

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

March 15, 2007: Preferred deadline for September entrance in junior-year program at the Smith College Center for Women in Mathematics.

See "Mathematics Opportunities" in this issue.

March 31, 2007: Nominations for Third World Academy of Sciences Prizes. See <http://www.twas.org/>.

April 4, 2007: Full proposals for NSF Undergraduate Biology and Mathematics (UBM) project. See "Mathematics Opportunities" in this issue.

April 5, 2007: Preliminary proposals for NSF IGERT competition. See "Mathematics Opportunities" in this issue.

April 15, 2007: Applications for AMS "Math in Moscow" Scholarships for fall 2007. See <http://www.mccme.ru/mathinmoscow> or contact Math in Moscow, P.O. Box 524, Wynnewood, PA 19096; fax +7095-291-65-01;

email: mim@mccme.ru. For information and application forms for the AMS scholarships see <http://www.ams.org/outreach/mimoscow.html> or contact Math in Moscow Program, Membership and Programs Department, American Mathematical Society, 201 Charles Street, Providence, RI 02904-2294; email: student-serv@ams.org.

April 16, 2007: Applications for Project NEXT: New Experiences in Teaching. See <http://archives.math.utk.edu/projnext/>.

May 1, 2007: Applications for AWM Travel Grants. See <http://www.awm-math.org/travelgrants.html>; telephone 703-934-0163; email: awm@math.umd.edu; or contact

Where to Find It

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

AMS Bylaws—November 2005, p. 1239

AMS Email Addresses—February 2007, p. 271

AMS Ethical Guidelines—June/July 2006, p. 701

AMS Officers 2005 and 2006 (Council, Executive Committee, Publications Committees, Board of Trustees)—May 2006, p. 604

AMS Officers and Committee Members—October 2006, p. 1076

Conference Board of the Mathematical Sciences—September 2006, p. 911

Information for Notices Authors—June/July 2006, p. 696

Mathematics Research Institutes Contact Information—August 2006, p. 798

National Science Board—January 2007, p. 57

New Journals for 2004—June/July 2006, p. 697

NRC Board on Mathematical Sciences and Their Applications—March 2007, p. 426

NRC Mathematical Sciences Education Board—April 2007, p. 546

NSF Mathematical and Physical Sciences Advisory Committee—February 2007, p. 274

Program Officers for Federal Funding Agencies—October 2006, p. 1072 (DoD, DoE); December 2006 p. 1369 (NSF)

Stipends for Study and Travel—September 2006, p. 913

Association for Women in Mathematics, 11240 Waples Mill Road, Suite 200, Fairfax, VA 22030.

June 1, 2007: Applications for National Academies Christine Mirzayan Graduate Fellowships for the fall program. See <http://www7.nationalacademies.org/policyfellows> or contact The National Academies Christine Mirzayan Science and Technology Policy Graduate Fellowship Program, 500 5th Street, NW, Room 508, Washington, DC 20001; telephone: 202-334-2455; fax: 202-334-1667; email: policyfellows@nas.edu.

June 5, 2007: Proposals for Enhancing the Mathematical Sciences Workforce in the Twenty-First Century. See http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf05595.

June 30, 2007: Nominations for 2007 Fermat Prize. See <http://www.math.ups-tlse.fr/Fermat/>.

October 1, 2007: Applications for AWM Travel Grants. See <http://www.awm-math.org/travelgrants.html>; telephone 703-934-0163; email: awm@math.umd.edu; or contact Association for Women in Mathematics, 11240 Waples Mill Road, Suite 200, Fairfax, VA 22030.

October 5, 2007: Full proposals for NSF IGERT competition. See "Mathematics Opportunities" in this issue.

October 15, 2007: Preferred deadline for January entrance in junior-year program at the Smith College Center for Women in Mathematics. See "Mathematics Opportunities" in this issue.

