

our backlog drop, and I have high hopes that PAMS will reach a healthy and sustainable equilibrium within 1–2 years.

There are further changes afoot with respect to PAMS. In April the Council of the AMS discussed a proposal to launch open access companions to PAMS and TAMS. This proposal is in response to various factors, including mandates worldwide concerning the free access of government funded research (most notably in the UK), and advocacy for open access by the communities of researchers

and librarians. I look forward to these projects with optimism, and I firmly believe that the future is bright for PAMS. The traditional PAMS, combined with the new open access companion journal, will together continue to provide an outstanding forum for short high quality research articles. Let's continue the great tradition established by Hedlund, Jacobson, and Schaeffer in 1950 by writing and publishing the next generation's analogs of the wonderful articles by Rényi and Harish-Chandra.

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.wustl.edu in the case of the editor and smf@ams.org in the case of the managing editor. The fax numbers are 314-935-6839 for the editor and 401-331-3842 for the managing editor. Postal addresses may be found in the masthead.

Upcoming Deadlines

July 24, 2013: Proposals for NSF CAREER Awards. See the website <http://www.nsf.gov/pubs/2011/nsf11690/nsf11690.htm>.

July 31, 2013: Nominations for SASTRA Ramanujan Prize. See the website <http://www.math.ufl.edu/sastra-prize/nominations-2013.html>.

August 1, 2013: Applications for August review for National Academies Research Associateship Programs. See the website http://sites.nationalacademies.org/PGA/RAP/PGA_050491 or contact Research Associateship Programs, National Research Council, Keck 568, 500 Fifth Street, NW, Washington, DC 20001; telephone 202-334-2760; fax 202-334-2759; email rap@nas.edu.

Where to Find It

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

AMS Bylaws—*January 2012*, p. 73

AMS Email Addresses—*February 2013*, p. 249

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

AMS Officers 2012 and 2013 Updates—*May 2013*, p. 646

AMS Officers and Committee Members—*October 2012*, p. 1290

Contact Information for Mathematical Research Institutes—*August 2013*, p. 943

Conference Board of the Mathematical Sciences—*September 2012*, p. 1128

IMU Executive Committee—*December 2011*, p. 1606

Information for Notices Authors—*June/July 2013*, p. 776

National Science Board—*January 2013*, p. 109

NRC Board on Mathematical Sciences and Their Applications—*March 2013*, p. 350

NSF Mathematical and Physical Sciences Advisory Committee—*February 2013*, p. 252

Program Officers for Federal Funding Agencies—*October 2012*, p. 1284 (DoD, DoE); *December 2012*, p. 1585 (NSF Mathematics Education)

Program Officers for NSF Division of Mathematical Sciences—*November 2012*, p. 1469

August 13, 2013: Full proposals for NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) program. See <http://www.nsf.gov/pubs/2012/nsf12529/nsf12529.htm>.

August 28, 2013: Full proposals for NSF REU sites. See “Mathematics Opportunities” in this issue.

September 1–November 15, 2013: Applications for travel grants for ICM 2014. See “Mathematics Opportunities” in this issue.

September 15, 2013: Applications for spring 2014 semester of Math in Moscow. See <http://www.mccme.ru/mathinmoscow> or write to: Math in Moscow, P.O. Box 524, Wynnewood, PA 19096; fax: +7095-291-65-01; e-mail: mim@mccme.ru. Information and application forms for the AMS scholarships are available on the AMS website at <http://www.ams.org/programs/travel-grants/mimoscow> or by writing to: Math in Moscow Program, Membership and Programs Department, American Mathematical Society, 201 Charles Street, Providence RI 02904-2294; email student-serv@ams.org.

September 15, 2013: Deadline for nominations for AMS Award for Impact on the Teaching and Learning of Mathematics. See “Mathematics Opportunities” in this issue.

September 16, 2013: Nominations for Sloan Fellowships. Contact Sloan Research Fellowships, Alfred P. Sloan Foundation, 630 Fifth Avenue, Suite 2550, New York, NY 10111-0242, or consult the foundation’s website: <http://www.sloan.org/fellowships>.

September 20, 2013: Full proposals for NSF Focused Research Groups. See “Mathematics Opportunities” in this issue.

