A Bibliography of Publications of Richard Eugene Crandall

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Abstract

This bibliography records publications of the late Richard E. Crandall.

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12 [100]. $2 \cdot 3 \cdot 5 \cdots p \pm 1$ [16, 29]. 3×2^k [70]. $3x + 1$ [8]. **$49.95** [155]. L [166, 138]. $n! \pm 1$ [16, 29]. π [152]. $qx + 1$ [148]. x^ν [17, 19].

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References

Crandall:1973:ARL

[1] Richard Eugene Crandall. *Asymptotic Regge Limits for Inclusive Reactions*. Ph.D. thesis, Massachusetts Institute of Technology, Cambridge, MA, USA, ???? 1973. 81 pp. URL `http://search.proquest.com/docview/302648140`.

Crandall:1973:HPO

[2] Richard E. Crandall. High power operational amplifier. US Patent 3,919,655., 1973. US Patent Application ?, filed ?.

Crandall:1974:CSA

[3] Richard E. Crandall and D. Morgan. Central station to addressed point communication system. US Patent 4,048,620., 1974. US Patent Application ?, filed ?.

Crandall:1976:ELS

[4] Richard E. Crandall. Electrical load shedding feasible if survey documents real savings. *Real Estate Forum, New York*, ??(??):??, July 1976.

Crandall:1976:ETR

[5] R. E. Crandall and O. A. Bloom. Existing technology reduces energy consumption by 25%. *Institutional Management*, 4(5):??, May 1976.

Crandall:1977:P

[6] Richard Crandall, Peter Orno, M. S. Klamkin, Brian Hogan, G. A. Heuer, Thomas E. Elsner, Erwin Just, John Z. Hearon, Charles F. White, Robert S. Fisk, L. van Hamme, L. Carlitz, Mark Kleiman, Leon Gerber, Alan Wayne, M. G. Greening, Erwin Schmid, George Berzsenyi, Huseyin Demir, and Clayton W. Dodge. Problems. *Mathematics Magazine*, 50(1): 46–53, 1977. CODEN MAMGA8. ISSN 0025-570X. URL `http://www.jstor.org/stable/2689756`.

Crandall:1978:MSI

[7] Richard E. Crandall, S. Apsell, and A. Galvin. Multiple sensor intrusion detection system. US Patent 4,321,592., 1978. US Patent Application ?, filed ?.

Crandall:1978:P

[8] R. E. Crandall. On the "$3x + 1$" problem. *Mathematics of Computation*, 32(144):1281–1292, October 1978. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic).

Erdos:1978:P

[9] Paul Erdos, Edward T. H. Wang, W. R. Utz, A. K. Austin, F. David Hammer, Peter Orno, Mark Kleiman, Jordan I. Levy, Bernardo Recaman, John Hoyt, Richard Crandall, M. S. Klamkin, Paul Y. H. Yiu, Brian Hogan, Kenneth Klinger, and Philip Straffin. Problems. *Mathematics Magazine*, 51(4):245–249, September 1978. CODEN MAMGA8. ISSN 0025-570X. URL `http://www.jstor.org/stable/2689475`.

Crandall:1979:SLT

[10] R. E. Crandall and M. A. Penk. A search for large twin prime pairs. *Mathematics of Computation*, 33(145):383–388, January 1979. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic).

Crandall:1980:RS

[11] R. E. Crandall. On the rings of Saturn. *J. Oregon Acad. Sci.*, ??(??):??, March 1980.

Crandall:1981:ECD

[12] R. E. Crandall. Electronic Cavendish device. *American Journal of Physics*, 49(7):700–??, July 1981. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL `http://link.aip.org/link/ajpias/v49/i7/p700/s2`.

Crandall:1981:LDS

[13] R. E. Crandall and E. H. Wishnow. Listening to the Doppler shift of visible light. *American Journal of Physics*, 49(5):477–??, May 1981. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL `http://link.aip.org/link/ajpias/v49/i5/p477/s1`.

Stearns:1981:BHP

[14] S. C. Stearns and R. E. Crandall. Bet-hedging and persistence as adaptations of colonizers. In G. G. E. Scudder and J. L. Reveal, editors, *Evo-*

lution today, Hunt Institute for Botanical Documentation, pages 371–383. Carnegie-Mellon University, Pittsburgh, PA, USA, 1981.

Stearns:1981:QPD

[15] Stephen C. Stearns and Richard E. Crandall. Quantitative predictions of delayed maturity. *Evolution*, 35(3):455–463, May 1981. CODEN EVOLAO. ISSN 0014-3820 (print), 1558-5646 (electronic). URL `http://www.jstor.org/stable/pdfplus/2408194.pdf`.

Buhler:1982:PF

[16] J. P. Buhler, R. E. Crandall, and M. A. Penk. Primes of the form $n! \pm 1$ and $2 \cdot 3 \cdot 5 \cdots p \pm 1$. *Mathematics of Computation*, 38(158):639–643, April 1982. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic).

Crandall:1982:EGS

[17] R. E. Crandall and Mary Hall Reno. Erratum: "Ground state energy bounds for potentials x^ν" [J. Math. Phys. **23** (1982), no. 1, 64–70; MR 82m:81021]. *Journal of Mathematical Physics*, 23(9):1737, September 1982. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427. URL `http://jmp.aip.org/resource/1/jmapaq/v23/i9/p1737_s2`. See [19].

Crandall:1982:FIP

[18] Richard E. Crandall, David J. Griffiths, Nicholas A. Wheeler, and Raymond A. Mayer. Fields of an infinite plane of color. *Physical Review D (Particles and Fields)*, 25(4):1143–1145, February 1982. CODEN PRVDAQ. ISSN 0556-2821 (print), 1089-4918 (electronic), 1538-4500 (CD-ROM). URL `http://link.aps.org/doi/10.1103/PhysRevD.25.1143; http://prd.aps.org/abstract/PRD/v25/i4/p1143_1`.

Crandall:1982:GSE

[19] R. E. Crandall and Mary Hall Reno. Ground state energy bounds for potentials x^ν. *Journal of Mathematical Physics*, 23(1):64–70, January 1982. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427. URL `http://jmp.aip.org/resource/1/jmapaq/v23/i1/p64_s1`. See erratum [17].

Crandall:1982:MAS

[20] R. E. Crandall. Minimal apparatus for the speed-of-light measurement. *American Journal of Physics*, 50(12):1157–??, December 1982. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL `http://link.aip.org/link/ajpias/v50/i12/p1157/s1`.

Crandall:1982:VML

[21] R. E. Crandall and Stephen C. Stearns. Variational models of life-histories: when do solutions exist? *Theoretical Population Biology*, 21(1):11–23, 1982. CODEN TLPBAQ. ISSN 0040-5809 (print), 1096-0325 (electronic).

Crandall:1983:ECD

[22] R. E. Crandall. Electronic Cavendish device. *American Journal of Physics*, 51(4):367–??, April 1983. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL `http://link.aip.org/link/ajpias/v51/i4/p367/s1`. Abstract of 1981 Competition 1st Prize.

