, <http://www.awm-math.org/travelgrants.html>; or telephone 301-405-7892; or send e-mail to awm@math.umd.edu.

February 15, 2000: Deadline for nominations for the Richard C. DiPrima Prize. For details see "Mathematics Opportunities" in this issue.

NSF Division of Mathematical Sciences

Listed below are names, e-mail addresses, and telephone numbers for

the program directors for the coming academic year in the Division of Mathematical Sciences of the National Science Foundation.

Algebra and Number Theory

Joseph Brennan
703-306-1884
jbrennan@nsf.gov

Robert Perlis
703-306-1876
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Analysis Program
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Dmitry Khavinson
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ppolyako@nsf.gov

Applied Mathematics
Hans Engler
703-306-1870
hengler@nsf.gov

Deborah F. Lockhart
703-306-1882
dlockhar@nsf.gov

Jong-Shi Pang
703-306-1877
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Henry Warchall
703-306-0565, ext. 1977
hwarchal@nsf.gov

Computational Mathematics
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703-306-1878
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Infrastructure Program
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703-306-1874
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Statistics and Probability
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703-306-1885
kcrank@nsf.gov

William Smith
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wbsmith@nsf.gov

James L. Rosenberger
703-306-1883
jrosenbe@nsf.gov

Topology and Foundations
Ralph Krause
703-306-1886
rkrause@nsf.gov

Benjamin Mann
703-306-1886
bmenn@nsf.gov

Gerard Venema
703-306-1887
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Geometric Analysis
Benjamin Mann
703-306-1886
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Christopher Stark
703-306-1881
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The administrative staff includes:

Division Director
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Executive Officer
Bernard R. McDonald
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bmcdona1@nsf.gov

Administrative Officer
Tyzcer L. Henson
703-306-1873
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The mailing address is: Division of Mathematical Sciences, National Science Foundation, Room 1025, 4201

Wilson Boulevard, Arlington, VA 22230; telephone: 703-306-1870. The address for the Division's World Wide Web server is <http://www.nsf.gov/mps/dms/>.

NSF Mathematics Education Staff

The Directorate for Education and Human Resources (EHR) of the National Science Foundation (NSF) sponsors a range of programs that support educational projects in mathematics, science, and engineering. Listed below are the names, telephone numbers, and e-mail addresses of those EHR program officers whose field is in the mathematical sciences or mathematics education. These individuals can provide information about the programs they oversee, as well as information about other EHR programs of interest to mathematicians. The mailing address is: Directorate for Education and Human Resources, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230. The World Wide Web address is <http://www.nsf.gov/ehr/>.

Division of Elementary, Secondary, and Informal Education

Teacher Enhancement Program
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Instructional Materials Development Program

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Division of Research, Evaluation, and Dissemination

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Division of Human Resource Development

Jesse C. Lewis
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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.

Abraham Robinson: The Creation of Nonstandard Analysis, a Personal and Mathematical Odyssey, by Joseph Warren Dauben. Princeton University Press, 1998. ISBN 0-691-05911-X.

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

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

Challenges, by Serge Lang. Springer-Verlag, 1998. ISBN 0-387-94861-9.

Cryptonomicon, by Neal Stephenson. Avon Books, 1999. ISBN 0-38097-346-4.

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

e: The Story of a Number, by Eli Maor. Paperback edition, Princeton University Press, 1998. ISBN 0-691-05854-7.

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, 1998. ISBN 0-201-14943-5.

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

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

The Feynman Processor, by Gerard J. Milburn and Paul Davies. Helix Books, Perseus, 1998. ISBN 0-738-20016-6.

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, 1998. ISBN 0-198-50078-5.

Goodbye, Descartes: The End of Logic and the Search for a New Cosmology of the Mind, by Keith Devlin. John Wiley & Sons, 1998. ISBN 0-471-14216-6.

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.

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

In the Light of Logic, by Solomon Feferman. Oxford University Press, 1998. ISBN 0-195-08030-0.