Mathematical Sciences Education Board, National Research Council

Jan de Lange, Freudenthal Institute, The Netherlands

Keisha M. Ferguson, Pattengill Elementary School, Ann Arbor, MI

Louis Gomez, Northwestern University

Javier Gonzalez, Pioneer High School, Whittier, CA

Sharon Griffin, Clark University

Phillip A. Griffiths (chair), Institute for Advanced Study

Arthur Jaffe, Harvard University

Jeremy Kilpatrick, University of Georgia

Julie Legler, St. Olaf College

W. James Lewis, University of Nebraska, Lincoln

Kevin F. Miller, University of Michigan, Ann Arbor

Marge Petit (vice chair), Consultant, Fayston, VT

Donald Saari, University of California, Irvine

Nancy J. Sattler, Terra State Community College, Freemont, OH

Richard J. Schaar, Texas Instruments

Frank Wang, Oklahoma School of Science and Mathematics

MSEB Staff

Martin Orland, Acting Director

Terry Holmer, Senior Program Assistant

The contact information is: Mathematical Sciences Education Board, National Academy of Sciences, 500 Fifth Street, NW, 11th Floor, Washington, DC 20001; telephone 202-334-2353; fax 202-344-1294; email: mseb@nas.edu; World Wide Web http://www7.nationalacademies.org/mseb/1MSEB_Membership.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.

An Abundance of Katherines, by John Green. Dutton Juvenile Books, September 2006. ISBN 0-525-47688-1.

Alan Turing's Automatic Computing Engine: The Master Codebreaker's Struggle to Build the Modern Com-

puter, edited by B. Jack Copeland. Oxford University Press, June 2005. ISBN 0-198-56593-3.

Analysis and Probability: Wavelets, Signals, Fractals by Pale E. T. Jorgensen. Springer, September 2006. ISBN 0-387-29519-4.

Arthur Cayley: Mathematician Laureate of the Victorian Age, by Tony Crilly. Johns Hopkins University Press, December 2005. ISBN 0-801-88011-4.

The Artist and the Mathematician: The Story of Nicolas Bourbaki, the Genius Mathematician Who Never Existed, by Amir D. Aczel. Thunder's Mouth Press, August 2006. ISBN 1-560-25931-0.

A Beautiful Math: John Nash, Game Theory, and the Modern Quest for a Code of Nature, by Tom Siegfried. Joseph Henry Press, October 2006. ISBN 0-309-10192-1.

**The Best of All Possible Worlds: Mathematics and Destiny*, by Ivar Ekeland. University Of Chicago Press, October 2006. ISBN-13: 978-0-226-19994-8.

Bourbaki, A Secret Society of Mathematicians, Maurice Mashaal. AMS, June 2006. ISBN 0-8218-3967-5.

The Coxeter Legacy: Reflections and Projections, edited by Chandler Davis and Erich W. Ellers. AMS, March 2006. ISBN 0-8218-3722-2.

Dark Hero of the Information Age: In Search of Norbert Wiener, by Flo Conway and Jim Siegelman. Basic Books, December 2004. ISBN 0-738-20368-8. (Reviewed May 2006.)

Descartes: A Biography, by Desmond Clarke. Cambridge University Press, March 2006. ISBN 0-521-82301-3.

Descartes: The Life and Times of a Genius, by A. C. Grayling. Walker & Company, November 2006. ISBN 0-8027-1501-X.

**Einstein's Heroes: Imagining the World through the Language of Mathematics*, by Robyn Arianrhod. Oxford University Press, July 2006. ISBN-13: 978-0-195-30890-7.

The Equations: Icons of Knowledge, by Sander Bais. Harvard University Press, November 2005. ISBN 0-674-01967-9.

The Essential Turing, edited by B. Jack Copeland. Oxford University Press, September 2004. ISBN

0-198-25080-0. (Reviewed November 2006.)

Euclid in the Rainforest: Discovering Universal Truths in Logic and Math, by Joseph Mazur. Pi Press, October 2004. ISBN 0-131-47994-6.

Euler through Time: A New Look at Old Themes, by V. S. Varadarajan. AMS, June 2006. ISBN 0-8218-3580-7.

Evolutionary Dynamics: Exploring the Equations of Life, by Martin Nowak. Belknap Press, September 2006. ISBN 0-674-02338-2.