Crandall:1983:EPM

[23] R. E. Crandall. Exact propagator for motion confined to a sector. *Journal of Physics A (Mathematical and General)*, 16(3):513–519, February 21, 1983. CODEN JPHAC5. ISSN 0305-4470 (print), 1361-6447 (electronic). URL `http://stacks.iop.org/0305-4470/16/i=3/a=011`.

Crandall:1983:EPR

[24] R. E. Crandall. Exact propagator for reflectionless potentials. *Journal of Physics A (Mathematical and General)*, 16(13):3005–3011, September 11, 1983. CODEN JPHAC5. ISSN 0305-4470 (print), 1361-6447 (electronic). URL `http://stacks.iop.org/0305-4470/16/i=13/a=023`.

Crandall:1983:FEA

[25] R. E. Crandall. Fast eigenvalue algorithm for central potentials. *Journal of Physics A (Mathematical and General)*, 16(12):L395–L399, August 21, 1983. CODEN JPHAC5. ISSN 0305-4470 (print), 1361-6447 (electronic). URL `http://stacks.iop.org/0305-4470/16/L395`.

Crandall:1983:MAD

[26] R. E. Crandall and J. F. Delord. Minimal apparatus for determination of Planck's constant. *American Journal of Physics*, 51(1):90–??, January 1983. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL `http://link.aip.org/link/ajpias/v51/i1/p90/s1`.

Crandall:1983:PME

[27] R. E. Crandall. Photon mass experiment. *American Journal of Physics*, 51(8):698–??, August 1983. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL `http://link.aip.org/link/ajpias/v51/i8/p698/s1`.

Crandall:1983:RTA

[28] R. E. Crandall and B. R. Litt. Reassembly and time advance in reflectionless scattering. *Annals of Physics*, 146(2):458–469, 1983. CODEN ADNYA6. ISSN 0003-4916 (print), 1096-035x (electronic).

Keller:1983:CPF

[29] Wilfred Keller. Corrigendum: "Primes of the form $n!\pm1$ and $2\cdot3\cdot5\cdots p\pm1$" [Math. Comp. **38** (1982), no. 158, 639–643 and MR 83c:10006] by J. P. Buhler, R. E. Crandall and M. A. Penk. *Mathematics of Computation*, 40(162):727, April 1983. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic).

Crandall:1984:EST

[30] R. Crandall, R. Whitnell, and R. Bettega. Exactly soluble two-electron atomic model. *American Journal of Physics*, 52(5):438–??, May 1984. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL `http://link.aip.org/link/ajpias/v52/i5/p438/s1`.

Crandall:1984:KGR

[31] R. E. Crandall and N. A. Wheeler. Klein–Gordon radio and the problem of photon mass. *Il Nuovo Cimento*, 80B(2):??, April 1984.

Crandall:1984:PAS

[32] Richard E. Crandall. *Pascal applications for the sciences*. A Self-teaching guide. John Wiley, New York, NY, USA, 1984. ISBN 0-471-87242-3 (paperback). x + 246 pp. LCCN Q183.9 .C73 1984. US$16.95.

McPhee:1984:PCG

[33] N. McPhee and R. E. Crandall. Pascal-86 color graphics package developed at Reed College. *Intel Innovator Publication*, 5(2):??, June/July 1984.

Russell:1984:GPI

[34] P. J. Russell, Richard E. Crandall, and R. Feinbaum. GELYSIS: Pascal-implemented analysis of one-dimensional electrophoresis gels. *Nucleic Acids Research*, 12(1):493–498, 1984. CODEN NARHAD. ISSN 0305-1048.

Stearns:1984:PAS

[35] S. C. Stearns and R. E. Crandall. Plasticity for age and size at sexual maturity: a life-history response to unavoidable stress. In G. Potts and R. J. Wootton, editors, *Fish Reproduction*, pages 13–33. Academic Press, New York, USA, 1984.

Crandall:1985:CES

[36] R. Crandall, R. Bettega, and R. Whitnell. A class of exactly soluble three-body problems. *Journal of Chemical Physics*, 83(2):698–702, July 15, 1985. CODEN JCPSA6. ISSN 0021-9606 (print), 1089-7690 (electronic).

Crandall:1986:SPM

[37] Richard E. Crandall and Marianne M. Colgrove. *Scientific programming with Macintosh Pascal*. John Wiley, New York, NY, USA, 1986. ISBN 0-471-82176-4 (paperback). vii + 279 pp. LCCN QA76.8.M3 C73 1986. US$18.95.

Crandall:1987:EFE

[38] R. E. Crandall and J. P. Buhler. Elementary function expansions for Madelung constants. *Journal of Physics A (Mathematical and General)*, 20(16):5497–5510, November 11, 1987. CODEN JPHAC5. ISSN 0305-4470 (print), 1361-6447 (electronic). URL `http://stacks.iop.org/0305-4470/20/5497`.

Crandall:1987:IDM

[39] R. Crandall, M. McClellan, S. Arch, J. Doenias, and R. Piper. Inverse diffusion methods for data peak separation. *Analytical biochemistry*, 167 (??):15–22, ???? 1987. CODEN ANBCA2. ISSN 0003-2697 (print), 1096-0309 (electronic).

Crandall:1987:PWC

[40] R. E. Crandall and J. F. Delord. The potential within a crystal lattice. *Journal of Physics A (Mathematical and General)*, 20(9):2279–2292, June 21, 1987. CODEN JPHAC5. ISSN 0305-4470 (print), 1361-6447 (electronic). URL `http://stacks.iop.org/0305-4470/20/2279`.

Crandall:1987:WRB

[41] R. E. Crandall and S. G. Gillespie. Welcome to the Rascal Billiard Parlour. *MacA.P.P.L.E.*, ??(??):??, March 1987.

Crandall:1988:BRM

[42] R. E. Crandall. Book review: *The Media Lab: Inventing the Future at MIT*, by Stewart Brand. *Computers in Physics*, 2(1):91–??, January 1988. CODEN CPHYE2. ISSN 0894-1866 (print), 1558-4208 (electronic). URL `https://aip.scitation.org/doi/10.1063/1.4822669`.

Crandall:1988:NSR

[43] Richard E. Crandall. Notes on simulation and reality [editorial]. *Computers in Physics*, 2(3):102–??, May/June 1988. CODEN CPHYE2. ISSN

0894-1866 (print), 1558-4208 (electronic). URL `https://aip.scitation.org/doi/10.1063/1.4822714`.

Crandall:1989:HMC

[44] R. E. Crandall and T. G. Dunne. Heuristic methods for counting and sizing of molecules in the liquid state. *American Journal of Physics*, 57:346–351, 1989. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL `http://link.aip.org/link/ajpias/v57/i4/p346/s1`.

Buhler:1990:CPL

[45] J. P. Buhler and R. E. Crandall. On the convergence problem for lattice sums. *Journal of Physics A (Mathematical and General)*, 23(12):2523–2528, June 21, 1990. CODEN JPHAC5. ISSN 0305-4470 (print), 1361-6447 (electronic). URL `http://stacks.iop.org/0305-4470/23/2523`.

Crandall:1990:NCP

[46] Richard E. Crandall. The NeXT computer as physics machine. *Computers in Physics*, 4(2):132–141, March–April 1990. CODEN CPHYE2. ISSN 0894-1866 (print), 1558-4208 (electronic). URL `https://aip.scitation.org/doi/10.1063/1.4822897`.

Crandall:1991:ICH

[47] Richard E. Crandall. 'idle' computers hunt for big primes. *New Scientist*, ??(??):??, March 2, 1991. CODEN NWSCAL. ISSN 0262-4079 (print), 1364-8500 (electronic).

Crandall:1991:MSa

[48] Richard E. Crandall. *Mathematica for the Sciences*. Addison-Wesley, Reading, MA, USA, 1991. ISBN 0-201-51001-4. xiii + 300 pp. LCCN Q172 .C73 1991. See [49].

Crandall:1991:MSb

[49] Richard E. Crandall. *Mathematica for the Sciences*. Addison-Wesley and Toppan, Reading, MA, USA and Tokyo, Japan, 1991. ISBN 4-8101-8036-0. 315 pp. LCCN ???? Japanese translation of [48].

Crandall:1991:SPH

[50] Richard E. Crandall. Symbolic processors help physics. *Computers in Physics*, ??(??):??, October 1991. CODEN CPHYE2. ISSN 0894-1866 (print), 1558-4208 (electronic).

Crandall:1991:SSS

[51] Richard E. Crandall. Symbolic software supports new adventures in physics. *Computers in Physics*, 5(6):576–579, November/December 1991. CODEN CPHYE2. ISSN 0894-1866 (print), 1558-4208 (electronic). URL `https://aip.scitation.org/doi/10.1063/1.4823027`.

Buhler:1992:IPO

[52] J. P. Buhler, R. E. Crandall, and R. W. Sompolski. Irregular primes to one million. *Mathematics of Computation*, 59(200):717–722, October 1992. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic).

Crandall:1992:MAP

[53] Richard E. Crandall. Method and apparatus for public key exchange in a cryptographic system. US Patent 5,159,632., 1992. US Patent Application ?, filed ?.

Buhler:1993:IPC

[54] J. Buhler, R. Crandall, R. Ernvall, and T. Metsänkylä. Irregular primes and cyclotomic invariants to four million. *Mathematics of Computation*, 61(203):151–153, July 1993. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic).

Crandall:1993:CAF

[55] Richard E. Crandall. Combinatorial approach to Feynman path integration. *Journal of Physics A (Mathematical and General)*, 26(14):3627–3648, July 21, 1993. CODEN JPHAC5. ISSN 0305-4470 (print), 1361-6447 (electronic). URL `http://stacks.iop.org/0305-4470/26/3627`.

Crandall:1993:MAP

[56] Richard E. Crandall. Method and apparatus for public key exchange in a cryptographic system. US Patent 5,271,061., 1993. US Patent Application ?, filed ?.

Powell:1993:LDS

[57] J. Powell and R. Crandall. Lattice dynamics for a simplified DNA model. *Mathematica in Education*, 2(3):15–20, 1993. ISSN 1065-2965.

Crandall:1994:DWT

[58] Richard Crandall and Barry Fagin. Discrete weighted transforms and large-integer arithmetic. *Mathematics of Computation*, 62(205):305–324, January 1994. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842

(electronic). URL `http://www.jstor.org/stable/pdfplus/2153411.pdf`.

Crandall:1994:EES

[59] Richard E. Crandall and Joe P. Buhler. On the evaluation of Euler sums. *Experimental Mathematics*, 3(4):275–285, ???? 1994. CODEN ???? ISSN 1058-6458 (print), 1944-950X (electronic). URL `http://projecteuclid.org/euclid.em/1048515810`.

Crandall:1994:MAP

[60] Richard E. Crandall. Method and apparatus for public key exchange in a cryptographic system. US Patent 5,463,690., 1994. US Patent Application ?, filed ?.

Crandall:1994:PSC

[61] Richard E. Crandall. *Projects in Scientific Computation*. TELOS division of Springer-Verlag, Santa Clara, CA, USA and New York, NY, USA, 1994. ISBN 0-387-97808-9. xxiv + 470 pp. LCCN Q183.9.P733 1994. US$49.95. With one Macintosh/IBM-PC floppy disk (3.5 inch).

Crandall:1995:TSF

[62] R. Crandall, J. Doenias, C. Norrie, and J. Young. The twenty-second Fermat number is composite. *Mathematics of Computation*, 64(210):863–868, April 1995. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic).

Crandall:1996:MAD

[63] Richard E. Crandall. Method and apparatus for Digital Signature Authentication. US Patent 5,581,616., 1996. US Patent Application ?, filed ?.

Crandall:1996:QZF

[64] Richard E. Crandall. On the quantum zeta function. *Journal of Physics A (Mathematical and General)*, 29(21):6795–6816, November 7, 1996. CODEN JPHAC5. ISSN 0305-4470 (print), 1361-6447 (electronic).

Crandall:1996:TAS

[65] Richard E. Crandall. *Topics in Advanced Scientific Computation*. TELOS division of Springer-Verlag, Santa Clara, CA, USA and New York, NY, USA, 1996. ISBN 0-387-94473-7. ix + 340 pp. LCCN QA9.58.C73 1996. US$39.95. Includes programs in C and Mathematica.

Bailey:1997:KC

[66] David H. Bailey, Jonathan M. Borwein, and Richard E. Crandall. On the Khintchine constant. *Mathematics of Computation*, 66(217):417–431, January 1997. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic). URL `http://www.ams.org/jourcgi/jour-pbprocess?fn=110&arg1=S0025-5718-97-00800-4&u=/mcom/1997-66-217/; http://www.jstor.org/stable/pdfplus/2153664.pdf`.

Brent:1997:TNF

[67] Richard P. Brent, Richard E. Crandall, and Karl Dilcher. Two new factors of Fermat numbers. Technical Report TR-CS-97-11, Department of Computer Science, The Australian National University, Canberra 0200, ACT, Australia, May 1997. 9 pp. URL `http://cs.anu.edu.au/techreports/1997/TR-CS-97-11.pdf; http://cs.anu.edu.au/techreports/1997/TR-CS-97-11.ps.gz`.

Crandall:1997:BRB

[68] Richard E. Crandall. Book review: *Computation of Special Functions*, by Shanjie Zhang and Jianming Jin. *American Journal of Physics*, 65(4):355, April 1997. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL `http://ajp.aapt.org/resource/1/ajpias/v65/i4/p355_s1`.

Crandall:1997:CLN

[69] Richard E. Crandall. The challenge of large numbers. *Scientific American*, 276(2):74–78, February 1997. CODEN SCAMAC. ISSN 0036-8733 (print), 1946-7087 (electronic). URL `http://www.nature.com/scientificamerican/journal/v276/n2/pdf/scientificamerican0297-74.pdf; http://www.sciam.com/0297issue/0297currentissue.html`.

Crandall:1997:FPC

[70] Richard E. Crandall. Floating-point convolutions of length 3×2^k. Report, Reed College, Portland, OR, USA, 1997. 4 pp. URL `http://people.reed.edu/~crandall/papers/con32k.pdf`.

Crandall:1997:OTD

[71] Richard E. Crandall and J. Farrell. Optimization of two dimensional real convolutions. Report, Reed College, Portland, OR, USA, 1997. 6 pp. URL `http://people.reed.edu/~crandall/papers/con2d.pdf`.

Crandall:1997:SWW

[72] Richard Crandall, Karl Dilcher, and Carl Pomerance. A search for Wieferich and Wilson primes. *Mathematics of Computation*, 66(217): 433–449, January 1997. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic). URL `http://www.ams.org/jourcgi/jour-pbprocess?fn=110&arg1=S0025-5718-97-00791-6&u=/mcom/1997-66-217/; http://www.jstor.org/stable/pdfplus/2153665.pdf`.

Borwein:1998:CSR

[73] Jonathan M. Borwein, David M. Bradley, and Richard E. Crandall. Computational strategies for the Riemann zeta function. Report CECM-98-118, Centre for Experimental and Constructive Mathematics (CECM) at Simon Fraser University (SFU), Burnaby, BC V5A 1S6, Canada, October 30, 1998. 68 pp. URL `http://docserver.carma.newcastle.edu.au/211; http://people.reed.edu/~crandall/papers/attach01.pdf`. Published in [90].

Crandall:1998:ACA

[74] Richard E. Crandall. Advances in cryptographic algorithms: New discoveries. In ????, editor, *Proceedings of the RSA Conference, San Francisco, CA, January 1998*. ????, ????, 1998.

Crandall:1998:ASF

[75] Richard E. Crandall. Applications of space-filling curves. Report, Reed College, Portland, OR, USA, 1998.

Crandall:1998:FEE

[76] Richard E. Crandall. Fast evaluation of Epstein zeta functions. Report, Reed College, Portland, OR, USA, 1998. 11 pp. URL `http://people.reed.edu/~crandall/papers/epstein.pdf`.

Crandall:1998:FEM

[77] Richard E. Crandall. Fast evaluation of multiple zeta sums. *Mathematics of Computation*, 67(223):1163–1172, July 1998. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic). URL `http://www.ams.org/jourcgi/jour-pbprocess?fn=110&arg1=S0025-5718-98-00950-8&u=/mcom/1998-67-223/; http://www.jstor.org/stable/pdfplus/2585176.pdf`.

Crandall:1998:KSB

[78] Richard E. Crandall. Keynote speech: Breaking numerical records with Mathematica. In ????, editor, *Worldwide Mathematica Conference, Chicago, IL, June 1998*, volume ??, page ?? ????, ????, 1998.

Crandall:1998:NOL

[79] Richard E. Crandall and Marvin Levich. *A network orange: logic and responsibility in the Computer Age*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 1998. ISBN 0-387-94647-0. xvi + 130 pp. LCCN QA76.9.C66 C73 1998. With a foreword by Howard Rheingold.

Crandall:1999:CLE

[80] Richard Crandall, Uli Hofmann, and Richard L. Lozes. Contrast limitations in electron-beam lithography. *Journal of Vacuum Science & Technology, B: Microelectronics and Nanometer Structures–Processing, Measurement, and Phenomena*, 17(6):2945–2947, November/December 1999. CODEN JVSTBM. ISSN 1071-1023 (print), 1520-8567 (electronic). URL `http://scitation.aip.org/content/avs/journal/jvstb/17/6/10.1116/1.590930`.

Crandall:1999:ICS

[81] Richard E. Crandall. Integer convolution via split-radix fast Galois transform. Report, Reed College, Portland, OR, USA, 1999. 4 pp. URL `http://people.reed.edu/~crandall/papers/confgt.pdf`.

Crandall:1999:NRM

[82] Richard E. Crandall. New representations for the Madelung constant. *Experimental Mathematics*, 8(4):367–379, ???? 1999. CODEN ???? ISSN 1058-6458 (print), 1944-950X (electronic). URL `http://projecteuclid.org/euclid.em/1047262358`.

Crandall:1999:PPR

[83] Richard E. Crandall. Parallelization of Pollard-rho factorization. Report, Reed College, Portland, OR, USA, 1999. 14 pp. URL `http://people.reed.edu/~crandall/papers/parrho.pdf`.

Crandall:1999:SPK

[84] Richard E. Crandall and Steve Jobs. Seybold publisher's keynote on educational supercomputing. *????*, ??(??):??, 1999. URL `http://www.youtube.com/watch?v=89Y8bjVEZ8E`.

Crandall:1999:ULC

[85] Richard E. Crandall. Universal lossless compressor for digitized analog data. US Patent 6,433,707., 1999. US Patent Application ?, filed ?.

Crandall:1999:VIC

[86] R. E. Crandall and J. Klivington. Vector implementation of color-image wavelet transform. Report, Advanced Computation Group, Apple Computer, Cupertino, CA, USA, October 25, 1999. 15 pp. URL `http://images.apple.com/acg/pdf/g4wavelet.pdf`.

Crandall:1999:VIM

[87] Richard E. Crandall and Jason Klivington. Vector implementation of multiprecision arithmetic. Report, Advanced Computation Group, Apple Computer, Cupertino, CA, USA, October 25, 1999. 11 pp. URL `http://images.apple.com/acg/pdf/G4multiprecision.pdf`.

Hofmann:1999:FPS

[88] U. Hofmann, R. Crandall, and L. Johnson. Fundamental performance of state-of the-art proximity effect correction methods. *Journal of Vacuum Science & Technology, B: Microelectronics and Nanometer Structures–Processing, Measurement, and Phenomena*, 17(6):2940–2944, November/December 1999. CODEN JVSTBM. ISSN 1071-1023 (print), 1520-8567 (electronic).

Bailey:199x:KC

[89] David H. Bailey, Jonathan M. Borwein, and Richard E. Crandall. On the Khintchine constant. Report, Centre for Experimental and Constructive Mathematics (CECM) at Simon Fraser University (SFU), Burnaby, BC V5A 1S6, Canada, 199x. 19 pp. Published in [66].

Borwein:2000:CSR

[90] Jonathan M. Borwein, David M. Bradley, and Richard E. Crandall. Computational strategies for the Riemann zeta function. *Journal of Computational and Applied Mathematics*, 121(1–2):247–296, September 2000. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic). URL `http://people.reed.edu/~crandall/papers/attach01.pdf`. Numerical analysis in the 20th century, Vol. I, Approximation theory.