The Invention of Infinity: Mathematics and Art in the Renaissance, by

- J. V. Field. Oxford University Press, 1997. ISBN 0-198-52394-7.
- Jacques Hadamard, A Universal Mathematician*, by Vladimir Maz'ya and Tatyana Shaposhnikova. AMS/London Mathematical Society, 1998. ISBN 0-821-80841-9.
- James Joseph Sylvester: Life and Work in Letters*, by Karen Hunger Parshall. Oxford University Press, 1998. ISBN 0-198-50391-1.
- The Jungles of Randomness: A Mathematical Safari*, by Ivars Peterson. Paperback edition, John Wiley & Sons, 1998. ISBN 0-471-29587-6. (Reviewed June/July 1999.)
- Knowing And Teaching Elementary Mathematics: Teachers' Understanding of Fundamental Mathematics in China and the United States*, by Liping Ma. Lawrence Erlbaum Publishers, 1999. ISBN 0-8058-2908-3 (cloth), 0-8058-2909-1 (paper). (Reviewed September 1999.)
- The Language of Mathematics: Making the Invisible Visible*, by Keith Devlin. W. H. Freeman and Company, 1998. ISBN 0-716-73379-X.
- Life by the Numbers*, by Keith Devlin. John Wiley & Sons, 1998. ISBN 0-471-24044-3.
- The Magical Maze: Seeing the World through Mathematical Eyes*, by Ian Stewart. John Wiley & Sons, 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, 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.
- Mathematical Reasoning: Analogies, Metaphors, and Images*, edited by Lyn English. Lawrence Erlbaum Associates, 1997. ISBN 0-805-81979-7. (Reviewed May 1999.)
- 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, 1998. ISBN 0-192-88072-1.
- Mathematics: From the Birth of Numbers*, by Jan Gullberg. W. W. Norton and Company, 1997. ISBN 0-393-04002-X.
- The Mathematics of Ciphers; Number Theory and RSA Cryptography*, by S. C. Coutinho. A K Peters, 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 in this issue.)
- Modern Mathematics in the Light of the Fields Medals*, by Michael Monastyrsky. A K Peters, 1997. ISBN 1-568-81065-2.
- 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 Mészáros. Copernicus-Springer Verlag, 1998. ISBN 0-387-98419-4.
- My Brain is Open: The Mathematical Journeys of Paul Erdős*, by Bruce Schecter. Simon & Schuster, 1998. ISBN 0-684-84635-7.
- Mystic, Geometer, and Intuitionist: The Life of L. E. J. Brouwer*, by Dirk Van Dalen. Oxford University Press, 1999. ISBN 0-198-50297-4.
- New Directions in the Philosophy of Mathematics: An Anthology*, Thomas Tymoczko, Editor. Princeton University Press, revised edition, 1998. ISBN 0-691-03498-2.
- Noeuds: Genèse d'une théorie mathématique (Knots: Genesis of a Mathematical Theory)*, by Alexsi Sossinsky (in French). Seuil, 1999. ISBN 2-020-32089-4.
- The Number Devil*, by Hans Magnus Enzensberger. Metropolitan Books, 1998. ISBN 0-805-05770-6.
- The Number Sense: How the Mind Creates Mathematics*, by Stanislas Dehaene. Oxford University Press, 1997. ISBN 0-195-11004-8.
- Once Upon a Number: The Hidden Mathematical Logic of Stories*, by John Allen Paulos. Basic Books, 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, to appear 1999. ISBN 0-415-12274-0.
- Pioneers of Representation Theory: Frobenius, Burnside, Schur, and Brauer*, by Charles W. Curtis. AMS/London Mathematical Society, 1999. ISBN 0-8218-9002-6.
- Proofs from THE BOOK*, by Martin Aigner and Günter Ziegler. Springer-Verlag, 1998. ISBN 3-540-63698-6. (Reviewed August 1999.)
- The Queen of Mathematics: A Historically Motivated Guide to Number Theory*, by Jay R. Goldman. A K Peters, 1998. ISBN 1-568-81006-7.
- Randomness*, Deborah Bennett. Harvard University Press, 1998. ISBN 0-674-10745-4.
- Reasoning with the Infinite: From the Closed World to the Mathematical Universe*, by Michel Blay. University of Chicago Press, 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.
- Strength in Numbers*, by Sherman Stein. John Wiley & Sons, 1996. ISBN 0-471-152528-8. (Reviewed May 1999.)
- Tracking the Automatic Ant, and Other Mathematical Explorations*, by David Gale. Springer-Verlag, 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, 1997. ISBN 0-19-511368-3. (Reviewed October 1999.)
- What's Happening in the Mathematical Sciences, 1998-1999*, by Barry Cipra. AMS, 1999. ISBN 0-821-80766-8.
- Why Do Buses Come In Threes?*, by Rob Eastaway and Jeremy Wyndham. John Wiley & Sons, 1999. ISBN 0-471-34756-6.
- The World According to Wavelets*, by Barbara Burke Hubbard. A K Peters, second edition, 1999. ISBN 1-568-81072-5. (Reviewed October 1999.)