The Fabulous Fibonacci Numbers, by Alfred S. Posamentier and Ingmar Lehmann. Prometheus Books, February 2007. ISBN 1-591-02475-7.

Fearless Symmetry: Exposing the Hidden Patterns of Numbers, by Avner Ash and Robert Gross. Princeton University Press, May 2006. ISBN 0-691-12492-2. (Reviewed January 2007.)

From Cosmos to Chaos: The Science of Unpredictability, by Peter Coles. Oxford University Press, August 2006. ISBN 0-198-56762-6.

From Zero to Infinity: What Makes Numbers Interesting, by Constance Reid. Fiftieth anniversary edition, A K Peters, February 2006. ISBN 1-568-81273-6. (Reviewed February 2007.)

Gödel's Theorem: An Incomplete Guide to Its Use and Abuse, by Torkel Franzen. A K Peters, May 2005. ISBN 1-568-81238-8. (Reviewed March 2007.)

Great Feuds in Mathematics: Ten of the Liveliest Disputes Ever, by Hal Hellman. Wiley, September 2006. ISBN 0-471-64877-9.

How Mathematics Happened, by Peter S. Rudman. Prometheus Books, October 2006. ISBN 1-591-02477-3.

How to Cut a Cake: And Other Mathematical Conundrums, by Ian Stewart. Oxford University Press, November 2006. ISBN 0-199-20590-6.

Infinite Ascent: A Short History of Mathematics, by David Berlinski. Modern Library, September 2005. ISBN 0-679-64234-X.

It's about Time: Understanding Einstein's Relativity, by N. David Mermin. Princeton University Press, September 2005. ISBN 0-691-12201-6.

John von Neumann: Selected Letters, edited by Miklós Rédei. AMS, November 2005. ISBN 0-8218-3776-1.

King of Infinite Space: Donald Coxeter, the Man Who Saved Geometry,

by Siobhan Roberts. Walker & Company, September 2006. ISBN 0-802-71499-4.

The Lifebox, the Seashell, and the Soul: What Gnarly Computation Taught Me about Ultimate Reality, the Meaning of Life, and How to Be Happy, by Rudy Rucker. Thunder's Mouth Press, October 2005. ISBN 1-560-25722-9.

A Madman Dreams of Turing Machines, by Janna Levin. Knopf, August 2006. ISBN 1-400-04030-2.

The Man Who Knew Too Much: Alan Turing and the Invention of the Computer, by David Leavitt. Great Discoveries series, W. W. Norton, December 2005. ISBN 0-393-05236-2. (Reviewed November 2006.)

The Math Instinct: Why You're a Mathematical Genius (along with Lobsters, Birds, Cats, and Dogs), by Keith Devlin. Thunder's Mouth Press, March 2005. ISBN 1-56025-672-9.

Mathematical Illustrations: A Manual of Geometry and PostScript, by Bill Casselman. Cambridge University Press, December 2004. ISBN 0-521-54788-1. (Reviewed January 2007.)

Mathematics and Common Sense: A Case of Creative Tension, by Philip J. Davis. A K Peters, October 2006. ISBN 1-568-81270-1.

Measuring the World, by Daniel Kehlmann. Pantheon, November 2006. ISBN 0-375-42446-6.

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

Musimathics: The Mathematical Foundations of Music, Volume 1, by Gareth Loy. MIT Press, September 2006. ISBN 0-262-12282-0.

Mystic, Geometer, and Intuitionist: The Life of L. E. J. Brouwer. Volume 2: Hope and Disillusion, by Dirk van Dalen. Oxford University Press, October 2005. ISBN 0-198-51620-7.

The Newtonian Moment: Isaac Newton and the Making of Modern Culture, by Mordechai Feingold. New York Library and Oxford University Press, December 2004. ISBN 0-195-17735-5.

Not Even Wrong: The Failure of String Theory and the Continuing Challenge to Unify the Laws of Physics, by Peter Woit. Jonathan Cape, April 2006. ISBN 0-224-07605-1.

Once upon Einstein, by Thibault D'Amour. A K Peters, March 2006. ISBN 1-568-81289-2.