Brent:2000:TNF

[91] R. P. Brent, R. E. Crandall, K. Dilcher, and C. Van Halewyn. Three new factors of Fermat numbers. *Mathematics of Computation*, 69(231):1297–1304, July 2000. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic). URL `http://www.ams.org/journal-getitem?pii=S0025-5718-00-01207-2; http://www.ams.org/mcom/2000-69-231/S0025-5718-00-01207-2/S0025-5718-00-01207-2.dvi; http://www.ams.org/mcom/2000-69-231/S0025-5718-00-01207-`

2/S0025-5718-00-01207-2.pdf; http://www.ams.org/mcom/2000-69-231/S0025-5718-00-01207-2/S0025-5718-00-01207-2.ps; http://www.ams.org/mcom/2000-69-231/S0025-5718-00-01207-2/S0025-5718-00-01207-2.tex.

Crandall:2000:ALD

[92] Richard E. Crandall. Algorithms for localized dart-throwing. Report, Reed College, Portland, OR, USA, 2000. 9 pp. URL http://people.reed.edu/~crandall/papers/darts.pdf.

Crandall:2000:CSU

[93] Richard E. Crandall. Cryptographic system using chaotic dynamics. US Patent 6,587,563., 2000. US Patent Application ?, filed ?.

Crandall:2000:FEC

[94] Richard E. Crandall. Fast evaluation for a certain class of lattice sums. Report, Reed College, Portland, OR, USA, 2000. 5 pp. URL http://people.reed.edu/~crandall/papers/zeta2D.pdf.

Crandall:2000:FMA

[95] Richard E. Crandall. Fast matrix algebra on Apple G4. Report, Advanced Computation Group, Apple Computer, Cupertino, CA, USA, February 29, 2000. 14 pp. URL http://images.apple.com/acg/pdf/g4_matrix072804.pdf.

Crandall:2000:MAS

[96] Richard E. Crandall. Method and apparatus for simultaneously encrypting and compressing data. US Patent 6,154,542., ???? 2000. US Patent Application ?, filed ?.

Crandall:2000:PGE

[97] Richard E. Crandall. PowerPC G4 for engineering, science, and education. Report, Advanced Computation Group, Apple Computer, Cupertino, CA, USA, 2000.

Crandall:2000:SSF

[98] R. E. Crandall and J. Klivington. Supercomputer-style FFT library for Apple G4. Report, Advanced Computation Group, Apple Computer, Cupertino, CA, USA, January 6, 2000. 24 pp. URL http://images.apple.com/acg/pdf/g4fft.pdf.

Bailey:2001:RCF

[99] David H. Bailey and Richard E. Crandall. On the random character of fundamental constant expansions. *Experimental Mathematics*, 10(2): 175–190, June 2001. CODEN ???? ISSN 1058-6458 (print), 1944-950X (electronic). URL `http://projecteuclid.org/euclid.em/999188630`.

Buhler:2001:IPC

[100] Joe Buhler, Richard Crandall, Reijo Ernvall, Tauno Metsänkylä, and M. Amin Shokrollahi. Irregular primes and cyclotomic invariants to 12 million. *Journal of Symbolic Computation*, 31(1–2):89–96, January/February 2001. CODEN JSYCEH. ISSN 0747-7171 (print), 1095-855X (electronic). URL `http://www.idealibrary.com/links/doi/10.1006/jsco.1999.1011; http://www.idealibrary.com/links/doi/10.1006/jsco.1999.1011/pdf; http://www.idealibrary.com/links/doi/10.1006/jsco.1999.1011/ref`. Computational algebra and number theory (Milwaukee, WI, 1996).

Crandall:2001:MAF

[101] Richard E. Crandall and B. Garst. Method and apparatus for fast elliptic encryption with direct embedding. US Patent 6,307,935., 2001. US Patent Application ?, filed ?.

Crandall:2001:PNC

[102] Richard Crandall and Carl Pomerance. *Prime Numbers: a Computational Perspective*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2001. ISBN 0-387-94777-9. xv + 545 pp. LCCN QA246 .C74 2001.

Bailey:2002:RGN

[103] David H. Bailey and Richard E. Crandall. Random generators and normal numbers. *Experimental Mathematics*, 11(4):527–546 (2003), ???? 2002. CODEN ???? ISSN 1058-6458 (print), 1944-950X (electronic). URL `http://projecteuclid.org/euclid.em/1057864662`.

Crandall:2002:OPF

[104] R. E. Crandall and J. Papadopoulos. Octuple-precision floating point on Apple G4. Report, Advanced Computation Group, Apple Computer, Cupertino, CA, USA, May 8, 2002. 8 pp. URL `http://images.apple.com/acg/pdf/oct3a.pdf`.

Barabasi:2003:LNS

[105] Albert-László Barabási and R. E. Crandall. Linked: The new science of networks. *American Journal of Physics*, 71(4):409–??, April 2003. CO-

DEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL http://link.aip.org/link/ajpias/v71/i4/p409/s2.

Crandall:2003:IAC

[106] R. E. Crandall and J. Papadopoulos. On the implementation of AKS-class primality tests. Report, Advanced Computation Group, Apple Computer, Cupertino, CA, USA, March 18, 2003. 9 pp. URL http://images.apple.com/acg/pdf/aks3.pdf.

Crandall:2003:MAF

[107] Richard E. Crandall. Method and apparatus for fast convolution using spline kernel. US Patent 6,701,028., 2003. US Patent Application ?, filed ?.

Crandall:2003:TFF

[108] Richard E. Crandall, Ernst W. Mayer, and Jason S. Papadopoulos. The twenty-fourth Fermat number is composite. *Mathematics of Computation*, 72(243):1555–1572 (electronic), July 2003. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic). URL http://www.ams.org/journal-getitem?pii=S0025-5718-02-01479-5; http://www.ams.org/mcom/2003-72-243/S0025-5718-02-01479-5/S0025-5718-02-01479-5.dvi; http://www.ams.org/mcom/2003-72-243/S0025-5718-02-01479-5/S0025-5718-02-01479-5.pdf; http://www.ams.org/mcom/2003-72-243/S0025-5718-02-01479-5/S0025-5718-02-01479-5.ps; http://www.ams.org/mcom/2003-72-243/S0025-5718-02-01479-5/S0025-5718-02-01479-5.tex; http://www.jstor.org/stable/pdfplus/4099850.pdf.

Bailey:2004:BEA

[109] David H. Bailey, Jonathan M. Borwein, Richard E. Crandall, and Carl Pomerance. On the binary expansions of algebraic numbers. *Journal of Number Theory Bordeaux*, 16(3):487–518, ???? 2004. CODEN ???? ISSN 1246-7405. URL http://jtnb.cedram.org/item?id=JTNB_2004__16_3_487_0.

Bedau:2004:CHF

[110] M. Bedau, R. E. Crandall, and M. Raven. Cryptographic hash functions based on Artificial Life. Report, Reed College, Portland, OR, USA, 2004. 20 pp. URL http://people.reed.edu/~crandall/papers/crypto8.pdf.

Borwein:2004:RAFa

[111] J. Borwein, R. Crandall, and G. Fee. On the Ramanujan AGM fraction. I. The real-parameter case. *Experimental Mathematics*, 13(3):275–285, ????

2004. CODEN ???? ISSN 1058-6458 (print), 1944-950X (electronic). URL `http://projecteuclid.org/euclid.em/1103749836`.

Borwein:2004:RAFb

[112] J. Borwein and R. Crandall. On the Ramanujan AGM fraction. II. The complex-parameter case. *Experimental Mathematics*, 13(3):287–295, ???? 2004. CODEN ???? ISSN 1058-6458 (print), 1944-950X (electronic). URL `http://projecteuclid.org/euclid.em/1103749837`.

Crandall:2004:BIJ

[113] Richard E. Crandall. On a Bessel-integral of J. Borwein. Report, Reed College, Portland, OR, USA, August 2004. 2 pp. URL `http://people.reed.edu/~crandall/papers/borweinJ.pdf`.

Crandall:2004:GFA

[114] R. E. Crandall, J. Klivington, and D. Kramer. Gigaelement FFTs on Apple G5 clusters. Report, Advanced Computation Group, Apple Computer, Cupertino, CA, USA, August 27, 2004. 7 pp. URL `http://images.apple.com/acg/pdf/FFTdistIntel20070816.pdf`.

Crandall:2004:IPL

[115] R. Crandall, G. Oxman, M. Helman, and A. Sullivan. Intuitive physics leads to epidemic models: Focus on smallpox. Report, Center for Advanced Computation, Reed College, Portland, OR, USA, June 1, 2004. 29 pp.

Crandall:2005:FEW

[116] Richard E. Crandall. Fast evaluation of the Witten zeta function. Report, Reed College, Portland, OR, USA, August 2005. 3 pp. URL `http://people.reed.edu/~crandall/papers/Witten2.pdf`.

Crandall:2005:FEZ

[117] Richard E. Crandall. Fast evaluation of Zucker moment-sums. Report, Reed College, Portland, OR, USA, September 2005. 3 pp. URL `http://people.reed.edu/~crandall/papers/Zucker.pdf`.

Crandall:2005:MAF

[118] Richard E. Crandall. Method and apparatus for fast convolution using separated spline kernel. US Patent 6,912,323., 2005. US Patent Application ?, filed ?.

Crandall:2005:PN

[119] Richard Crandall and Carl Pomerance. *Prime Numbers: a Computational Perspective*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., second edition, 2005. ISBN 0-387-25282-7. xvi + 597 pp.

Bailey:2006:IIC

[120] D. H. Bailey, J. M. Borwein, and R. E. Crandall. Integrals of the Ising class. *Journal of Physics A (Mathematical and General)*, 39(40):12271–12302, October 2006. CODEN JPHAC5. ISSN 0305-4470 (print), 1361-6447 (electronic). URL `http://adsabs.harvard.edu/abs/2006JPhA...39..001B; http://iopscience.iop.org/article/10.1088/0305-4470/39/40/001; http://stacks.iop.org/0305-4470/39/i=40/a=001`.

Cahill:2006:STI

[121] E. Cahill, R. Crandall, L. Rude, and A. Sullivan. Space-time influenza model with demographic, mobility, and vaccine parameters. In ????, editor, *Proceedings of the 5th Annual Hawaii International Conference on Mathematics, Statistics, and related fields*, page ?? ????, ????, 2006. URL `http://academic.reed.edu/epi/papers/USAfluFINAL.pdf`.

Crandall:2006:NFP

[122] Richard E. Crandall. Note on fast polylogarithm computation. Report, Reed College, Portland, OR, USA, January 2006. 6 pp. URL `http://people.reed.edu/~crandall/papers/Polylog.pdf`.

Bailey:2007:BI

[123] D. H. Bailey, J. M. Borwein, and R. E. Crandall. Box integrals. *Journal of Computational and Applied Mathematics*, 206(1):196–208, 2007. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic).

Bailey:2007:HFI

[124] D. H. Bailey, D. Borwein, J. M. Borwein, and R. E. Crandall. Hypergeometric forms for Ising-class integrals. *Experimental Mathematics*, 16(3):257–276, ???? 2007. CODEN ???? ISSN 1058-6458 (print), 1944-950X (electronic). URL `http://projecteuclid.org/euclid.em/1204928528`.

Borwein:2007:DCR

[125] D. Borwein, J. Borwein, R. Crandall, and R. Mayer. On the dynamics of certain recurrence relations. *The Ramanujan Journal*, 13(1-3):63–101, 2007. CODEN RAJOF9. ISSN 1382-4090 (print), 1572-9303 (electronic). Special issue for Richard Askey's 70th birthday.

Borwein:2007:ELAa

[126] David Borwein, Jonathan Borwein, and Richard Crandall. Effective Laguerre asymptotics. Report, Department of Computer Science, Dalhousie University, Halifax, NS, Canada B3H 4R2, 2007. URL `http://locutus.cs.dal.ca:8088/archive/00000334/`; `http://web.archive.org/web/20070208032521/http://locutus.cs.dal.ca:8088/archive/00000334/`.

Chen:2007:OAR

[127] Charlie C. Chen, Jiinpo Wu, and Richard E. Crandall. Obstacles to the adoption of radio frequency identification technology in the emergency rooms of hospitals. *International Journal of Electronic Healthcare (IJEH)*, 3(2):193–207, 2007.

Crandall:2007:NSK

[128] Richard E. Crandall. Note on sinc-kernel sums and Poisson transformation. Report, Reed College, Portland, OR, USA, June 2007. 4 pp. URL `http://people.reed.edu/~crandall/papers/Sinc.pdf`.

Crandall:2007:TRW

[129] Richard E. Crandall. Theory of ROOF walks. Report, Reed College, Portland, OR, USA, August 19, 2007. 40 pp. URL `http://people.reed.edu/~crandall/papers/ROOF.pdf`.

Borwein:2008:ELA

[130] David Borwein, Jonathan M. Borwein, and Richard E. Crandall. Effective Laguerre asymptotics. *SIAM Journal on Numerical Analysis*, 46(6):3285–3312, ???? 2008. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Crandall:2008:TRW

[131] Richard E. Crandall. Theory of ROOF walks. Report, Reed College, Portland, OR, USA, May 23, 2008. 40 pp. URL `http://people.reed.edu/~crandall/papers/ROOF11.pdf`.

Bailey:2009:RQR

[132] D. H. Bailey, J. M. Borwein, and R. E. Crandall. Resolution of the Quinn–Rand–Strogatz constant of nonlinear physics. *Experimental Mathematics*, 18(1):107–116, ???? 2009. CODEN ???? ISSN 1058-6458 (print), 1944-950X (electronic). URL `http://projecteuclid.org/euclid.em/1243430534`.

Bailey:2010:ATB

[133] D. H. Bailey, J. M. Borwein, and R. E. Crandall. Advances in the theory of box integrals. *Mathematics of Computation*, 79(271):1839–1866, July 2010. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic). URL `http://www.ams.org/journals/mcom/2010-79-271/S0025-5718-10-02338-0/; http://www.ams.org/journals/mcom/2010-79-271/S0025-5718-10-02338-0/S0025-5718-10-02338-0.pdf`.

Borwein:2010:HDB

[134] Jonathan M. Borwein, O-Yeat Chan, and R. E. Crandall. Higher-dimensional box integrals. *Experimental Mathematics*, 19(4):431–446, ???? 2010. CODEN ???? ISSN 1058-6458 (print), 1944-950X (electronic). URL `http://projecteuclid.org/euclid.em/1317758103`.

Crandall:2010:TLR

[135] Richard E. Crandall. Theory of log-rational integrals. In *Gems in experimental mathematics*, volume 517 of *Contemp. Math.*, pages 127–142. Amer. Math. Soc., Providence, RI, 2010.

Crandall:2011:SRS

[136] Richard Crandall. *Scientific Reflections: Selected Multidisciplinary Works*. Perfectly Scientific Press, Portland, OR, USA, second edition, 2011. ISBN 1-935638-08-4. vi + 385 pp. LCCN Q113 .C72 2011.

Crandall:2012:GTB

[137] Richard Crandall. The googol-th bit of the Erdős–Borwein constant. *Integers*, 12(5):811–840, October 2012. CODEN INTEHN. ISSN 1867-0652 (print), 1867-0660 (electronic).

Crandall:2012:UAP

[138] R. E. Crandall. Unified algorithms for polylogarithm, L-series, and zeta variants. Preprint, 2012. URL `http://www.perfscipress.com/papers/universalTOC25.pdf`.

Bailey:2013:EFS

[139] David H. Bailey, Jonathan M. Borwein, and Richard E. Crandall. Expectations on fractal sets. *Applied Mathematics and Computation*, ??(??):??, ???? 2013. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic). URL `http://www.davidhbailey.com/dhbpapers/fracboxes.pdf`. To appear.

Bailey:2013:LSA

[140] David H. Bailey, Jonathan M. Borwein, Richard E. Crandall, and John Zucker. Lattice sums arising from the Poisson equation. *Journal of Physics A: Mathematical and Theoretical*, 46(11):115201, March 2013. CODEN JPAMB5. ISSN 1751-8113 (print), 1751-8121 (electronic). URL `http://adsabs.harvard.edu/abs/2013JPhA...46k5201B; http://iopscience.iop.org/article/10.1088/1751-8113/46/11/115201; http://stacks.iop.org/1751-8121/46/i=11/a=115201; http://www.davidhbailey.com/dhbpapers/PoissonLattice.pdf`.

Borwein:2013:CFW

[141] Jonathan M. Borwein and Richard E. Crandall. Closed forms: What they are and why we care. *Notices of the American Mathematical Society*, 60(1): 50–65, January 2013. CODEN AMNOAN. ISSN 0002-9920 (print), 1088-9477 (electronic). URL `http://www.ams.org/notices/201301/rnoti-p50.pdf`.

Crandall:2013:FDB

[142] Richard Crandall. On the fractal distribution of brain synapses. In Bailey et al. [169], pages 325–348. ISBN 1-4614-7620-8, 1-4614-7621-6 (e-book). ISSN 2194-1009. LCCN QA241. URL `http://public.eblib.com/choice/publicfullrecord.aspx?p=1466708; http://swb.eblib.com/patron/FullRecord.aspx?p=1466708; http://www.myilibrary.com?id=547562`.

Wolfram:2013:RRC

[143] Stephen Wolfram. Remembering Richard Crandall (1947–2012). *ACM Communications in Computer Algebra*, 47(1/2):14–15, March 2013. CODEN ???? ISSN 1932-2232 (print), 1932-2240 (electronic).

Walker:1983:SVD

[144] J. Walker. Simple and vivid demonstrations of advanced concepts in physics. *Scientific American*, ??(??):??, January 1983. CODEN SCAMAC. ISSN 0036-8733 (print), 1946-7087 (electronic). Survey of Richard E. Crandall's experimental work.

Crandall:1986:PC

[145] Jerry P. Gollub and Neal B. Abraham. Physics in the colleges. *Physics Today*, 39(6):28–34, June 1986. CODEN PHTOAD. ISSN 0031-9228 (print), 1945-0699 (electronic). URL `http://www.physicstoday.org/resource/1/phtoad/v39/i6/p28_s1`.

Taylor:1992:BRB

[146] Cyrus Taylor. Book reviews: *Mathematica for the Sciences*, by Richard E. Crandall and *Mathematica in Action*, by Stan Wagon. *Physics Today*, 45(1):71, January 1992. CODEN PHTOAD. ISSN 0031-9228 (print), 1945-0699 (electronic). URL `http://www.physicstoday.org/resource/1/phtoad/v45/i1/p71_s1`.

Wenes:1994:BRB

[147] Geert Wenes. Book review: *Projects in Scientific Computation*, by Richard E. Crandall and *A Scientist's and Engineer's Guide to Workstations and Supercomputers*, by Rubin H. Landau and Paul J. Fink, Jr. *Computers in Physics*, 8(1):68–??, ???? 1994. CODEN CPHYE2. ISSN 0894-1866 (print), 1558-4208 (electronic).

Franco:1995:CCC

[148] Zachary Franco and Carl Pomerance. On a conjecture of Crandall concerning the $qx+1$ problem. *Mathematics of Computation*, 64(211):1333–1336, July 1995. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic).

Peterson:2000:GCO

[149] Ivars Peterson. Great computations: Owners of home computers join researchers in cracking problems and crunch-. *Science News (Washington, DC)*, 157(10):152–155, March 4, 2000. CODEN SCNEBK. ISSN 0036-8423 (print), 1943-0930 (electronic). URL `http://www.sciencenews.org/pages/pdfs/data/2000/157-10/15710-12.pdf`.

Peterson:2001:PMM

[150] Ivars Peterson. Pi à la mode: Mathematicians tackled the seeming randomness of pi's digits. *Science News (Washington, DC)*, 160(9):136–137, September 1, 2001. CODEN SCNEBK. ISSN 0036-8423 (print), 1943-0930 (electronic). URL `http://www.jstor.org/stable/4012633`.

Preuss:2001:DPR

[151] Paul Preuss. Are the digits of pi random? A Berkeley Lab researcher may hold the key. *Energy Science News*, ??(??):??, ???? 2001. URL `http://web.archive.org/web/20050208141708/http://www.pnl.gov/energyscience/10-01/art3.htm; http://www.pnl.gov/energyscience/10-01/art3.htm`. pnl.gov.

Seife:2001:MRD

[152] Charles Seife. Mathematics: Randomly distributed slices of π. *Science*, 293(5531):793–??, August 3, 2001. CODEN SCIEAS. ISSN 0036-8075 (print), 1095-9203 (electronic). URL `http://www.sciencemag.org/content/293/5531/793.summary`.

Seife:2001:PKE

[153] Charles Seife. Pi keeps 'em guessing. *Science NOW*, ??(??):??, July 27, 2001. URL `http://news.sciencemag.org/sciencenow/2001/07/27-01.html; http://sciencenow.sciencemag.org/cgi/content/full/2001/727/1`.

Teitelbaum:2002:RBN

[154] J. Teitelbaum. Review of *Prime numbers: A computational perspective*, by Crandall, R. and Pomerance, C. *Bulletin of the American Mathematical Society*, 39(3):449–454, April 2002. CODEN BAMOAD. ISSN 0002-9904 (print), 1936-881X (electronic).

Wagon:2002:BRM

[155] Stan Wagon. Book review: Mathematics: Prime time: *Prime Numbers: A Computational Perspective*. Richard Crandall and Carl Pomerance, xvi + 545 pp. Springer-Verlag, 2001. $49.95. *American Scientist*, 90(1):84, January/February 2002. CODEN AMSCAC. ISSN 0003-0996 (print), 1545-2786 (electronic). URL `http://www.jstor.org/stable/pdfplus/27857605.pdf`. See [102].

Gibbs:2003:DSP

[156] W. W. Gibbs. A digital slice of pi. the new way to do pure math: Experimentally. *Scientific American*, 288(5):23–24, May 2003. CODEN SCAMAC. ISSN 0036-8733 (print), 1946-7087 (electronic). URL `http://crd.lbl.gov/~dhbailey/sciam-2003.pdf; http://www.nature.com/scientificamerican/journal/v288/n5/pdf/scientificamerican0503-23.pdf; http://www.scientificamerican.com/article.cfm?id=a-digital-slice-of-pi`.

McCartin:2003:AEP

[157] Brian J. McCartin and Suzanne M. Labadie. Accurate and efficient pricing of vanilla stock options via the Crandall–Douglas scheme. *Applied Mathematics and Computation*, 143(1):39–60, October 20, 2003. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic).

Dworkin:2004:MSD

[158] Andy Dworkin. Mathematical supermodels define epidemic predictions. *The Oregonian*, ??(??):??, April 28, 2004. URL `http://people.reed.edu/~crandall/papers/EpiArticle.pdf`.

Klarreich:2004:MLC

[159] Erica Klarreich. Math Lab: Computer experiments are transforming mathematics. *Science News (Washington, DC)*, 165(17):266–??, April 24, 2004. CODEN SCNEBK. ISSN 0036-8423 (print), 1943-0930 (electronic). URL `http://www.sciencenews.org/articles/20040424/bob9.asp; http://www.sciencenews.org/view/feature/id/4949/description/Math_Lab; http://www.sciencenews.org/view/generic/id/5159/description/Letters_from_the_June_26_2004_issue_of_iScience_News-i`.

Landhuis:2005:CGC

[160] Esther Landhuis. A case for giving children flu shots: Studies indicate sweeping benefits. *The Mercury News*, ??(??):??, January 20, 2005. URL `http://www.mercurynews.com/mld/mercurynews/living/health/10688678.htm`.

Moody:2005:RPQ

[161] Robin J. Moody. Reed professor, Qmedtrix put together idea. *Portland Business Journal*, ??(??):??, December 23, 2005. URL `http://people.reed.edu/~crandall/papers/Qmedtrix-Reed.pdf`.

Bailey:2012:MPI

[162] David H. Bailey and Jonathan Borwein. Mathematician/physicist/inventor Richard Crandall dies at 64. Web blog., December 21, 2012. URL `http://experimentalmath.info/blog/2012/12/mathematicianphysicistinventor-richard-crandall-dies-at-64/`.

Wolfram:2012:RRC

[163] Stephen Wolfram. Remembering Richard Crandall (1947–2012). Web blog., December 30, 2012. URL `http://blog.stephenwolfram.com/2012/12/remembering-richard-crandall-1947-2012/`.

Bailey:2014:CTE

[164] David H. Bailey, Jonathan M. Borwein, and Richard E. Crandall. Computation and theory of extended Mordell–Tornheim–Witten sums. *Mathematics of Computation*, 83(288):1795–1821, 2014. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic). URL `http://www.ams.org/journals/mcom/2014-83-288/S0025-5718-2014-02768-3;`

http://www.ams.org/journals/mcom/2014-83-288/S0025-5718-2014-02768-3/S0025-5718-2014-02768-3.pdf.

Coffey:2014:SRR

[165] Mark W. Coffey. Series representation of the Riemann zeta function and other results: Complements to a paper of Crandall. *Mathematics of Computation*, 83(287):1383–1395, 2014. CODEN MCMPAF. ISSN 0025-5718 (print), 1088-6842 (electronic). URL http://www.ams.org/journals/mcom/2014-83-287/S0025-5718-2013-02755-X; http://www.ams.org/journals/mcom/2014-83-287/S0025-5718-2013-02755-X/S0025-5718-2013-02755-X.pdf.

Bailey:2015:CCI

[166] D. H. Bailey and J. M. Borwein. Crandall's computation of the incomplete gamma function and the Hurwitz zeta function, with applications to Dirichlet L-series. *Applied Mathematics and Computation*, 268(??): 462–477, October 1, 2015. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic). URL http://www.sciencedirect.com/science/article/pii/S0096300315008292.

Broadhurst:2015:PPH

[167] David Broadhurst. A prime puzzle in honor of Richard Crandall. Web site., October 5, 2015. URL http://experimentalmath.info/blog/2015/10/a-prime-puzzle-in-honor-of-richard-crandall/.

Wolfram:2016:IMP

[168] Stephen Wolfram. *Idea makers: personal perspectives on the lives and ideas of some notable people*. Wolfram Media, Inc., Champaign, IL, USA, 2016. ISBN 1-57955-003-7 (hardcover), 1-57955-005-3 (e-book), 1-57955-011-8. 250 (est.) pp. LCCN Q141 .W678562 2016. URL http://www.wolfram-media.com/products/idea-makers.html.

Bailey:2013:CAM

[169] David H. Bailey, Heinz H. Bauschke, Peter Borwein, Frank Garvan, Michel Théra, Jon D. Vanderwerff, and Henry Wolkowicz, editors. *Computational and analytical mathematics: in honor of Jonathan Borwein's 60th Birthday*, volume 50 of *Springer proceedings in mathematics and statistics*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2013. ISBN 1-4614-7620-8, 1-4614-7621-6 (e-book). ISSN 2194-1009. xv + 701 pp. LCCN QA241. URL http://public.eblib.com/choice/publicfullrecord.aspx?p=1466708; http://swb.eblib.com/patron/FullRecord.aspx?p=1466708; http://www.myilibrary.com?id=547562.