

Bibliography

- [1] Kenneth John Atchity. *A Writer's Time: Making the Time to Write*. W. W. Norton & Company, New York, revised and expanded edition, 1995.
- [2] Benjamin S. Bloom. The 2 sigma problem: The search for methods of group instruction as effective as one-to-one tutoring. *Educational Researcher*, 13(6):4–16, 1984.
- [3] Carl H. Brans and Robert H. Dicke. Mach's principle and a relativistic theory of gravitation. *Physical Review*, 124:925–935, 1961.
- [4] Edgar Buckingham. On physically similar systems. *Physical Review*, 4(4):345–376, 1914.
- [5] Adam S. Burrows and Jeremiah P. Ostriker. Astronomical reach of fundamental physics. *Proceedings of the National Academy of Sciences of the USA*, 111(7):2409–16, 2014.
- [6] Robert A. Caro. *The Power Broker: Robert Moses and the Fall of New York*. Vintage Books, New York, 1975.
- [7] Thomas P. Carpenter, Mary M. Lindquist, Westina Matthews and Edward A. Silver. Results of the third NAEP assessment: Secondary school. *Mathematics Teacher*, 76:652–659, 1983.
- [8] Michael A Day. The no-slip condition of fluid dynamics. *Erkenntnis*, 33(3):285–296, 1990.
- [9] Stanislas Dehaene. *The Number Sense: How the Mind Creates Mathematics*. Oxford University Press, New York, revised and updated edition, 2011.
- [10] Persi Diaconis and Frederick Mosteller. Methods for studying coincidences. *Journal of the American Statistical Association*, 84(408):853–861, 1989.
- [11] Peter G. Doyle and Laurie Snell. *Random Walks and Electric Networks*. Mathematical Association of America, Washington, DC, 1984.
- [12] Arthur Engel. *Problem-Solving Strategies*. Springer, New York, 1998.
- [13] William Feller. *An Introduction to Probability Theory and Its Applications*, volume 1. Wiley, New York, 3rd edition, 1968.
- [14] Richard P. Feynman, Robert B. Leighton and Matthew L. Sands. *The Feynman Lectures on Physics*. Addison-Wesley, Reading, MA, 1963. A “New Millennium” edition of these famous lectures, with corrections accumulated over the years, was published in 2011 by Basic Books.
- [15] Neville H. Fletcher and Thomas D. Rossing. *The Physics of Musical Instruments*. Springer, New York, 2nd edition, 1988.

- [16] Edward M. Forster. *Howard's End*. A. A. Knopf, New York, 1921.
- [17] Mike Gancarz. *The UNIX Philosophy*. Digital Press, Boston, 1995.
- [18] Mike Gancarz. *Linux and the Unix Philosophy*. Digital Press, Boston, 2003.
- [19] Robert E. Gill, T. Lee Tibbitts, David C. Douglas, Colleen M. Handel, Daniel M. Mulcahy, Jon C. Gottschalck, Nils Warnock, Brian J. McCaffery, Philip F. Battley and Theunis Piersma. Extreme endurance flights by landbirds crossing the Pacific Ocean: Ecological corridor rather than barrier? *Proceedings of the Royal Society B: Biological Sciences*, 276(1656):447–457, 2009.
- [20] Simon Gindikin. *Tales of Mathematicians and Physicists*. Springer, New York, 2007.
- [21] Geoffrey Grimmett. *Percolation*. Springer, Berlin, 2nd edition, 1999.
- [22] John Harte. *Consider a Spherical Cow: A Course in Environmental Problem Solving*. University Science Books, Mill Valley, CA, 1988.
- [23] Sighard F. Hoerner. *Fluid-Dynamic Drag: Practical Information on Aerodynamic Drag and Hydrodynamic Resistance*. Hoerner Fluid Dynamics, Bakersfield, CA, 1965.
- [24] Williams James. *The Principles of Psychology*, volume 2. Henry Holt, New York, 1890.
- [25] Edwin T. Jaynes. A backward look into the future. In W. T. Grandy Jr. and P. W. Milonni, editors, *Physics and Probability: Essays in Honor of Edwin T. Jaynes*. Cambridge University Press, Cambridge, UK, 1993.
- [26] Edwin T. Jaynes. *Probability Theory: The Logic of Science*. Cambridge University Press, Cambridge, UK, 2003.
- [27] Thomas B. Greenslade Jr.. Atwood's machine. *The Physics Teacher*, 23(1):24–28, 1985.
- [28] Anatoly A. Karatsuba. The complexity of computations. *Proceedings of the Steklov Institute of Mathematics*, 211:169–183, 1995.
- [29] Anatoly A. Karatsuba and Yuri Ofman. Multiplication of many-digit numbers by automatic computers. *Doklady Akad. Nauk SSSR*, 145:293–294, 1962. English translation in *Physics-Doklady* 7:595–596 (1963).
- [30] Doug King. Design masterclass 2: Thermal response. *CIBSE Journal*, pages 47–49, August 2010.
- [31] Rodger Kram, Antoinette Domingo and Daniel P. Ferris. Effect of reduced gravity on the preferred walk-run transition speed. *Journal of Experimental Biology*, 200(4):821–826, 1997.
- [32] Sanjoy Mahajan. *Order of Magnitude Physics: A Textbook with Applications to the Retinal Rod and to the Density of Prime Numbers*. PhD thesis, California Institute of Technology, 1998.
- [33] Sanjoy Mahajan. *Street-Fighting Mathematics: The Art of Educated Guessing and Opportunistic Problem Solving*. MIT Press, Cambridge, MA, 2010.
- [34] Ned Mayo. Ocean waves—their energy and power. *The Physics Teacher*, 35(6):352–356, 1997.
- [35] Karen McComb, Craig Packer and Anne Pusey. Roaring and numerical assessment in contests between groups of female lions, *Panthera leo*. *Animal Behaviour*, 47(2):379–387, 1994.

- [36] George Pólya. Über eine Aufgabe der Wahrscheinlichkeitsrechnung betreffend die Irrfahrt im Strassennetz. *Mathematische Annalen*, 84(1):149–160, 1921.
- [37] George Pólya. Let us teach guessing: A demonstration with George Pólya [video-recording]. Mathematical Association of America, Washington, DC, 1966
- [38] George Pólya. *How to Solve It: A New Aspect of Mathematical Method*. Princeton University Press, Princeton, NJ, 2004.
- [39] Edward M. Purcell. Life at low Reynolds number. *American Journal of Physics*, 45:3–11, 1977.
- [40] Kenneth A. Ross and Donald E. Knuth. A programming and problem solving seminar. Technical Report, Stanford University, Stanford, CA, 1989. STAN-CS-89-1269.
- [41] Knut Schmid-Nielsen. *Scaling: Why Animal Size is So Important*. Cambridge University Press, Cambridge, UK, 1984.
- [42] Gilbert Strang. *Linear Algebra and its Applications*. Thomson, Belmont, CA, 2006.
- [43] David Tabor. *Gases, Liquids and Solids and Other States of Matter*. Cambridge University Press, Cambridge, UK, 3rd edition, 1990.
- [44] Geoffrey I. Taylor. The formation of a blast wave by a very intense explosion. II. The atomic explosion of 1945. *Proceedings of the Royal Society of London. Series A, Mathematical and Physical*, 201(1065):175–186, 1950.
- [45] John R. Taylor. *Classical Mechanics*. University Science Books, Sausalito, CA, 2005.
- [46] David J. Tritton. *Physical Fluid Dynamics*. Oxford University Press, Oxford, UK, 1988.
- [47] Lawrence Weinstein. *Guesstimation 2.0: Solving Today's Problems on the Back of a Napkin*. Princeton University Press, Princeton, NJ, 2012.
- [48] Lawrence Weinstein and John A. Adam. *Guesstimation: Solving the World's Problems on the Back of a Cocktail Napkin*. Princeton University Press, Princeton, NJ, 2009.
- [49] Kurt Wiesenfeld. Resource letter: ScL-1: Scaling laws. *American Journal of Physics*, 69(9):938–942, 2001.
- [50] Michael M. Woolfson. *Everyday Probability and Statistics: Health, Elections, Gambling and War*. Imperial College Press, London, 2nd edition, 2012.