The Pea and the Sun: A Mathematical Paradox, by Leonard M. Wapner. A K Peters, April 2005. ISBN 1-568-81213-2. (Reviewed October 2006.)

Piano Hinged Dissections: Time to Fold!, by Greg Frederickson. A K Peters, October 2006. ISBN 1-568-81299-X.

Piero della Francesca: A Mathematician's Art, by J. V. Field. Yale University Press, August 2005. ISBN 0-300-10342-5. (Reviewed March 2007.)

Prince of Mathematics: Carl Friedrich Gauss, by M. B. W. Tent. A K Peters, January 2006. ISBN 1-568-81261-2.

Pursuit of Genius: Flexner, Einstein, and the Early Faculty at the Institute for Advanced Study, by Steve Batterson. A K Peters, June 2006. ISBN 1-568-81259-0.

Reality Conditions: Short Mathematical Fiction, by Alex Kasman. Mathematical Association of America, May 2005. ISBN 0-88385-552-6. (Reviewed August 2006.)

The Road to Reality: A Complete Guide to the Laws of the Universe, by Roger Penrose. Knopf, February 2005. ISBN 0-679-45443-8. (Reviewed June/July 2006.)

The Secret Life of Numbers: 50 Easy Pieces on How Mathematicians Work and Think, by George G. Szpiro. Joseph Henry Press, March 2006. ISBN 0-309-09658-8.

Shadows of Reality: The Fourth Dimension in Relativity, Cubism, and Modern Thought, by Tony Robbin. Yale University Press, March 2006. ISBN 0-300-11039-1. (Reviewed in this issue.)

The Shoelace Book: A Mathematical Guide to the Best (and Worst) Ways to Lace Your Shoes, by Burkard Polster. AMS, June 2006. ISBN 0-8218-3933-0. (Reviewed December 2006.)

Stalking the Riemann Hypothesis: The Quest to Find the Hidden Law of Prime Numbers, by Dan Rockmore. Pantheon, April 2005. ISBN 0-375-42136-X. (Reviewed September 2006.)

**Superior Beings: If They Exist, How Would We Know?: Game-Theoretic Implications of Omnipotence*,

APPLIED MATH TITLES

from **siam**

Matrix Methods in Data Mining and Pattern Recognition **New!**

Lars Eldén

2007 · x + 224 pages · Softcover · Code **FA04**
 ISBN: 978-0-898716-26-9 · List Price \$69.00
 SIAM Member Price \$48.30

Continuum Modeling in the Physical Sciences **New!**

E. van Groesen and Jaap Molenaar

2007 · x + 228 pages · Softcover · Code **MM13**
 ISBN: 978-0-898716-25-2 · List Price \$65.00
 SIAM Member Price \$45.50

Mathematics Applied to Continuum Mechanics **New!**

Lee A. Segel, with additional material on elasticity by G. H. Handelman

2007 · xxiv + 590 pages · Softcover · Code **CL52**
 ISBN: 978-0-898716-20-7 · List Price \$85.00
 SIAM Member Price \$59.50

Adaptive Control Tutorial

Petros Ioannou and Barış Fidan

2006 · xvi + 389 pages · Softcover · Code **DC11**
 ISBN-13: 978-0-898716-15-3 · ISBN-10: 0-89871-615-2
 List Price \$99.00 · SIAM Member Price \$69.30

Parallel Processing for Scientific Computing

Edited by Michael A. Heroux, Padma Raghavan, and Horst D. Simon

2006 · xxiv + 397 pages · Softcover · Code **SE20**
 ISBN-13: 978-0-898716-19-1 · ISBN-10: 0-89871-619-5
 List Price \$90.00 · SIAM Member Price \$63.00

Deblurring Images: Matrices, Spectra, and Filtering

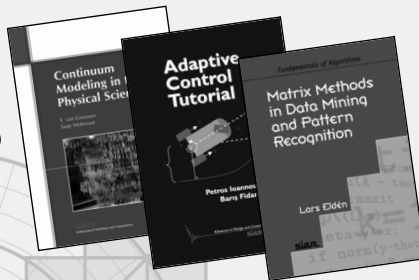
Per Christian Hansen, James G. Nagy, and Dianne P. O'Leary