September 30, 2013: Nominations for W. K. Clifford Prize. See <http://www.wkcliffordprize.org>.

October 1, 2013: Applications for AWM Travel Grants and Mathematics Education Research Travel Grants. See <https://sites.google.com/site/awmmath/programs/travel-grants> or telephone: 703-934-0163; email: awm@awm-math.org; or contact Association for Women in Mathematics, 11240 Waples Mill Road, Suite 200, Fairfax, VA 22030.

October 1, 2013: Nominations for Parzen Prize. Send to Thomas Wehrly, Department of Statistics, 3143 TAMU, Texas A&M University, College Station, Texas 77843-3143. For more information see the website <http://www.stat.tamu.edu/awards-and-prize-details.php?prizeid=7>.

October 4, 2013: Letters of intent for NSF Program ADVANCE Institutional Transformation and Institutional Transformation Catalyst awards. See http://www.nsf.gov/pubs/2012/nsf12584/nsf12584.htm?WT.mc_id=USNSF_36&WT.mc_ev=click.

October 15, 2013: Proposals for NSA Grants for Research in Mathematics. See “Mathematics Opportunities” in this issue.

October 16, 2013: Proposals for National Science Foundation (NSF) Postdoctoral Research Fellowships. See <http://www.nsf.gov/pubs/2012/nsf12496/nsf12496.htm>.

November 1, 2013: Applications for November review for National Academies Research Associateship Programs. See the website http://sites.nationalacademies.org/PGA/RAP/PGA_050491 or contact Research Associateship Programs, National Research Council, Keck 568, 500 Fifth Street, NW, Washington, DC 20001; telephone 202-334-2760; fax 202-334-2759; email rap@nas.edu.

November 12, 2013: Full proposals for NSF Program ADVANCE Institutional Transformation and Institutional Transformation Catalyst awards. See http://www.nsf.gov/pubs/2012/nsf12584/nsf12584.htm?WT.mc_id=USNSF_36&WT.mc_ev=click.

December 1, 2013: Applications for PIMS postdoctoral fellowships. See “Mathematics Opportunities” in this issue.

December 2, 2013: Nominations for Ferran Sunyer i Balaguer Prize. See <http://ffsb.iec.cat>.

December 31, 2013: Nominations for Otto Neugebauer Prize. See “Mathematics Opportunities” in this issue.

February 15, 2014: Nominations for AWM–Joan & Joseph Birman

Prize in Topology and Geometry. See “Mathematics Opportunities” in this issue.

April 15, 2014: Applications for fall 2014 semester of Math in Moscow. See “Mathematics Opportunities” in this issue.

Contact Information for Mathematics Institutes

American Institute of Mathematics

360 Portage Avenue
Palo Alto, CA 94306-2244
Telephone: 650-845-2071
Fax: 650-845-2074
email: conrey@aimath.org
<http://www.aimath.org>

Stefan Banach International Mathematical Center

8 Śniadeckich str.
P.O. Box 21
00-956 Warszawa, Poland
Telephone: 48 22 522-82-32
Fax: 48 22 622-57-50
email: Banach.Center.Office@impan.pl
<http://www.impan.gov.pl/BC>

Banff International Research Station

University of British Columbia
4176-2207 Main Mall
Vancouver, BC V6T 1Z4, Canada
Telephone: 604-822-1649
Fax: 604-822-0883
email: birs-director@birs.ca
<http://www.birs.ca>

Banff International Research Station

c/o The Banff Centre
Room 103, TransCanada Pipelines Pavilion
107 Tunnel Mountain Drive
Box 1020, Stn. 48
Banff, AB T1L 1H5, Canada
Telephone: 403-763-6999
Fax: 403-763-6990
email: birmsgr@birs.ca
<http://www.birs.ca>

Basque Center for Applied Mathematics (BCAM)

Alameda de Mazarredo 14
48009 Bilbao, Basque Country, Spain
Telephone: +34 946 567 842
Fax: +34 946 567 843
email: info@bcamath.org
<http://www.bcamath.org>

Reference and Book List

Center for Discrete Mathematics and Theoretical Computer Science (DIMACS)

CoRE Building, 4th Floor
Rutgers University
96 Frelinghuysen Road
Piscataway, NJ 08854-8018
Telephone: 732-445-5930
Fax: 732-445-5932
email: center-admin@dimacs.rutgers.edu
<http://dimacs.rutgers.edu>

Center for Scientific Computation and Mathematical Modeling (CSCAMM)

University of Maryland
4146 CSIC Building #406
Paint Branch Drive
College Park, MD 20742-3289
Telephone: 301-405-0652
Fax: 301-314-6674
email: info@cscamm.umd.edu
<http://www.cscamm.umd.edu/>

Centre International de Rencontres Mathématiques (CIRM)

163, avenue de Luminy, Case 916
F-13288 Marseille Cedex 09, France
Telephone: 33 04 91 83 30 00
Fax: 33 04 91 83 30 05
<http://www.cirm.univ-mrs.fr>

Centre for Mathematics and Its Applications (CMA)

Building 27
Australian National University
ACT 0200, Australia
Telephone: 61 2 6125 2897
Fax: 61 2 6125 5549
email: admin.research.msi@anu.edu.au
<http://maths.anu.edu.au/about-us/structure/centre-mathematics-its-applications>

Centre for Quantum Geometry of Moduli Spaces

Aarhus University
Ny Munkegade 118, Bldg. 1530
DK-8000 Aarhus C, Denmark
Telephone: 45 8715 5141
Fax: 45 8613 1769
email: qgm@au.dk
<http://qgm.au.dk/>

Centre de Recerca Matemàtica (CRM)

Campus de Bellaterra, Edifici C
08193 Bellaterra
Barcelona, Spain

Telephone: 34 93 581 1081
Fax: 34 93 581 2202
email: crm@crm.cat
<http://www.crm.cat>

Centre de Recherches Mathématiques (CRM)

Université de Montréal
P.O. Box 6128, Centre-ville Station
Montréal, Quebec H3C 3J7, Canada
Telephone: 514-343-7501
Fax: 514-343-2254
email: CRM@CRM.UMontreal.ca
<http://www.crm.umontreal.ca>

Centro Internazionale per la Ricerca Matematica (CIRM)

Fondazione Bruno Kessler
Via Sommarive, 14 Povo
38100 Trento, Italy
Telephone: 39-0461-881628
Fax: 39-0461-810629
email: michelet@science.unitn.it
<http://www.science.unitn.it/cirm/>

Centro de Investigación en Matemáticas (CIMAT)

Jalisco S/N, Col. Valenciana,
CP: 36240
Guanajuato, Gto, México
Telephone: +52 473 732 7155/
735 0800
Fax: +52 473 732 5749
email: laura@cimat.mx
<http://www.cimat.mx>

Centro di Ricerca Matematica Ennio De Giorgi

Collegio Puteano
Scuola Normale Superiore
Piazza dei Cavalieri, 3
I-56100 Pisa, Italy
Telephone: 39 (050) 509256
Fax: 050 509177
email: crm@crm.sns.it
<http://www.crm.sns.it/>

Chennai Mathematical Institute

Plot H1, SIPCOT IT Park,
Kelambakkam
Siruseri 603103, India
Telephone: 91-44-3298-3441,
91-44-3298-3442
Fax: 91-44-2747-0225
email: office@cmi.ac.in
<http://www.cmi.ac.in>

Chern Institute of Mathematics

Nankai University
Tianjin 300071, China
Telephone: 86-22-2350-8228
Fax: 86-22-2350-1532
email: cim@nankai.edu.cn
http://www.nim.nankai.edu.cn/nim_e/index.htm

Euler International Mathematical Institute

nab. Fontanki, 27
St. Petersburg 191023, Russia
Telephone: 7 960 279 10 37
Fax: 7 812 234 05 74
email: admin@euler.pdmi.ras.ru
<http://www.pdmi.ras.ru/EIMI/index.html>

Fields Institute for Research in Mathematical Sciences

222 College Street, 2nd Floor
Toronto, Ontario M5T 3J1, Canada
Telephone: 416 348 9710
Fax: 416 348 9714
email: inquiries@fields.utoronto.ca
<http://www.fields.utoronto.ca/>

Forschungsinstitut für Mathematik (FIM)

HG G 44.1
Rämistrasse 101
8092 Zürich, Switzerland
Telephone: 41 44 632 3598
Fax: 41 44 632 1614
email: admin@fim.math.ethz.ch
<http://www.fim.math.ethz.ch/>

Institut des Hautes Études Scientifiques (IHÉS)

Le Bois Marie 35, route de Chartres
F-91440 Bures sur Yvette, France
Telephone: 33 1 60 92 66 00
Fax: 33 1 60 92 66 69
<http://www.ihes.fr>

Institut Henri Poincaré

11, rue Pierre et Marie Curie
75231 Paris Cedex 05, France
Telephone: 33 01 44 27 67 89
Fax: 33 01 44 07 09 37
<http://ihp.fr/en>

Institut Mittag-Leffler

Auravägen 17
SE-182 60 Djursholm, Sweden
Telephone: 46 8 622 05 60
Fax: 46 8 622 05 89

email: info@mittag-leffler.se
<http://www.mittag-leffler.se/>

Institute for Advanced Study (IAS)
 School of Mathematics
 Einstein Drive, Simonyi Hall
 Princeton, NJ 08540
 Telephone: 609-734-8100
 Fax: 609-951-4459
 email: math@math.ias.edu
<http://www.math.ias.edu/>

Institute for Mathematical Sciences
 National University of Singapore
 3 Prince George's Park
 Singapore 118402, Republic of Singapore
 Telephone: 65 6516 1897
 Fax: 65 6873 8292
 email: ims@nus.edu.sg
<http://www2.ims.nus.edu.sg/>

Institute of Mathematical Sciences
 Chinese University of Hong Kong
 Academic Building No. 1, Unit 601
 Shatin, N. T., Hong Kong
 Telephone: 852 3943 8038
 Fax: 852 2603 7636
 email: ims@ims.cuhk.edu.hk
<http://www.ims.cuhk.edu.hk>

Institute for Mathematics and its Applications (IMA)
 University of Minnesota
 College of Science and Engineering
 400 Lind Hall
 207 Church Street, SE
 Minneapolis, MN 55455-0134
 Telephone: 612-624-6066
 Fax: 612-626-7370
 email: staff@ima.umn.edu
<http://www.ima.umn.edu/>

Institute for Pure and Applied Mathematics (IPAM)
 460 Portola Plaza
 Box 957121
 Los Angeles, CA 90095-7121
 Telephone: 310-825-4755
 Fax: 310-825-4756
 email: ipam@ucla.edu
<http://www.ipam.ucla.edu>

Institute for Research in Fundamental Sciences
 School of Mathematics
 P. O. Box 19395-5746
 Tehran, Iran
 Telephone: 98 21 222 90 928
 Fax: 98 21 222 90 648

email: ipmmath@ipm.ir
<http://math.ipm.ac.ir>

Instituto de Ciencias Matemáticas (ICMAT)
 c. Nicolás Cabrera 13-15
 Campus de Cantoblanco Universidad Autónoma de Madrid
 28049 Madrid, Spain
 Telephone: +34 91 2999700
 email: secretaria@icmat.es
<http://www.icmat.es>

Instituto Nacional de Matemática Pura e Aplicada (IMPA)
 Estrada Dona Castorina, 110
 Rio de Janeiro, Brazil 22460-320
 Telephone: 55 21 2529 5000
 Fax: 55 21 2512 4115
 email: diretor@impa.br
<http://www.impa.br>

International Center for Theoretical Physics (ICTP)
 Strada Costiera 11
 I-34151 Trieste, Italy
 Telephone: 39 040 2240111
 Fax: 39 040 224163
 email: sci_info@ictp.it
<http://www.ictp.it>

International Centre for Mathematical Sciences (ICMS)
 15 South College Street
 Edinburgh EH8 9AA
 United Kingdom
 Telephone: 0131 650 9831
 Fax: 0131 651 4381
 email: info@icms.org.uk
<http://www.icms.org.uk/index.php>

Isaac Newton Institute for Mathematical Sciences
 20 Clarkson Road
 Cambridge CB3 0EH
 United Kingdom
 Telephone: 44 0 1223 335999
 Fax: 44 0 1223 330508
 email: info@newton.ac.uk
<http://www.newton.ac.uk/>

Korea Institute for Advanced Study (KIAS)
 85 Hoegiro (Cheongnyangni-dong 207-43)
 Dongdaemun-gu
 Seoul 130-722, Republic of Korea
 Telephone: 82 2 958 3711
 Fax: 82 2 958 3770

<http://www.kias.re.kr/en/index.jsp>

Liu Bie Ju Centre for Mathematical Sciences
 City University of Hong Kong
 Tat Chee Avenue
 Kowloon, Hong Kong
 Telephone: 852 3442 9816
 Fax: 852 3442 0250
 email: mc1bj@cityu.edu.hk
<http://www.cityu.edu.hk/rcms>

Mathematical Biosciences Institute
 The Ohio State University
 Jennings Hall, 3rd Floor
 1735 Neil Avenue
 Columbus, OH 43210
 Telephone: 614-292-3648
 Fax: 614-247-6643
 email: rebecca@mbi.osu.edu
<http://www.mbi.osu.edu>

Mathematical Sciences Research Institute (MSRI)
 17 Gauss Way
 Berkeley, CA 94720 5070
 Telephone: 510-642-0143
 Fax: 510-642-8609
 email: msri-inquiries@msri.org
<http://www.msri.org/>

Mathematisches Forschungsinstitut Oberwolfach
 Schwarzwalddstr. 9-11 (Lorenzenhof)
 D-77709 Oberwolfach Walke, Germany
 Telephone: 07834 979 0
 Fax: 07834 979 38
 email: admin@mfo.de
<http://www.mfo.de>

Max Planck Institut für Mathematik
 Vivatsgasse 7
 53111 Bonn, Germany
 Telephone: 49 0 228 402 0
 Fax: 49 0 228 402 277
 email: admin@mpim-bonn.mpg.de
<http://www.mpim-bonn.mpg.de>

Max Planck Institut für Mathematik in den Naturwissenschaften
 Inselstrasse 22
 04103 Leipzig, Germany
 Telephone: 49 0 341 9959 657
 Fax: 49 (0) 341 9959 658
 email: Dietmar.Rudzik@mis.mpg.de
<http://www.mis.mpg.de/>

Pacific Institute for the Mathematical Sciences (PIMS)

University of British Columbia
4176-2207 Main Mall
Vancouver, BC, V6T 1Z4, Canada
Telephone: 1-604-822-3922
Fax: 604-822-0883
email: reception@pims.math.ca
http://www.pims.math.ca

Alfréd Rényi Institute of Mathematics

Hungarian Academy of Sciences
P.O. Box 127
H-1364 Budapest, Hungary
Telephone: 36 1 483 8302
Fax: 36 1-483 8333
email: math@renyi.hu
http://www.renyi.hu

Research Institute for Mathematical Sciences (RIMS)

Kyoto University
Kyoto 606 8502, Japan
Telephone: 81 75 753 7245
Fax: 81 75 753 7272
email: mori@kurims.kyoto-u.ac.jp
http://www.kurims.kyoto-u.ac.jp/

Erwin Schrödinger International Institute for Mathematical Physics

Boltzmannngasse 9
A-1090 Vienna, Austria
Telephone: 43 1 4277 28301
Fax: 43 1 4277 9283
email: secr@esi.ac.at
http://www.esi.ac.at/

Sobolev Institute of Mathematics

Russian Academy of Sciences,
Siberian Branch
4 Acad. Koptuyug Avenue
630090 Novosibirsk, Russia
Telephone: 383 333 28 92
Fax: 383 333 25 98
email: im@math.nsc.ru
http://math.nsc.ru

Statistical and Applied Mathematical Sciences Institute (SAMSI)

19 T. W. Alexander Drive
P.O. Box 14006
Research Triangle Park, NC 27709-4006
Telephone: 919-685-9350
Fax: 919-685-9360
email: info@samsi.info
http://www.samsi.info/

Steklov Institute of Mathematics

Russian Academy of Sciences
Gubkina str. 8
119991, Moscow, Russia
Telephone: 7 495 984 81 41
Fax: 7 495 984 81 39
email: steklov@mi.ras.ru
http://www.mi.ras.ru

Steklov Institute of Mathematics

27, Fontanka
St. Petersburg 191023, Russia
Telephone: 7 812 312 40 58
Fax: 7 812 310 53 77
email: admin@pdmi.ras.ru
http://www.pdmi.ras.ru

Tata Institute of Fundamental Research

School of Mathematics
Homi Bhabha Road
Mumbai 400 005, India
Telephone: 91 22 22782000
Fax: 91 22 22804610/4611
http://www.tifr.res.in/index.php/en/

T. N. Thiele Centre for Applied Mathematics in Natural Science

Department of Mathematical Sciences
University of Aarhus
Ny Munkegade 118, Building 1530
DK-8000 Aarhus C, Denmark
Telephone: 45 8715 5791
Fax: 45 86 13 17 69
email: thiele@imf.au.dk
http://www.thiele.au.dk

Warwick Mathematics Research Centre

University of Warwick
Zeeman Building
Coventry CV4 7AL, United Kingdom
Telephone: +44 (0)24 7652 4661
Fax: +44 (0)24 7652 4182
email: Miles.Reid@maths.warwick.ac.uk
http://www.maths.warwick.ac.uk/mrc/index.html

Weierstrass Institute for Applied Analysis and Stochastics

Mohrenstrasse 39
10117 Berlin, Germany
Telephone: 49 30 20372 0
Fax: 49 30 20372 303
email: contact@wias-berlin.de
http://www.wias-berlin.de/

Book List

The Book List highlights recent books that have mathematical themes and are aimed at a broad audience potentially including mathematicians, students, and the general public. 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 Accidental Statistician: The Life and Memories of George E. P. Box*, by George E. P. Box. Wiley, April 2013. ISBN-13: 978-1-118-40088-3.

American Mathematicians as Educators, 1893-1923: Historical Roots of the "Math Wars", by David Lindsay Roberts. Docent Press, July 2012, ISBN-13: 978-09837-004-49.

Assessing the Reliability of Complex Models: Mathematical and Statistical Foundations of Verification, Validation, and Uncertainty Quantification, by the National Research Council. National Academies Press, 2012. ISBN-13: 978-0-309-25634-6.

The Best Writing on Mathematics 2012, edited by Mircea Pitici. Princeton University Press, November 2012. ISBN-13: 978-06911-565-52.

The Big Questions: Mathematics, by Tony Crilly. Quercus, April 2011. ISBN-13:978-18491-624-01. (Reviewed October 2012.)

Charles S. Peirce on the Logic of Number, by Paul Shields. Docent Press, October 2012. ISBN-13: 978-0-9837004-7-0.

The Continuity Debate: Dedekind, Cantor, du Bois-Reymond, and Peirce on Continuity and Infinitesimals, by Benjamin Lee Buckley. Docent Press, December 2012. ISBN-13: 978-0-9837004-8-7.

Decoding the Heavens: A 2,000-Year-Old Computer—and the Century-Long Search to Discover Its Secrets, by Jo Marchant. Da Capo Press, February 2009. ISBN-13: 978-03068-174-27. (Reviewed June/July 2013).

The Foundations of Geometry and Religion from an Abstract Standpoint, by Salilesh Mukhopadhyay. Outskirts Press, July 2012. ISBN-13: 978-1-4327-9424-8.

The Fractalist: Memoir of a Scientific Maverick, by Benoit Mandelbrot.

Pantheon, October 2012. ISBN-13: 978-03073-773-57.

Fueling Innovation and Discovery: The Mathematical Sciences in the 21st Century, by the National Research Council. National Academies Press, 2012. ISBN-13: 978-0-309-25473-1.

Galileo's Muse: Renaissance Mathematics and the Arts, by Mark Austin-Peterson. Harvard University Press, October 2011. ISBN-13: 978-06740-597-26. (Reviewed November 2012.)

Game Theory and the Humanities: Bridging Two Worlds, by Steven J. Brams. MIT Press, September 2012. ISBN-13: 978-02625-182-53.

Games and Mathematics: Subtle Connections, by David Wells. Cambridge University Press, November 2012. ISBN-13: 978-11076-909-12.

Girls Get Curves: Geometry Takes Shape, by Danica McKellar. Plume, July 2013. ISBN-13: 978-04522-987-43.

The Golden Ticket: P, NP, and the Search for the Impossible, by Lance Fortnow. Princeton University Press, March 2013. ISBN-13: 978-06911-564-91.

Google's PageRank and Beyond: The Science of Search Engine Rankings, by Amy Langville and Carl Meyer. Princeton University Press, February 2012. ISBN-13: 978-06911-526-60.

Guesstimation 2.0: Solving Today's Problems on the Back of a Napkin, by Lawrence Weinstein. Princeton University Press, September 2012. ISBN-13: 978-06911-508-02.

Heavenly Mathematics: The Forgotten Art of Spherical Trigonometry, by Glen Van Brummelen. Princeton University Press, December 2012. ISBN-13: 978-06911-489-22.

Henri Poincaré: Impatient Genius, by Ferdinand Verhulst. Springer, August 2012. ISBN-13: 978-14614-240-62.

Henri Poincaré: A Scientific Biography, by Jeremy Gray. Princeton University Press, November 2012. ISBN-13: 978-06911-527-14.

How to Study as a Mathematics Major, by Lara Alcock. Oxford University Press, March 2013. ISBN-13: 978-0199661312.

I Died for Beauty: Dorothy Wrinch and the Cultures of Science, by Marjorie Senechal. Oxford University

Press, December 2012. ISBN-13:978-01997-325-93.

Ibn al-Haytham's Theory of Conics, Geometrical Constructions and Practical Geometry, by Roshdi Rashed. Routledge, February 2013. ISBN-13: 978-0-415-58215-5.

In Pursuit of the Unknown: 17 Equations That Changed the World, by Ian Stewart. Basic Books, March 2012. ISBN-13: 978-04650-297-30. (Reviewed December 2012.)

Infinity: New Research Frontiers, edited by Michael Heller and W. Hugh Woodin. Cambridge University Press, February 2011. ISBN-13: 978-11070-038-73.

The Infinity Puzzle: Quantum Field Theory and the Hunt for an Orderly Universe, by Frank Close. Basic Books, November 2011. ISBN-13: 978-04650-214-44. (Reviewed September 2012.)

Introduction to Mathematical Thinking, by Keith Devlin. Keith Devlin, July 2012. ISBN-13: 978-06156-536-31.

Invisible in the Storm: The Role of Mathematics in Understanding Weather, by Ian Roulstone and John Norbury. Princeton University Press, February 2013. ISBN-13: 978-06911-527-21.

The Joy of x: A Guided Tour of Math, from One to Infinity, by Steven Strogatz. Eamon Dolan/Houghton Mifflin Harcourt, October 2012. ISBN-13: 978-05475-176-50.

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About the cover**No surprises from Catalan's constant**

This month's cover was suggested by the article in this issue written by David H. Bailey *et alia*. It exhibits two ways to portray 1,000,000 "digits" taken from somewhere in the base 4 expansion of the Catalan constant. In the foreground on the cover is the track of a random walk based on the expansion, with 0 equal to a step right, 1 a step up, etc. It is colored red at the start and dark blue at the end. In the background these digits are laid out, top to bottom and left to right, as shaded pixels.

The track of the random walk overlays three pseudo-random walks in pastel colors, and the behavior of the digits' track is not visibly inconsistent with a random distribution. At first this might not seem like an interesting way to look at such an expansion, but the article "Walking on real numbers", written by Jon Borwein *et al.* and published recently in the *Mathematical Intelligencer*, demonstrates that it can often reveal interesting information. It sometimes leads to curious patterns—as for example, the walk illustrated below (redrawn from an image in that article), based on the binary expansion

0.10111111011...

of the concatenation of successive primes 2, 3, 5, 7, 11.... This is known to be a normal number, but the expansion does not appear otherwise to be very random.



We thank Jon Borwein and Fran Aragon for supplying us with the expansion of the Catalan constant, as well as helpful comments.

—Bill Casselman
Graphics Editor
(notices-covers@ams.org)

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