2006 · xiv + 130 pages · Softcover · Code **FA03**
 ISBN-13: 978-0-898716-18-4 · ISBN-10: 0-89871-618-7
 List Price \$63.00 · SIAM Member Price \$44.10

Solving PDEs in C++: Numerical Methods in a Unified Object-Oriented Approach

Yair Shapira

2006 · xxiv + 500 · Softcover · Code **CS01**
 ISBN-13: 978-0-898716-01-6 · ISBN-10: 0-89871-601-2
 List Price \$125.00 · SIAM Member Price \$87.50



Cardiovascular and Respiratory Systems: Modeling, Analysis, and Control

Jerry J. Batzel, Franz Kappel, Daniel Schneditz, and Hien T. Tran

2006 · xx + 274 pages · Softcover · Code **FR34**
 ISBN-13: 978-0-898716-17-7 · ISBN-10: 0-89871-617-9
 List Price \$106.00 · SIAM Member Price \$74.20

The Lanczos and Conjugate Gradient Algorithms: From Theory to Finite Precision Computations

Gérard Meurant

2006 · xvi + 365 pages · Softcover · Code **SE19**
 ISBN-13: 978-0-898716-16-0 · ISBN-10: 0-89871-616-8
 List Price \$107.00 · SIAM Member Price \$74.90

A Course in Mathematical Biology: Quantitative Modeling with Mathematical and Computational Methods

Gerda de Vries, Thomas Hillen, Mark Lewis, Johannes Müller, and Birgitt Schönfisch

2006 · xii + 309 pages · Softcover · Code **MM12**
 ISBN-13: 978-0-898716-12-2 · ISBN-10: 0-89871-612-8
 List Price \$69.00 · SIAM Member Price \$48.30

Understanding and Implementing the Finite Element Method

Mark S. Gockenbach

2006 · xvi + 363 pages · Softcover · Code **OT97**
 ISBN-13: 978-0-898716-14-6 · ISBN-10: 0-89871-614-4
 List Price \$87.00 · SIAM Member Price \$60.90

Direct Methods for Sparse Linear Systems

Timothy A. Davis

2006 · xii + 217 pages · Softcover · Code **FA02**
 ISBN-13: 978-0-898716-13-9 · ISBN-10: 0-89871-613-6
 List Price \$65.00 · SIAM Member Price \$45.50

Reference and Book List

Omniscience, Immortality, and Incomprehensibility, by Steven Brams. Springer, second edition, November 2007. ISBN-13: 978-0-387-48065-7.

Symmetry and the Monster: The Story of One of the Greatest Quests of Mathematics, by Mark Ronan. Oxford University Press, May 2006. ISBN 0-192-80722-6. (Reviewed February 2007.)

The Three Body Problem, by Catherine Shaw. Allison and Busby, March 2005. ISBN 0-749-08347-6. (Reviewed October 2006.)

**The Triumph of Numbers: How Counting Shaped Modern Life*, by I. B. Cohen. W. W. Norton, July 2006. ISBN-13: 978-0-393-32870-7.

The Trouble with Physics: The Rise of String Theory, the Fall of a Science, and What Comes Next, by Lee Smolin. Joseph Henry Press, October 2006. ISBN 0-309-10192-1.

Unknown Quantity: A Real and Imaginary History of Algebra, by John Derbyshire. Joseph Henry Press, May 2006. ISBN 0-309-09657-X.

Yearning for the Impossible: The Surprising Truths of Mathematics, by John Stillwell. A K Peters, May 2006. ISBN 1-568-81254-X.

To ORDER Please mention keycode "BKNO07" when you order.

Order online: www.siam.org/catalog • Use your credit card (AMEX, MasterCard, or VISA): Call SIAM Customer Service at +1-215-382-9800 worldwide or toll free at 800-447-SIAM in USA and Canada; Fax: +1-215-386-7999; E-mail: siambooks@siam.org • Send check or money order to: SIAM, Dept. BKNO07, 3600 University City Science Center, Philadelphia, PA 19104-2688.

siam SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS