

**HISTORY OF MATHEMATICS: REFERENCES**  
**(mainly books, for the most part in English)**

**TABLE OF CONTENTS**

A.	General Histories	2
B.	Source Books, Encyclopedias, Dictionaries	3
C.	Biographical Sources	5
D.	Bibliographic Sources	15
E.	Special Topics and Periods	
	I. Algebra	17
	II. Calculus/Analysis	19
	III. Geometry and Topology	21
	IV. Set Theory, Logic, and Philosophy of Mathematics	24
	V. Numbers and Number Theory	28
	VI. Probability and Statistics	31
	VII. Combinatorics and Graph Theory	33
	VIII. Greek Mathematics	33
	IX. Non-Western Mathematics and Ethnomathematics (Egyptian, Babylonian, Chinese, Indian, Islamic, ...)	34
	X. Astronomy, Computing, Mathematics and Science	37
	XI. "Modern" Mathematics (19 <sup>th</sup> Century-)	40
	XII. Miscellaneous Topics and Periods	42
F.	History and Pedagogy	46
G.	Miscellaneous Topics (not necessarily historical)	48

## A. General Histories

- W. S. Anglin, *Mathematics: A concise history and philosophy*; Springer-Verlag, 1994.
- W. S. Anglin & J. Lambek, *The heritage of Thales*; Springer, 1995.
- R. C. Archibald, *Outline of the history of mathematics; the 2nd Slaughter Memorial Paper*, Math. Assoc. of America, 1949.
- E. T. Bell, *The development of mathematics*; Dover, 1992 (orig. 1945).
- W. P. Berlinghoff & F. Q. Gouvêa, *Math through the ages: A general history for teachers and others, expanded ed.*; Oxtan House Publ. and MAA, 2004.
- N. Bourbaki, *Elements of the history of mathematics*; Springer-Verlag, 1994 (orig. French, 1969).
- C. B. Boyer, *A history of mathematics, 2nd ed.*, revised by U.C. Merzbach; Wiley, 1989 (orig. 1968).
- D. M. Burton, *The history of mathematics: An introduction, 4th ed.*; WCB/McGraw-Hill, 1999 (orig. 1985).
- F. Cajori, *A history of mathematics*; Chelsea, 1980 (orig. 1893).
- F. Cajori, *A history of elementary mathematics*, Cosimo Inc, 2007 [orig. 1986].
- R. Calinger, *Contextual history of mathematics to Euler*; Prentice Hall, 1989.
- M. Cantor, *Vorlesungen über Geschichte der Mathematik, 4 vols.*; Johnson Reprint, 1965.
- J. P. Collete, *Histoire des mathématiques, 2 vols.*; Editions du Renouveau Pédagogique, 1973 & 1979.
- R. Cooke, *The history of mathematics: a brief course, 2<sup>nd</sup>. ed.*, Wiley-Interscience, 2005.
- A. Dahan - Dalmedico and J. Peiffer, *History of mathematics: highways and byways*, MAA, 2009 (tr. from the French by S. Segal).
- J. Dieudonné (ed.) *Abrégé d'histoire des mathématiques: 1700-1900, 2 vols.*; Hermann, 1978.
- H. Eves, *An introduction to the history of mathematics, 6th ed.*; Saunders, 1990 (orig. 1953).
- I. Grattan – Guinness, *The Fontana history of the mathematical sciences: the rainbow of mathematics*; Fontana, 1997.
- L. Hodgkin, *A history of mathematics: from Mesopotamia to modernity*, Oxford Univ. Press, 2005.
- J. E. Hofmann, *A history of mathematics to 1800*; Littlefield, Adams & Co., 1967.

V. J. Katz, *A history of mathematics: An introduction*, 3<sup>rd</sup> ed.; Addison-Wesley, 2009.

M. Kline, *Mathematical thought from ancient to modern times*; Oxford Univ. Press, 1972.

E. Kramer, *The nature and growth of modern mathematics*; Princeton Univ. Press, 1981 (orig 1970).

D.E. Smith, *History of mathematics*, 2 vols.; Dover, 1958 (orig. 1923).

J. Stillwell, *Mathematics and its history*, 2<sup>nd</sup> ed.; Springer-Verlag, 2002 (orig. 1989).

D. J. Struik, *A concise history of mathematics*, 4th revised ed., Dover, 1987 (orig. 1948).

D. Suzuki, *Mathematics in historical context*, MAA, 2009.

D. Suzuki, *A history of mathematics*, Prentice Hall, 2002.

**B. Source Books, Encyclopedias, Dictionaries**

A. D. Alexandrov et al, *Mathematics: Its content, methods, and meaning*, 3 vols.; M.I.T. Press, 1956.

R. Ayoub, *Musings of the masters: an anthology of mathematical reflections*, MAA, 2004.

R. J. Baum, *Philosophy of mathematics: From Plato to the present*; Freeman, Cooper & Co., 1973.

P. Benacerraff & H. Putnam, *Philosophy of mathematics: Selected readings*; Prentice-Hall, 1964.

L Berggren, J. Borwein, and P. Borwein,  *$\pi$ : A source book*; Springer-Verlag, 1997.

G. Birkhoff, *A Source book in classical analysis*; Harvard Univ. Press, 1973.

R. Calinger, *Classics of mathematics*; Macmillan, 1994 (orig. 1983).

D. C. Campbell & J.C. Higgins, *Mathematics: People, problems, results*, 3 vols.; Wadsworth, 1984.

M. Clagett, *Ancient Egyptian science: A source book*, vol. 3; Amer. Phil. Soc., 1999.

M. R. Cohen & I.E. Drabkin, *A source book in Greek science*; Harvard Univ. Press, 1958.

J. W. Dauben & C. J. Scriba (eds.), *Writing the history of mathematics: its historical development*, Birkhauser, 2002.

- J.W. Dauben, M. Folkerts, E. Knobloch, and H. Wussing, *History of mathematics: States of the art*; Academic Press, 1996.
- W. B. Ewald, *From Kant to Hilbert: A source book in the foundations of mathematics*, 2 vols.; Oxford University Press, 1996.
- J. Fauvel & J. Gray, *The history of mathematics: A reader*; Macmillan, 1987.
- T. Gowers (ed), *The Princeton companion to mathematics*, Princeton Univ. Press, 2008.
- E. Grant, *A source book in medieval science*; Harvard Univ. Press, 1974.
- I. Grattan-Guinness (ed.), *Landmark writings in western mathematics (1640-1940)*, Elsevier, 2005.
- I. Grattan-Guinness, *Companion encyclopedia of the history and philosophy of the mathematical sciences*, 2 vols.; Routledge, 1994.
- S. Hawking (ed.), *God created the integers: the mathematical breakthroughs that changed history*, Running Press, 2007.
- M. Hazenwinkel (ed.), *Encyclopedia of mathematics*, 10 vols. + Supplements I and II; Kluwer, 1994, 1997, and 2000.
- J. van Heijenoort, *From Frege to Gödel: A source book in mathematical logic, 1879-1931*; Harvard Univ. Press, 1967.
- V. J. Katz, *The mathematics of Egypt, Mesopotamia, China, India, and Islam: a sourcebook*, Princeton Univ. Press, 2007.
- M. Kline, *Mathematics in the modern world: Readings from Scientific American*; Freeman, 1968.
- M. Kline, *Mathematics: An introduction to its spirit and use*; Freeman, 1979.
- F. Le Lionnais, *Great currents of mathematical thought*, 2 vols.; Dover, 1971.
- H. Midonick, *A treasury of mathematics*; Philosophical library, 1965.
- J. R. Newman, *The world of mathematics*, 4 vols.; Simon & Schuster, 1956.
- P. Pesic (ed.), *Beyond geometry. Classical papers from Riemann to Einstein*, Dover, 2007.
- E. Robson & J. Stedall (eds), *The Oxford handbook of the history of mathematics*, Oxford Univ. Press, 2009.
- W. L. Schaaf, *Our mathematical heritage*; Collier-Macmillan, 1963.
- D. E. Smith, *A source book in mathematics*, 2 vols.; Dover, 1959 (orig. 1929).
- J. Stedall, *Mathematics emerging: a sourcebook, 1540-1900*, Oxford Univ. Press, 2008.

- L. A. Steen, *Mathematics today: Twelve informal essays*; Springer-Verlag, 1978.
- D. J. Struik, *A source book in mathematics: 1200-1800*; Harvard Univ. Press, 1969.
- F. Swetz, *From five fingers to infinity: A journey through the history of mathematics*; Open Court, 1994.
- G.J. Wimbish Jr., *Readings for mathematics: A humanistic approach*; Wadsworth Publ., 1972.
- P. Wolff, *Breakthroughs in mathematics*; New Amer. Library, 1963.
- P. Wolff, *Breakthroughs in physics*; Signet, 1965.

### C. Biographical Sources

**[The sources are listed here alphabetically by the mathematician/scientist being written about. Collections of biographies are placed following the listing of individuals.]**

- O. Ore, *Niels Henrik Abel*; Univ. of Minnesota Press, 1957.
- A. Stubhang, *Niels Henrik Abel and his times*; Springer-Verlag, 2000.
- A. Cupillari (ed), *A biography of Maria Guetana Agnesi, an eighteenth-century woman mathematician; with translation of some of her work from Italian into English*, The Mellen Press, 2007.
- M. Mazzotti, *The world of Maria Gaetana Agnesi, mathematician of God*, Johns Hopkins Univ. Press, 2007.
- R. Rashed, *Al-Khayyam, mathématicien*; Blanchard, 1999.
- N. E. Albert, *A<sup>3</sup> and his algebra: how a boy from Chicago's west side became a force in American mathematics*, Universe Inc, 2005. (A biography of Adrian Albert.)
- E. J. Dijksterhuis, *Archimedes*; Princeton Univ. Press, 1987 (orig. 1938).
- S. Stein, *Archimedes: What did he do besides cry eureka?*; Math. Assoc. of America, 1999.
- T. L. Heath, *Aristarchus of Samos: The ancient Copernicus*; Dover, 1981 (orig. 1913).
- J. M. Dubbey, *The mathematical work of Charles Babbage*; Cambridge Univ. Press, 1978.
- A. Hyman, *Charles Babbage: Pioneer of the computer*; Princeton Univ. Press, 1982.
- R. Kaluza, *Through a reporter's eyes: The life of Stefan Banach*; MAA, 1996.
- M. Feingold, *Before Newton: The life and times of Isaac Barrow*; 1990

- M. B. W. Tent, Leonhard Euler and the Bernoullis: mathematicians from Basel, A K Peters, 2009.
- J. Gray, Janos Bolyai, non-euclidean geometry, and the nature of space, MIT Press, 2004.
- E. Kiss, Mathematical gems from the Bolyai chests; 1999.
- E. Kolman, Bernard Bolzano; Belin, 1963.
- P. Rusnock, Bolzano's philosophy and the emergence of modern mathematics, Editions Rodopi, 2000.
- S. Russ, The mathematical works of Bernard Bolzano, Oxford Univ. Press, 2005.
- J. Sebestik, Logique et mathématiques chez Bernard Bolzano; Vrin (Paris), 1992.
- D. Machale, George Boole: His life and work; Boole Press, 1981.
- D. van Dalen, Mystic, geometer, and intuitionist: The life of L. E. J. Brouwer, 2 vols.; Oxford Univ. Press, 1999 & 2005.
- J. W. Dauben, Georg Cantor: His mathematics and philosophy of the infinite; Harvard Univ. Press, 1979.
- W. Purkert and H.J. Ilgands, Georg Cantor, 1845-1918; Birkhäuser, 1987.
- M. Georgiadou, Constantin Carathéodory: mathematics and politics in turbulent times, Springer Verlag, 2004.
- O. Ore, Cardano: The gambling scholar; Princeton Univ. Press, 1953.
- J. Dhombres and N. Dhombres, Lazare Carnot; Fayard, 1997.
- C. C. Gillispie, Lazare Carnot, Savant; Princeton Univ. Press, 1971.
- M. A. Akivis & B. A. Rosenfeld, Elie Cartan (1869-1951); Amer. Math. Soc., 1993.
- B. Belhoste, Augustin - Louis Cauchy: A biography; Springer-Verlag, 1990.
- T. Crilly, Arthur Cayley: mathematician laureate of the Victorian age, John Hopkins Univ. Press, 2006.
- S. Y. Cheng et al (eds.), A mathematician and his mathematical work: Selected papers of S. S. Chern; World Scientific, 1996.
- T. Yau (ed.), S. S. Chern: A great geometer of the twentieth century, expanded ed.; International Press, 1998.
- G. Flegg et al, Nicolas Chuquet: Renaissance mathematician; Reidel, 1985.
- R. Gowing, Roger Cotes: Natural philosopher; Cambridge Univ. Press, 1981.
- C. Reid, Courant; Springer-Verlag, 1976.

- C. Davis & E. W. Elleas (eds), *The Coxeter legacy: reflections and projections*, AMS, 2006.
- S. Roberts, *King of infinite space: Donald Coxeter, the man who saved Geometry*, Walker and Company, 2006.
- T. L. Hankins, *Jean D'Alembert: Science and the Enlightenment*; Oxford Univ. Press, 1970.
- P. Dugac, *Richard Dedekind et les fondements des mathématiques*; J. Vrin (Paris), 1976.
- W. Scharlau, *Richard Dedekind, 1831-1916*; Viewig, 1981.
- J. V. Field and J. Gray, *The geometrical work of Girard Desargues*, Springer-Verlag, 1987.
- D. Clarke, *Descartes: a biography*, Cambridge Univ. Press, 2006.
- G. Rodis-Lewis, *Descartes: His life and thought*; Cornell Univ. Press, 1998.
- J. F. Scott, *The scientific work of René Descartes*; Taylor & Francis, 1952.
- P. Dugac, *Jean Dieudonné: Mathématicien complet. Plus de lumiere*; Editions Jacques Gabay, 1995.
- R. L. Graham et al (eds.), *The mathematics of Paul Erdős*; Springer-Verlag, 1997.
- G. Halas et al, *Paul Erdős and his mathematics*, 2 vols; Springer-Verlag, 2000.
- P. Hoffman, *The man who loved only numbers: The story of Paul Erdős and the search for mathematical truth*; Hyperion Press, 1998.
- B. Schecter, *My brain is open: The mathematical journeys of Paul Erdős*; Simon & Schuster, 1998.
- R. Baker (ed), *Euler reconsidered: tercentenary essays*, Kendrick Press, 2007.
- N. N. Bogolyubov, G. K. Mikhailov, and A. P. Yushkevich (eds), *Euler and modern science*, MAA, 2007.
- R. Bradley & E. Sandifer (eds), *Leonhard Euler: Life, work, and legacy*, Elsevier, 2007.
- R. Bradley, L. D'Antonio, and E. Sandifer (eds), *Euler at 300: an appreciation*, MAA, 2007.
- L. Debnath, *The legacy of Leonhard Euler. A tricentennial tribute*, Imperial College Press, 2010.
- W. Dunham, *The genius of Euler: reflections on his life and work*, MAA, 2007.
- W. Dunham, *Euler: The master of us all*; Math. Assoc. of America, 1999.

- E. Sandifer, *How Euler did it*, MAA, 2007.
- E. Sandifer, *The early mathematics of Leonhard Euler*, MAA, 2007.
- M. B. W. Tent, *Leonhard Euler and the Bernoullis: mathematicians from Basel*, A K Peters, 2009.
- V. S. Varadarajan, *Euler through time: a new look at old themes*, AMS, 2006.
- M. S. Mahoney, *The mathematical career of Pierre de Fermat*; Princeton Univ. Press, 1973.
- J. Dhombres and J. - B. Robert, *Joseph Fourier, 1768-1830: créateur de la physique- mathématique*, Belin, 1998.
- I. Grattan-Guinness and J. R. Ravetz, *Joseph Fourier, 1768-1830*; M.I.T. Press, 1972.
- J. Weiner, *Frege*; Oxford Univ. Press, 1999.
- J. Weiner, *Frege in perspective*; Cornell Univ. Press, 1990.
- L. Infeld, *Whom the gods love: The story of Evariste Galois*; National Council of Teachers of Mathematics, 1975 (orig. 1948).
- L. T. Rigatelli, *Evariste Galois, 1811-1832 (English ed.)*; Birkhäuser, 1996.
- W. K. Bühler, *Gauss: A biographical study*; Springer-Verlag, 1981.
- G. W. Dunnington, *Carl Friedrich Gauss: Titan of science*; Exposition Press, 1955.
- T. Hall, *Carl Friedrich Gauss: A biography*; M.I.T. Press, 1970.
- M. B. W. Tent, *The prince of mathematics: Carl Friedrich Gauss*, A K Peters, 2005.
- J. W. Dawson, *Logical dilemmas: The life and work of Kurt Gödel*; A.K. Peters, 1997.
- H. Wang, *A logical journey: From Gödel to philosophy*; M.I.T. Press, 1996.
- H. Wang, *Reflections on Kurt Gödel*; M.I.T. Press, 1987.
- P. Weingartner & L.Schmetterer (eds.), *Gödel remembered*; Bibliopolis (Naples), 1987.
- H. J. Petsche, A. C. Lewis, et al (eds), *From past to future: Grassmann's work in context*, Springer, 2011.
- H.- J. Petsche, *Hermann Grassmann. Biography*, Birkhäuser, 2009.
- G. Schubring (ed.), *Hermann G. Grassmann (1809-1877) – visionary mathematician, scientist, and neohumanist scholar*; Kluwer, 1996.



- N. Maz'ya and T. Shaposhnikova, Jacques Hadamard: A universal mathematician; Amer. Math. Society, 1998.
- J. Ewing and F. Gehring (eds), Paul Halmos: Celebrating 50 years of mathematics; Springer-Verlag, 1991.
- P. R. Halmos, I want to be a mathematician; Springer-Verlag, 1985.
- T. L. Hankins, Sir William Rowan Hamilton; The Johns Hopkins Univ. Press, 1980.
- R. Fox (ed.), Thomas Harriott: An Elizabethan man of science; Ashgak, 2001.
- J. W. Shirley, Thomas Harriot: A biography; Oxford Univ. Press, 1983.
- J. Gray, The Hilbert challenge; Oxford Univ. Press, 2000.
- C. Reid, Hilbert; Springer-Verlag, 1970
- D. J. Struik, The land of Stevin and Huygens; Reidel, 1981 (orig. 1958).
- G. Yoder, Unrolling time: Christian Huygens and the mathematization of nature, Cambridge Univ. Press, 1988.
- M. Deaken, Hypatia of Alexandria: mathematician and martyr, Prometheus, 2007.
- M. Kac, Enigmas of chance: An autobiography; Harper & Row, 1985.
- D. G. Kendall et al, Andrei Nikolaevich Kolmogorov (1903-1987); Bull. Lond. Math. Soc. 22 (1990), 31-100.
- R. Cooke, The mathematics of Sonya Kowalevskaya; Springer-Verlag, 1984.
- S. Kovalevskaya, A Russian childhood; Springer-Verlag, 1978.
- J. Grabiner, The calculus as algebra: J. L. Lagrange, 1736-1813; Garland, 1990.
- B. Larvor, Lakatos: An introduction; Routledge, 1998.
- C. C. Gillispie, Pierre-Simon Laplace, 1749-1827: A life in exact science; Princeton University Press, 1997.
- R. Hahn, Pierre Simon Laplace 1749-1827: a determined scientist, Harvard Univ. Press, 2005.
- E. J. Aiton, Leibniz: A biography; Adam Hilger Ltd. (Boston), 1985.
- R. Calinger, Gottfried Wilhelm Leibniz; Rensselaer Polyt. Inst., 1976.
- A. R. Hall, Philosophers at war: The quarrel between Newton and Leibniz; Cambridge Univ. Press, 1980.
- J. E. Hofmann, Leibniz in Paris: 1672-1676; Cambridge Univ. Press, 1970.

- D. B. Meli, *Equivalence and priority, Newton versus Leibniz*; Oxford U. Pr., 1993.
- F. Giles, *Leonardo of Pisa and the new mathematics of the middle ages*; T. Y. Crowell, 1969.
- R. Wilson, *Lewis Carroll in numberland: his fantastical mathematical logical life*, W. W. Norton, 2008.
- A. Stubhang, *The mathematician Sophus Lie*; Springer-Verlag, 2002.
- J. Lützen, *Joseph Liouville, 1809-1882: Master of pure and applied mathematics*; Springer-Verlag, 1990.
- S. Mac Lane, *A mathematical autobiography*, A K Peters, 2005.
- J. Fauvel et al (eds), *Möbius and his band: Mathematics and astronomy in nineteenth-century Germany*; Oxford Univ. Press, 1992.
- J. Parker, *R. L. Moore: mathematician and teacher*, MAA, 2005.
- S. Nasar, *A beautiful mind: Genius, schizophrenia and recovery in the life of Nobel laureate John Forbes Nash, Jr.*; Simon & Schuster, 1998.
- C. Reid, *Neumann – from life*; Springer-Verlag, 1982.
- J. Fauvel et al (eds.), *Let Newton be!* Oxford Univ. Press, 1988.
- N. Guicciardini, *Isaac Newton on mathematical certainty and method*, MIT Press, 2009.
- A. R. Hall, *Philosophers at war: The quarrel between Newton and Leibniz*; Cambridge Univ. Press, 1980.
- D. B. Meli, *Equivalence and priority, Newton versus Leibniz*; Oxford U. Pr., 1993.
- J. F. Scott, *The correspondence of Isaac Newton*; Cambridge Univ. Press, 1967.
- R. S. Westfall, *Never at rest: A biography of Isaac Newton*; Cambridge Univ. Press, 1980.
- D. T. Whiteside (ed.), *The mathematical papers of Isaac Newton*, 8 (paperback) vols., Cambridge Univ. Press, 2008.
- J. W. Brewer and M. K. Smith, *Emmy Noether: A tribute to her life and work*; Marcel Dekker, 1981.
- A. Dick, *Emmy Noether, 1882 - 1935*; Birkhäuser, 1981.
- B. Srinivasan and J. Sally, *Emmy Noether in Bryn Mawr*; Springer-Verlag, 1983.
- M. B. W. Tent, *Emmy Noether: the mother of modern algebra*, A K Peters, 2008.
- M. Clagett, *Nicole Oresme and the geometry of qualities and motions*; Univ. of Wisconsin Press, 1968.

- F. Cajori, *William Oughtred: a great 17<sup>th</sup>-century teacher of mathematics*, Open Court, 1916.
- M. Bishop, *Pascal: The life of genius*; Greenwood Press, 1968.
- H. M. Davidson, *Blaise Pascal*; Twayne Publ., 1993.
- W. R. Shea, *Designing experiments and games of chance: the unconventional science of Blaise Pascal*, Science History Publ., 2003.
- H. C. Kennedy, *Peano: Life and works of Giuseppe Peano*; Reidel, 1980.
- F. Skof (ed), *Giuseppe Peano between mathematics and logic*, Springer, 2011.
- E. R. Hogan, *Of the human heart: a biography of Benjamin Peirce*, Lehigh Univ. Press, 2008.
- N. Malcolm & J. Stedall, *John Pell (1611-1685) and his correspondence with Sir Charles Cavendish: The mental world of an early modern mathematician*, Oxford Univ. Press, 2005.
- F. E. Browder (ed.), *The mathematical heritage of Henri Poincaré*; Amer. Math. Soc., 1993.
- E. Charpentier, E. Ghys, and A. Lesne (eds), *The scientific legacy of Poincaré*, AMS, 2010.
- G. Szpiro, *Poincaré's prize*, Penguin, 2007.
- G. L. Alexanderson, *The random walks of George Polya*; Math. Assoc. of Amer., 2000.
- G. E. Andrews et al (eds.), *Ramanujan revisited*, Academic Press, 1987.
- B. C. Berndt & R. A. Rankin, *Ramanujan: Letters and commentary*; Amer. Math. Soc., 1995.
- G. H. Hardy, *Ramanujan: 12 lectures on his life and work*; Chelsea, 1968 (orig. 1940).
- R. Kanigel et al, *The man who knew infinity: the life of the genius Ramanujan*, Scribner's 1991.
- E. Zimmer, *Regiomontanus: His life and work*; North-Holland, 1990.
- D. Laugwitz, *Bernhard Riemann, 1826-1866*; Birkhäuser, 1999.
- K. Maurin, *The Riemann legacy: Riemannian ideas in mathematics and physics*, Kluwer, 1997.
- J. W. Dauben, *Abraham Robinson: The creation of nonstandard analysis. A personal and mathematical odyssey*, Princeton Univ. Press, 1995.
- E. Damiani et al, *From combinatorics to philosophy; the legacy of J. - C Rota*, Springer, 2000.

- L. Schwartz, *A mathematician grappling with his century*; Springer, 2001.
- S. Batterson, *Stephen Smale: The mathematician who broke the dimension barrier*; Amer. Math. Soc., 2000.
- D. J. Struik, *The land of Stevin and Huygens*; Reidel, 1981 (orig. 1958).
- K. Parshall, *James Joseph Sylvester, Jewish mathematician in a Victorian world*, Johns Hopkins Univ. Press, 2006.
- K. Parshall, *James Joseph Sylvester: Life and work in letters*; Oxford Univ. Press, 1998.
- A. Burdman Feferman and S. Feferman, *Alfred Tarski: Life and Logic*, Cambridge Univ. Press, 2004.
- B. J. Copeland, *The essential Turing*, Oxford Univ. Press, 2004.
- A. Hodges, *Alan Turing: The enigma of intelligence*; Unwin, 1985.
- D. Leavitt, *The man who knew too much: Alan Turing and the invention of the computer*, Norton, 2005.
- N. G. Cooper, *From cardinals to chaos: On the life and legacy of Stanislaw Ulam*; Cambridge Univ. Press, 1989.
- S. M. Ulam, *Adventures of a mathematician*; Scribner & Sons, 1976.
- A. Burdman and S. Feferman, *Politics, logic, and love: The life of Jean van Heijenoort*; A. K. Peters, 1993.
- J. R. Goodstein, *The Volterra chronicles: the life and times of an extraordinary mathematician 1860-1940*, AMS, 2007.
- J. Glimm et al (eds.), *The legacy of John von Neumann*; Amer. Math. Soc., 1990.
- S. J. Heims, *John von Neumann and Norbert Wiener*; M.I.T. Press, 1980.
- N. Macrae, *John von Neumann*; Random House, 1992.
- M. Redei (ed), *John von Neumann: selected letters*, AMS, 2005.
- J. F. Scott, *The mathematical work of John Wallis*; Chelsea, 1981 (orig. 1938).
- A. Weil, *The apprenticeship of a mathematician*; Birkhäuser, 1991.
- K. Chandrasekharan (ed), *Hermann Weyl 1885-1955*; Springer-Verlag, 1986.
- R. O. Wells, Jr. (ed.), *The mathematical heritage of Hermann Weyl*; Amer. Math. Soc., 1988.
- F. Conway & J. Siegelman, *Dark hero of the information age: in search of Norbert Wiener, the father of cybernetics*, Basic books, 2005.

- S. J. Heims, John von Neumann and Norbert Wiener; M.I.T. Press, 1980.
- P. R. Masani, Norbert Wiener: 1894-1964; Birkhäuser, 1990.
- N. Wiener, I am a mathematician, MIT Press, 1956.
- C. A. Parikh, The unreal life of Oscar Zariski; Academic Press, 1990.
- D. J. Albers and L. Alexanderson, Mathematical people: profiles and interviews, 2<sup>nd</sup> ed. ; A K Peters, 2008.
- D. J. Albers, G.L. Alexanderson and C. Reid, More mathematical people: Contemporary conversations; Harcourt, Brace, Jovanovich, 1990.
- D. J. Albers, G. L. Alexanderson & C. Reid, International Mathematical Congresses, 1893 - 1986; Springer-Verlag, 1987.
- Amer. Math. Soc., Women in mathematics; A.M.S. Notices, Special Issue, vol. 38 (1991), pp. 701-777.
- H. G. W. Begher et al (eds), Mathematics in Berlin; Birkhauser, 1998.
- E. T. Bell, Men of mathematics; Simon & Schuster, 1965.
- S. Bochner, The role of mathematics in the rise of science; Princeton Univ. Press, 1966. (Has 70 pp. of biographical sketchetches.)
- B. A. Case & A. M. Legget (eds), complexities: women in mathematics, Princeton Univ. Press, 2005.
- J. L. Coolidge, The mathematics of great amateurs; Oxford Univ. Press, 1990 (orig. 1949).
- J. Dieudonné (ed.), Abrégé d'histoire des mathématiques: 1700-1900, 2 vols.; Herman, 1978. (Vol. 2 has 30 pp. of biographical sketches.)
- W. Dunham, The calculus gallery, Princeton Univ. Press, 2005.
- J. Fauvel et al (eds.), Oxford figures: 800 years of the mathematical sciences; Oxford Univ. Press, 2000.
- J. Ferreiros, Labyrinth of thought : a history of set theory and its role in modern mathematics, Birkhauser, 2007.
- S. G. Gidinkin, Tales of physicists and mathematicians, 2<sup>nd</sup> ed., Birkhäuser, 2006.
- C. C. Gillispie (ed.), Dictionary of scientific biography, 17 vols.; Scribner's, 1970-1990.
- C. C. Gillispie (ed.), Biographical dictionary of mathematicians, 4 vols.; Scribner's, 1991. (This is a short version of the above reference.)
- J. Green & J. LaDuke, Pioneering women in American mathematics: the pre-1940 PhD's, AMS, 2009.

- L. S. Grinstein and P.J. Campbell (eds.), *Women of mathematics*; Greenwood Press, 1987.
- C. Henrion, *Women in mathematics*; Indiana Univ. Press, 1997.
- S. Hollingdale, *Makers of mathematics*; Penguin, 1987.
- K. Houston (ed.), *Creators of mathematics: The Irish connection*; Univ. College Dublin Press, 2000.
- I. James, *Driven to innovate: a century of Jewish mathematicians and physicists*, Peter Lang, 2009.
- I. James, *Remarkable mathematicians: From Euler to von Neumann*; Math. Assoc. of America, 2002.
- N. L. Johnson and S. Kotz (eds.), *Leading personalities in statistical sciences: From the seventeenth century to the present*; Wiley, 1997.
- P. C. Kenshaft, *Change is possible: stories of women and minorities in mathematics*, AMS, 2005.
- K. C. Knox & R. Noakes (eds), *From Newton to Hawking: a history of Cambridge university's Lucasian professors of mathematics*, Cambridge Univ. Press, 2003.
- A. Macfarlane, *Lectures on ten British mathematicians of the 19th century*; Wiley, 1916.
- K. O. May, *Bibliography and research manual of the history of mathematics*; Univ. of Toronto Press, 1973. (Has much biographical information.)
- H. Meschkowski, *Mathematiker-Lexikon*; Wissenschaftsverlag, Bibliographisches Institut, 1973.
- H. Meschkowski, *Ways of thought of great mathematicians*; Holden-Day, 1964.
- C. Morrow and T. Perl (eds), *Notable women in mathematics: A biographical dictionary*; Greenwood Press, 1998.
- J. Muir, *Of men and numbers: The story of the great mathematicians*; Dodd, Mead & Co., 1961.
- M. Murray, *Women becoming mathematicians: Creating a professional identity in post-world-war II America*; MIT Press, 2000.
- S. Oakes & A. Pears, *The book of presidents [of the London Mathematical Society] 1865-1965*, London Math. Soc., 2005.
- M.B. Ogilvy, *Women in science: Antiquity through the nineteenth century; a biographical dictionary with annotated bibliography*; MIT Press, 1988.
- L. Osen, *Women in mathematics*; M.I.T. Press, 1974.

J. C. Poggendorff (ed.), *Biographisch-Literarisches Handwörterbuch zur Geschichte der exakten Naturwissenschaften*, 11+ vols.; Verlag Chemie (1925-1940) and Akademie Verlag (1955-).

G. Prasad, *Some great mathematicians of the 19th century: Their lives and their works*, 2 vols.; Benares, 1933-34.

G. Sarton, *The study of the history of mathematics*; Dover, 1957 (orig. 1936). (Has extensive biographical information.)

S. L. Segal, *Mathematicians under the Nazis*, Princeton Univ. Press, 2003.

D. Shasha and C. Lazere, *Out of their minds: The lives and discoveries of 15 great computer scientists*; Springer-Verlag, 1995.

R. Siegmund-Schultze, *Mathematicians fleeing from Nazi Germany: individual fates and global impact*, Princeton Univ. Press, 2009.

Y. Sinai (ed), *Russian mathematicians in the 20<sup>th</sup> century*, World Scientific, 2003.

G. G. R. Taylor, *The mathematical practitioners of Tudor and Stuart England*; Cambridge Univ. Press, 1954.

H. T. Turnbull, *The great mathematicians*; Methuen, 1962.

R. V. and P. J. Wallis, *Biobibliography of British mathematics, Part II, 1701-1760, and Index of British mathematicians, Part III, 1701-1800*; Jasprint (U.K.), 1986 and 1992.

L. M. Wapner, *The pea and the sun*, A K Peters, 2005. (Contains brief biographies of Cantor, Banach, Tarski, Gödel, and Cohen.)

H. Wussing & W. Arnold (eds.), *Biographien bedeutender Mathematiker*, 4th ed.; Volk und Wissen Volkseigener Verlag (Berlin), 1989.

R. V. Young (ed), *Notable mathematicians from ancient times to the present*; Gale, 1998.

#### **D. Bibliographic Sources**

I. H. Anellis et al, *Studies in the nineteenth-century history of algebraic logic and universal algebra: A secondary bibliography*; *Modern Logic* 5(1995), 1-120.

R. C. Archibald, *Outline of the history of mathematics*; The 2nd Slaughter Memorial Paper, Math. Assoc. of America, 1949. (Has 50 pp. of bibliographic material.)

J. W. Dauben, *The history of mathematics from antiquity to the present: A selected annotated bibliography*; Garland Publ., 1985. Revised edition on CD-ROM, ed. by A. C. Lewis; Amer. Math. Soc., 2000.

J. Fauvel, *Mathematics through history: A resource guide*; QED Books (England), 1990.

- M. P. Gaffney & L.A. Steen, Annotated bibliography of expository writing in the mathematical sciences; Math. Assoc. of America, 1976.
- P. Gerdes & A. Djebbar, Mathematics in African history and cultures: an annotated bibliography, new ed., Morrisville, NC: Lulu.com. 2007.
- E. Høyrup, Books *about* mathematics: History, philosophy, education et al; Roskilde Univ. Center, 1979.
- Isis cumulative bibliography; Mansell (London), 1971-76.
- Isis critical bibliography of the history of science and its cultural influences. Issued annually as a supplement to the journal Isis.
- J. S. Madachy (ed.), Ten-year cumulative index to the *Journal of Recreational Mathematics*; Baywood Publ. (New York), 1982.
- K. O. May, Bibliography and research manual of the history of mathematics; Univ. of Toronto Press, 1973.
- K. O. May, Index of the *American Mathematical Monthly*, vols. 1-80 (1894-1973); Math. Assoc. of America, 1977.
- National Council of Teachers of Mathematics, Cumulative Index of *The Mathematics Teacher*, vols. 1-58 (1908-1965), vols. 59-68 (1966-1975), and vols. 69-78 (1976-1985); N.C.T.M., 1967, 1976, and 1988.
- National Council of Teachers of Mathematics, Cumulative Index of *The Arithmetic Teacher*, vols. 1-20 (1954-1973); N.C.T.M., 1974.
- J. E. Pemberton, How to find out in mathematics; Pergamon Press, 1969 (2nd revised ed.).
- J. C. Poggendorff, Biografisch-Literarisches Handwörterbuch der Exakten Naturwissenschaften [Biographical-Literary Lexicon of the Exact Natural Sciences]; Wiley-VCH Verlag (Berlin), 2000. Six CD ROMS.
- C. B. Read, The history of mathematics: A bibliography of articles in English appearing in seven periodicals; *School Science & Math.* 70 (1970), 415-453.
- C. B. Read & J.K. Bidwell, Selected articles dealing with the history of elementary mathematics; *School Science & Math.* 76 (1976), 477-483.
- C. B. Read & J. K. Bidwell, Periodical articles dealing with the history of advanced mathematics, I, II; *School Science & Math.* 76 (1976), 581-598 and 687-703.
- R. E. Rider, A bibliography of early modern algebra, 1500-1800; Univ. of California (Berkeley), 1982.
- L. Rogers, Finding out in the history of mathematics; Leapfrogs (England), 1979.
- G. Sarton, The study of the history of mathematics; Dover, 1957 (orig. 1936).
- W. L. Schaaf, A bibliography of recreational mathematics, 2 vols.; N.C.T.M., 1970.



W. L. Schaaf, *The high-school mathematics library*; N.C.T.M., 1970.

W. L. Schaaf, *Art and mathematics: A brief guide to source materials*; *Amer. Math. Monthly* 58 (1951), 167-177.

J. A. Seebach & L. A. Steen, *Mathematics Magazine: 50-year index*, vols. 1-50 (1926-1977); Math. Assoc. of America, 1978.

D. M. Y. Sommerville, *Bibliography of non-Euclidean geometry, including the theory of parallels, the foundation of geometry, and space of n-dimensions*; Chelsea, 1970 (orig. 1911).

D. J. Struik, *A selected list of mathematical books and articles published after 1200 and translated into English*; *Scripta Math.* 15 (1949), 115-131.

## E. Special Topics and Periods

### I. Algebra:

I. Bashmakova and G. Smirnova, *The beginnings and evolution of algebra*, Math. Assoc. of Amer., 2000.

J. Bewersdorff, *Galois theory for beginners: a historical perspective*, AMS, 2006.

H. J. M. Bos, *Redefining geometrical exactness: Descartes' transformation of the early modern concept of construction*; Springer-Verlag, 2001.

R. Cooke, *Classical algebra: its nature, origins, and uses*, Wiley, 2008.

B. Chandler & W. Magnus, *The history of combinatorial group theory*; Springer-Verlag, 1982.

D. A. Cox, *Galois theory*, Wiley, 2004. (Has many historical comments.)

L. Corry, *Modern algebra and the rise of mathematical structures*; Birkhäuser, 1996.

M. J. Crowe, *A history of vector analysis*; Univ. of Notre-Dame Press, 1967.

C. W. Curtis, *Pioneers of representation theory: Frobenius, Burnside, Schur, and Brauer*; Amer. Math. Soc., 1999.

J. Derbyshire, *Unknown quantity: a real and imaginary history of algebra*, Joseph Henry Press, 2006.

L. Euler, *Elements of algebra*, Springer, 1984.

H. M. Edwards, *Galois theory*; Springer-Verlag, 1984.

B. Fine & G. Rosenberg, *The fundamental theorem of algebra*; Springer-Verlag, 1997.

D. Flament, *Histoire des nombres complexes: entre algebra et géométrie*, CNRS Editions, 2003.

- H. Grassmann, *Extension theory*; Amer. Math. Soc., 2000.
- H. Grassmann, *A new branch of mathematics: The Ausdehnungslehre of 1844, and other works (in English)*, Open Court, 1995.
- J. Gray, *Linear differential equations and group theory from Riemann to Poincaré*; Birkhäuser, 1986.
- J. Gray & K. Parshall (eds), *Episodes in the history of modern algebra (1800-1950)*, AMS, 2007.
- T. Hawkins, *Emergence of the theory of Lie groups: An essay in the history of mathematics, 1869-1926*; Springer-Verlag, 2000.
- J. Hoyrup, *Lenghts, widths, surfaces. A portrait of old Babylonian algebra and its kin*, Springer, 2002.
- R. B. King, *Beyond the quartic equation*; Birkhäuser, 1996.
- J. Klein, *Greek mathematical thought and the origin of algebra*; Dover, 1992 (orig. 1932-34).
- I. Kleiner, *A history of abstract algebra*, Birkhauser, 2007.
- R. Krömer, *Tool and object. A history and philosophy of category theory*, Birkhauser, 2007.
- J. – P. Marquis, *From a geometrical point of view: a study of the history and philosophy of category theory*, Springer, 2009.
- H. Mehrten, *Die Entstehung der Verbandstheorie*; Gerstenberg Verlag, 1979.
- L. Novy, *Origins of modern algebra*; Noordhoff International Publ., 1973.
- H. M Pycior, *Symbols, impossible numbers, and geometric entanglements: British algebra through the commentaries on Newton's *Universal Arithmetick**; Cambridge Univ. Press, 1997.
- M. Ronan, *Symmetry and the monster: The story of one of the greatest quests of mathematics [the classification of finite simple groups]*, Oxford Univ. Press, 2006.
- J. Sesiano, *An introduction to the history of algebra: solving equations from Mesopotamia to the Renaissance*, AMS, 2009.
- J. Stedall, *The greate invention of algebra: Thomas Harriot's Treatise of equations*, Oxford Univ. Press, 2003.
- J. Stedall, *A discourse concerning algebra: English algebra to 1685*; Oxford Univ. Press, 2002.
- M. L. Tomber, *Nonassociative algebras, the first 101 years*; Michigan State Univ., c. 1980.

B. L. van der Waerden, *Geometry and algebra in ancient civilizations*; Springer-Verlag, 1983.

B. L. van der Waerden, *A history of algebra, from al-Khwarizmi to Emmy Noether*; Springer-Verlag, 1985.

V. S. Varadarajan, *Algebra in ancient and modern times*; Amer. Math. Society, 1998.

H. Wussing, *The genesis of the abstract group concept*; M.I.T. Press, 1984 (orig. German, 1969).

## II. Calculus/Analysis:

M. Baron, *The origins of the infinitesimal calculus*; Dover, 1987 (orig. 1969).

M. Blay, *Reasoning with the infinite*; Univ. of Chicago Press, 1998.

U. Bottazzini, *The higher calculus: A history of real and complex analysis from Euler to Weierstrass*; Springer-Verlag, 1986.

C. B. Boyer, *The history of the calculus and its conceptual development*; Dover, 1959 (orig. 1949).

R. E. Bradley & C. E. Sandifer, *Cauchy's Cours d'analyse, an annotated translation*, Springer, 2009.

D. Bressoud, *A radical approach to Lebesgue's theory of integration*, MAA, 2008.

D. Bressoud, *A radical approach to real analysis*; MAA, 1994.

J. M. Childs, *The early manuscripts of Leibniz*; Open Court Publ., 1920.

J. W. Dauben, *Abraham Robinson: The creation of non-standard analysis. A personal and mathematical odyssey*; Princeton Univ. Press, 1995.

F. De Gant, *Force and geometry in Newton's Principia*; Princeton University Press, 1995.

D. Densmore, *Newton's Principia: The central argument*; Green Lion Press, 1996.

J. Dieudonné, *History of functional analysis*; North-Holland Publ. Co., 1981.

W. Dunham, *The calculus gallery: masterpieces from Newton to Lebesgue*, Princeton Univ. Press, 2005.

C. H. Edwards, *The historical development of the calculus*; Springer-Verlag, 1982.

S. Engelsman, *Families of curves and the origins of partial differentiation*; North-Holland, 1984.

G. Ferraro, *The rise and development of the theory of series up to the early 1820s*,

- Springer, 2008.
- C. Fraser, *Calculus and analytical mechanics in the age of the Enlightenment*; Varorium, 1997.
- A. Gardiner, *Infinite processes: Background to analysis*; Springer-Verlag, 1982.
- H. O. Goldstine, *A history of the calculus of variations from the 17th through the 19th century*; Springer-Verlag, 1980.
- J. V. Grabiner, *A historian looks back: The calculus as algebra and selected writings*, MAA, 2010.
- J. V. Grabiner, *The calculus as algebra: J.-L. Lagrange, 1736-1813*; Garland, 1990.
- J. V. Grabiner, *The origins of Cauchy's rigorous calculus*; M.I.T. Press, 1981.
- I. Grattan-Guinness (ed.), *From the calculus to set theory, 1630-1910*; Duckworth, 1980.
- I. Grattan-Guinness, *The development of the foundations of mathematical analysis from Euler to Riemann*; M.I.T. Press, 1970.
- J. Gray, *Linear differential equations and group theory from Riemann to Poincaré*; Birkhäuser, 1986.
- N. Guicciardini, *Isaac Newton on mathematical certainty and method*, MIT Press, 2009.
- N. Guicciardini, *Reading the Principia: The debate on Newton's mathematical methods for the natural philosophy from 1687 to 1736*; Cambridge Univ. Press, 1999.
- N. Guicciardini, *The development of Newtonian calculus in Britain, 1700-1800*; Cambridge Univ. Press, 1989.
- E. Hairer and G. Wanner, *Analysis by its history*; Springer-Verlag, 1996.
- J. Havil, *Gamma: Exploring Euler's constant*; Princeton Univ. Press, 2003.
- T. Hawkins, *Lebesgue's theory of integration: Its origins and development*; Chelsea, 1970.
- H. N. Jahnke (ed), *A history of analysis*, AMS, 2003.
- S. Klymchuk, *Counterexamples in calculus*, MAA, 2010.
- A. N. Kolmogorov and A.P. Yushkevich (eds.), *Mathematics of the 19th century: Geometry and analytic function theory*; Birkhäuser, 1996.
- H. McKean and V. Moll, *Elliptic functions: Function theory, geometry, and arithmetic*; Cambridge Univ. Press, 1997.

F. A. Medvedev, *Scenes from the history of real functions*; Birkhäuser, 1991 (orig. Russian, 1975).

A. F. Monna, *Functional analysis in historical perspective*; Oosthoek Publ. Co., 1973.

A. F. Monna, *Dirichlet's Principle: A mathematical comedy of errors and its influence on the development of analysis*; Oosthoek, Scheltema and Holkema (Utrecht), 1975.

P. J. Nahin, *Dr. Euler's fabulous formula [ $e^{\pi i} + 1 = 0$ ] cures many mathematical ills*, Princeton Univ. Press, 2006.

P. J. Nahin, *When least is best: how mathematicians discovered many clever ways to make things as small (or as large) as possible*, Princeton Univ. Press, 2004. (Deals with optimization.)

C. Naux, *Histoire des logarithmes*, 2 vols.; A. Blanchard, 1966.

J. – P. Pier, *Mathematical analysis during the 20<sup>th</sup> century*, Oxford Univ. Press, 2001.

A. Pietsch, *History of Banach spaces and linear operators*, Birkhäuser, 2006.

R. Rashid (ed.), *Les mathématiques infinitésimales du IX<sup>e</sup> au XI<sup>e</sup> siècle*, 2 vols.; Al-Furqan Heritage Foundation, 1993.

R. Remmert, *Theory of complex functions*, Springer-Verlag, 1991. (Contains many historical notes.)

G. Shubring, *Conflict between generalization, rigor and intuition*, Springer, 2005.

G. F. Simmons, *Calculus gems: Brief lives and memorable mathematics*; McGraw-Hill, 1992.

J. A. Stedall, *The arithmetic of infinitesimals: John Wallace 1656*, Springer Verlag, 2004.

O. Toeplitz, *The calculus: A genetic approach*; Univ. of Chicago Press, 1963.

J. Wallis, *The arithmetic of infinitesimals*, Springer, 2004.

D. T. Whiteside, *The mathematical papers of Isaac Newton*, 8 vols.; Cambridge Univ. Press, 1967-1981.

### ***III. Geometry and Topology:***

K. Anderson, *The geometry of an art: the history of the mathematical theory of perspective from Alberti to Monge*, Springer, 2005.

B. Artmann, *Euclid – the creation of mathematics*; Springer-Verlag, 1999.

E. Aull and R. Lowen (eds.), *Handbook of the history of general topology*, vol. 1; Kluwer, 1997.

- L. Boi et. al. (eds.), 1830-1930: A century of geometry – epistemology, history, and mathematics; Springer-Verlag, 1992.
- R. Bonola, Non-Euclidean geometry; Dover, 1955 (orig. 1911).
- H. J. M. Bos, redefining geometrical exactness: Descartes' transformation of the early modern concept of construction; Springer-Verlag, 2001.
- C. B. Boyer, History of analytic geometry; The Scholar's Bookshelf, 1988 (orig. 1956).
- J. L. Coolidge, A history of geometrical methods; Dover, 1963 (orig. 1940).
- J. L. Colidge, A history of the conic sections and quadric surfaces; Dover, 1968 (orig. 1945).
- P. R. Cromwell, Polyhedra [in history]; Cambridge Univ. Press, 1997.
- J. Dieudonné, History of algebraic geometry; Wadsworth, 1985.
- J. Dieudonné, A History of algebraic and differential topology, 1900-1960; Birkhäuser, 1989.
- J. V. Field & J. Gray, The geometrical work of Girard Desargues; Springer-Verlag, 1987.
- D. H. Fowler, The Mathematics of Plato's Academy: A new reconstruction, Oxford Univ. Press, 1987.
- J. Gray, Worlds out of nothing: a course in the history of geometry in the 19<sup>th</sup> century, Springer, 2006.
- J. Gray, Janos Bolyai, non-euclidean geometry, and the nature of space, MIT Press, 2004.
- J. Gray (ed), The symbolic universe: Geometry and physics 1890-1930; Oxford Univ. Press, 1999.
- J. Gray, Ideas of space: Euclidean, non-Euclidean, and relativistic, 2nd ed.; Clarendon Press, 1989.
- M. J. Greenberg, Euclidean and non-Euclidean geometries: Development and history, 2nd ed.; Freeman, 1980 (orig. 1974).
- L. Heille, Geometry civilized: History, culture, and technique; Oxford Univ. Press, 1998.
- T. L. Heath (ed), The thirteen books of Euclid's *Elements*, 3 vols.; Dover, 1956.
- T. L. Heath (ed), Apollonius of Perga; Cambridge Univ. Press, 1896.
- I. M. James (ed), History of topology; North-Holland, 1999.
- W. R. Knorr, The evolution of the Euclidean Elements; Reidel, 1975.

- W. R. Knorr, *The ancient tradition of geometric problems*; Birkhäuser, 1986.
- W. R. Knorr, *Textual studies in ancient and medieval geometry*; Birkhäuser, 1989.
- A. N. Kolmogorov and A. P. Yushkevich (eds.), *Mathematics of the 19<sup>th</sup> century: Geometry and analytic function theory*; Birkhäuser, 1996.
- J. Manheim, *The genesis of point-set topology*; Pergamon Press, 1964.
- E. Maor, *The Pythagorean theorem, a 4000-year history*, Princeton Univ. Press, 2007.
- J. McCleary, *Geometry from a differentiable point of view*; Cambridge Univ. Press, 1994.
- D. O'Meara, *Pythagoras revisited: Mathematics and philosophy in late antiquity*; Open Univ. Press, 1989.
- L. Mlodinow, *Euclid's window: The story of geometry from parallel lines to hyperspace*; Touchstone, 2001.
- M. Monastyrsky, *Riemann, topology and physics*, 2<sup>nd</sup> ed.; Birkhauser, 1999.
- M. O'Leary, *Revolutions of geometry*, Wiley, 2010.
- P. Pesic (ed.), *Beyond geometry. Classical papers from Riemann to Einstein*, Dover, 2007.
- J. C. Pont, *La topologie algébrique des origines à Poincaré*; Presses Univ. de France, 1974.
- J. L. Richards, *Mathematical visions: The pursuit of geometry in Victorian England*; Academic Press, 1988.
- D. S. Richesson, *Euler's gem: the polyhedron formula and the birth of topology*, Princeton Univ. Press, 2008.
- B. A. Rosenfeld, *A history of non-Euclidean geometry*; Springer-Verlag, 1988.
- J. Stillwell (ed.), *Sources of hyperbolic geometry*; Amer. Math. Society, 1996.
- D. Schattschneider, *M. C. Escher: visions of symmetry*, 2<sup>nd</sup> ed., Harry N. Abrams, 2004.
- D. O'Shea, *The Poincaré conjecture: in search of the shape of the universe*, Walker, 2006.
- G. Szpiro, *Poincaré's prize: the hundred-year quest to solve one of math's greatest puzzles*, Dutton, 2007.
- G. Szpiro, *Kepler's conjecture: how some of the greatest minds in history helped solve one of the oldest math problems in the world*, Wiley, 2003.
- R. J. Trudeau, *The non-Euclidean revolution*; Birkhäuser, 1987.

B. L. van der Waerden, *Geometry and algebra in ancient civilizations*; Springer-Verlag, 1983.

R. Wilson, *Four colors suffice: how the map problem was solved*, Princeton Univ. Press, 2003.

I. M. Yaglom, Felix Klein and Sophus Lie: *Evolution of the idea of symmetry in the nineteenth century*; Birkhäuser, 1988.

#### IV. *Set Theory, Logic, and Philosophy of Mathematics:*

W. S. Anglin, *Mathematics: A concise history and philosophy*; Springer-Verlag, 1994.

W. Aspray and P. Kitcher (eds.), *History and philosophy of modern mathematics*; Univ. of Minnesota Press, 1988.

R. G. Ayoub (ed), *Musings of the masters*, MAA, 2004.

S. F. Barker, *Philosophy of mathematics*; Prentice-Hall, 1964.

J. D. Barrow, *Pi in the sky: Counting, thinking, and being*; Oxford Univ. Press, 1992.

R. J. Baum (ed.), *Philosophy and mathematics: From Plato to the present*; Freeman, Cooper & Co., 1973.

P. Benacerraff and H. Putnam (eds.), *Philosophy of mathematics: Selected readings*; Cambridge Univ. Press, 1983 (orig. 1964).

I. M. Bochenski, *A history of formal logic*; Chelsea, 1961.

P. Boehner, *Medieval logic*; Univ. of Chicago Press, 1952.

J. R. Brown, *Philosophy of mathematics: An introduction to a world of proofs and pictures*; Routledge, 1999.

F. Carruccio, *Mathematics and logic in history and in contemporary thought*; Faber & Faber, 1964.

B. Clegg, *Infinity: the quest to think the unthinkable*, Carroll & Graf, 2003.

D. Corfield, *Towards a philosophy of real mathematics*; Cambridge Univ. Press, 2003.

M. Davis, *The universal computer: The road from Leibniz to Turing*; W. W. Norton, 2000. (Paperback edition entitled: *Enigmas of logic ...* .]

P. J. Davis, R. Hersh, and E. A. Marchisotto, *The mathematical experience, Study Edition (with Companion Guide)*; Birkhäuser, 1995 (orig. 1981).

P. J. Davis and R. Hersh, *Descartes' dream: The world according to mathematics*;



- Harcourt Brace Jovanovich, 1986.
- H. De Long, *A profile of mathematical logic*; Addison-Wesley, 1970.
- M. Detlefsen (ed.), *Proof and knowledge in mathematics*; Routledge, 1992.
- A. K. Dewdney, *A mathematical mystery tour: Discovering the truth and beauty of the cosmos*; Wiley, 1999.
- T. Drucker (ed.), *Perspectives on the history of mathematical logic*; Birkhäuser, 2008 (reprinted).
- M. Dummett, *Frege: Philosophy of mathematics*; Harvard Univ. Press, 1991.
- Du Sautoy, *The music of the primes: searching to solve the great mystery in mathematics*, Harper Collins, 2003.
- J. Echeverria et al (eds.), *The space of mathematics: Philosophical, epistemological and historical explorations*; De Gruyter, 1992.
- A. W. F. Edwards, *Cogwheels of the mind: the story of Venn diagrams*, Johns Hopkins Univ. Press, 2004.
- H. M. Edwards, *Essays in constructive mathematics*, Springer, 2005.
- W. B. Ewald (ed.), *From Kant to Hilbert: A source book in the foundations of mathematics*, 2 vols.; Oxford University Press, 1996.
- S. Feferman, *In the light of logic*; Oxford Univ. Press, 1998.
- J. Ferreirós, *Labyrinth of thought: A history of set theory and its role in modern mathematics*; Birkhauser, 1999.
- J. Folina, *Poincaré and the philosophy of mathematics*; Macmillan, 1992.
- C. Franks, *The autonomy of mathematical knowledge. Hilbert's program revisited*, Cambridge Univ. Press, 2009.
- T. Franzen, *Godel's theorem: an incomplete guide to its use and abuse*, A K Peters, 2005.
- M. Friedman, *Kant and the exact sciences*; Harvard Univ. Press, 1992.
- M. Friedman & R. Creath (eds), *The Cambridge companion to Carnap*, Cambridge Univ. Press, 2007.
- D. M. Gabbay & J. Woods (eds), *The rise of modern logic: from Leibniz to Frege*, Elsevier, 2004.
- A. R. Garciadiego, *Bertrand Russell and the origins of the set-theoretic paradoxes*; Birkhauser, 1992.

- D. Gabbay & J. Woods (eds), *Handbook of the history of logic*, vol. 2. *Mediaeval and Renaissance logic*, Elsevier, 2008.
- Y. Gauthier, *Internal Logic: Foundations of Mathematics from Kronecker to Hilbert*, Kluwer, 2002.
- D. Gillies (ed.), *Revolutions in mathematics*; Oxford Univ. Press, 1992.
- B. Gold & R. A. Simons (eds), *Proof & other dilemmas: mathematics and philosophy*, MAA, 2008.
- R. Goldstein, *Incompleteness: the proof and paradox of Kurt Gödel*, Norton, 2005.
- I. Grattan-Guinness, *The search for mathematical roots, 1870-1940*; Princeton Univ. Press, 2001.
- J. Havil, *Nonplussed: mathematical proof of impossible ideas*, Princeton Univ. Press, 2007.
- R. Hersh, *18 unconventional essays on the nature of mathematics*, Springer 2006.
- R. Hersh, *What is mathematics, really?*, Oxford Univ. Press, 1997.
- D. Hesseling, *Gnomes in the fog. The reception of Brouwer's intuitionism in the 1920s*, Birkhäuser, 2003.
- D. M. Jesseph, *Berkeley's philosophy of mathematics*; Univ. of Chicago Press, 1993.
- G. Kampis et al (eds.), *Appraising Lakatos: Mathematics, methodology and the man*; Kluwer, 2002.
- A. Kanamori, *The higher infinite: Large cardinals in set theory from their beginnings*; Springer-Verlag, 1997.
- P. Kitcher, *The nature of mathematical knowledge*; Oxford Univ. Press, 1983.
- M. Kline, *Mathematics: The loss of certainty*; Oxford Univ. Press, 1980.
- W. Kneale and M. Kneale, *The development of logic*; Oxford Univ. Press, 1962.
- M. Koetsier, *Lakatos' philosophy of mathematics: A historical approach*; North-Holland, 1991.
- S. Körner, *The philosophy of mathematics*; Dover, 1986 (orig. 1960).
- N. Kretzman, *Infinity and continuity in ancient and medieval thought*; Cornell Univ. Press, 1982.
- R. Krömer, *Tool and object. A history and philosophy of category theory*, Birkhauser, 2007.
- L. M. Laita et al, *The genesis of Boole's logic: its history and a computer exploration*, Domicilio de la Academia, 2005.

- I. Lakatos, *Proofs and refutations: The logic of mathematical discovery*; Cambridge Univ. Press, 1976.
- S. Lavine, *Understanding the infinite*; Harvard University Press, 1994.
- B. Larvor, *Lakatos: An introduction*; Routledge, 1998.
- P. Maddy, *Realism in mathematics*; Oxford Univ. Press, 1993.
- P. Mancosu, *Philosophy of mathematics and mathematical practices in the seventeenth century*; Oxford Univ. Press, 1995.
- E. Maor, *To infinity and beyond: A cultural history of the infinite*; Birkhäuser, 1987.
- J. P. Marquis, *From a geometrical point of view: a study of the history and philosophy of category theory*, Springer, 2009.
- H. Meschkowski, *Evolution of mathematical thought*; Holden-Day, 1965.
- A. W. Moore, *The infinite*; Routledge, 1990.
- G. H. Moore, *Zermelo's axiom of choice: Its origins, development, and influence*; Springer-Verlag, 1982.
- G. Oliveri, *A realist philosophy of mathematics*, College Publ., 2007.
- C. J. Posy (ed.), *Kant's philosophy of mathematics*; Kluwer, 1992.
- P. Pritchard, *Plato's philosophy of mathematics*; Academia Verlag, 1995.
- F. A. Rodriguez-Consuegra, *The mathematical philosophy of Bertrand Russell: Origins and development*; Birkhäuser, 1991.
- R. Rucker, *Infinity and the mind: The science and philosophy of the infinite*; Birkhäuser, 1982.
- D. J. Rudolph and I. O. Stamatescu, *Philosophy, mathematics and modern physics: A dialogue*; Springer-Verlag, 1994.
- S. G. Shanker (ed.), *Gödel's theorem in focus*; Routledge, 1990.
- J. Stillwell, *Roads to infinity: The mathematics of truth and proof*, A K Peters, 2010. (Contains "historical background" at the end of each chapter.)
- N. Styazhkin, *History of mathematical logic from Leibniz to Peano*; M.I.T. Press, 1969.
- W. Tait, *The provenance of pure reason: essays in the philosophy of mathematics and its history*, Oxford Univ. Press, 2005.
- R. Torretti, *Philosophy of geometry from Riemann to Poincaré*; Dordrecht, 1978.

T. Tymoczko, *New directions in the philosophy of mathematics: An anthology*; revised ed., Princeton Univ. Press 1998.

W. P. Van Stigt, *Brouwer's intuitionism*; North-Holland, 1990.

L. M. Wapner, *The pea and the sun: a mathematical paradox*, A K Peters, 2005.

N. Y. Vilenkin, *In search of infinity (formerly: Stories about sets)*; Birkhäuser, 1995.

H. Wang, *A logical journey: From Gödel to philosophy*; MIT Press, 1996.

H. Weyl, *Mind and nature: selected writings on philosophy, mathematics, and Physics* (edited, with an Introduction, by, P. Pesic) Princeton Univ. Press, 2009.

H. Weyl, *Philosophy of mathematics and natural science*, Princeton Univ. Press, 2009.

## V. *Numbers and Number Theory:*

A. D. Aczel, *Fermat's Last Theorem: Unlocking the secret of an ancient mathematical problem*; Four Walls Eight Windows, 1996.

I. G. Bashmakova, *Diophantus and diophantine equations*; Math. Assoc. of America, 1997.

P. Beckmann, *A history of  $\pi$* ; Golem Press, 1970.

E. T. Bell, *The magic of numbers*; Dover, 1991 (orig. 1946).

E. T. Bell, *The last problem*; revised and updated by U. Dudley; Math Assoc. of America, 1990 (orig. 1961).

J. – P. Belna, *La notion de nombre chez Dedekind, Cantor, Frege*; Mathesis, 1996.

P. Benoit et. al. (eds.), *Histoire des fractions, fractions d'histoire*; Birkhauser, 1992.

L. Berggren, J. Borwein, and P. Borwein (eds.),  *$\pi$ : A source book*; Springer, 1997.

C. Brezinski, *History of continued fractions and Padé approximants*; Springer-Verlag, 1991.

C. C. Clawson, *The mathematical traveler: Exploring the grand history of numbers*; Plenum Publ., 1994.

I. B. Cohen, *The triumph of numbers: how counting shaped modern life*, W. W. Norton, 2006.

D. A. Cox, *Primes of the form  $x^2 + ny^2$* ; Wiley, 1989.

J. N. Crossley, *The emergence of number*; World Scientific, 1987 (orig. 1980).

T. Crump, *The anthropology of numbers*; Cambridge Univ. Press, 1990.

- T. Dantzig, *Number: The language of science*; Free Press, 1967 (orig. 1930).
- S. Dehaene, *The number sense: How the mind creates mathematics*; Oxford Univ. Press, 1997.
- B. N. Delone, *The St. Petersburg school of number theory* (tr. by R. Burns), AMS, 2005.
- J. Derbyshire, *Prime obsession: Bernhard Riemann and the greatest unsolved problem in mathematics*; Joseph Henry Press, 2003.
- L. E. Dickson, *History of the theory of numbers*, 3 vols.; Chelsea, 1952 (orig. 1912-1923).
- P. G. L. Dirichlet, *Lectures on number theory, with Supplements by R. Dedekind* (tr. by J. Stillwell); Amer. Math. Soc., 1999.
- H. D. Ebbinghaus et al, *Numbers*; Springer-Verlag, 1990.
- H. M. Edwards, *Fermat's last theorem: A genetic introduction to algebraic number theory*; Springer-Verlag, 1977.
- G. Flegg, *Numbers: Their history and meaning*; Andre Deutsch, 1983.
- Y. Gauthier, *Internal Logic: Foundations of Mathematics from Kronecker to Hilbert*, Kluwer, 2002.
- G. Godefroy, *The adventure of numbers*, AMS, 2004.
- J. R. Goldman, *The queen of mathematics: A historically motivated guide to number theory*; A. K. Peters, 1998.
- C. Goldstein et al (eds), *The shaping of arithmetic after C. F. Gauss's Disquisitiones Arithmeticae*, Springer, 2007.
- J. Havil, *Gamma: Exploring Euler's constant*; Princeton Univ. Press, 2003.
- T. L. Heath (ed), *Diophantus of Alexandria*, 2<sup>nd</sup> ed.; Dover, 1964.
- D. Hilbert, *The theory of algebraic number fields* (tr. by I. T. Adamson of the *Zahlbericht*); Springer-Verlag, 1998.
- P. Hoffman, *The man who loved only numbers: The story of Paul Erdős and the search for mathematical truth*; Hyperion Books, 1998.
- G. Ifrah, *The universal history of numbers*; Wiley, 2000.
- G. Ifrah, *From one to zero: A universal history of numbers*; Penguin, 1985.
- R. Kaplan, *The nothing that is: A natural history of zero*; Oxford Univ. Press, 1999.
- L.C. Karpinski, *The history of arithmetic*; Russell & Russell, 1965 (orig. 1925).

- A. Knoebel, R. Laubenbacher et al, *Mathematical masterpieces: further chronicles from the explorers*, Springer, 2007.
- U. Kraeft, *A short history of number theory*, Shaker Verlag, 2005.
- F. Lemmermeyer, *Reciprocity laws from Euler to Eisenstein*; Springer-Verlag, 2000.
- E. Maor, *e: The story of a number*; Princeton University Press, 1994.
- B. Mazur, *Imagining numbers*, Farrar, Strauss and Giroux, 2003.
- K. Menninger, *Number words and number symbols: A cultural history of numbers*; M.I.T. Press, 1969.
- P. J. Nahin, *Euler's magic formula  $[e^{mi} + 1 = 0]$  cures many mathematical ills*, Princeton Univ. Press, 2006.
- P. J. Nahin, *An imaginary tale: The story of  $\sqrt{-1}$* ; Princeton Univ. Press, 1998.
- W. Narkiewicz, *The development of prime number theory: From Euclid to Hardy and Littlewood*; Springer-Verlag, 2000.
- C. Naux, *Histoire des logarithmes*, 2 vols.; A. Blanchard, 1966.
- K. Neal, *From discrete to continuous. The broadening of number concepts in early modern England*, Kluwer, 2002.
- A. Posamentier & I. Lehmann,  *$\pi$ : a biography of the world's most mysterious number*, Prometheus Books, 2004.
- P. Ribenboim, *Fermat's Last Theorem for amateurs*; Springer-Verlag, 1999.
- P. Ribenboim, *Catalan's conjecture*, Academic Press, 1994.
- P. Ribenboim, *The book of prime number records*, 2nd. ed.; Springer-Verlag, 1989.
- P. Ribenboim, *13 lectures of Fermat's Last Theorem*; Springer-Verlag, 1979.
- D. Rockmore, *Stalking the Riemann Hypothesis: the quest to find the hidden law of prime numbers*, Pantheon, 2005.
- K. Sabbagh, *The Riemann hypothesis: The greatest unsolved problem in mathematics*; Farrar, Strauss and Giroux, 2002.
- W. Scharlau & H. Opolka, *From Fermat to Minkowski: Lectures on the theory of numbers and its historical development*; Springer-Verlag, 1985.
- D. Schmidt-Besserat, *Before writing. Vol. 1: From counting to cuneiform. Vol. 2: A catalogue of Near East tokens*; Univ. of Texas Press, 1992.
- C. Seife, *Zero: The biography of a dangerous idea*; Viking Press, 2000.

L. E. Sigler, *Fibonacci's Liber Abaci* [translated into modern English]; Springer-Verlag, 2002.

S. Singh, *Fermat's enigma: The epic quest to solve the world's greatest mathematical problem*; Walker & Co., 1997.

E. Sondheimer and A. Rogerson, *Numbers and infinity: A historical account of mathematical concepts*, Dover, 2006.

D. D. Spencer, *Key dates in number theory history: From 10,529 B.C. to the present*; Camelot Publ., 1995.

H. J. S. Smith, *Report on the theory of numbers*; Chelsea, 1965 (orig. 1860s).

F. Swetz, *Capitalism and arithmetic: The New Math of the 15th century*; Open Court, 1987.

R. Tubbs, *What is a number? Mathematical concepts and their origin*, Johns Hopkins Univ. Press, 2009.

G. Urton, *The social life of numbers*; Texas Univ. Press, 1997.

A. Van der Poorten, *Notes on Fermat's Last Theorem*; Wiley, 1996.

A. Weil, *Number theory: An approach through history, from Hammurapi to Legendre*; Birkhäuser, 1984.

C. Zaslavsky, *Africa counts: Number and pattern in African culture*; Prindle, Weber & Schmidt, 1973.

## VI. *Probability and Statistics:*

Jakob Bernoulli, *The Art of Conjecturing*, together with "Letter to a friend on sets in court tennis", translated by E. D. Sylla, Johns Hopkins Univ. Press, 2006.

P. L. Bernstein, *Against the Gods: The remarkable story of risk*; Wiley, 1996.

A. I. Dale, *A history of inverse probability: From Thomas Bayes to Karl Pearson*; Springer-Verlag, 1999.

H. A. David, *Annotated readings in the history of statistics*; Springer-Verlag, 2001.

F. N. David, *Games, gods and gambling*; Charles Griffin, 1962.

L. Daston, *Classical probability in the Enlightenment*; Princeton U. Press, 1988.

L. Daston et al (eds.), *The probabilistic revolution*, 2 vols.; 1987.

A. Desrosières, *The politics of large numbers: A history of statistical reasoning*; Harvard Univ. Press, 1998.

- R. W. Farebrother, *Fitting linear relationships: A history of the calculus of observations 1750-1900*; Springer-Verlag, 1999.
- J. Franklin, *The science of conjecture: evidence and probability before Pascal*, Johns Hopkins Univ. Press, 2002.
- G. Gigerenzer et al, *The empire of chance: How probability changed science and everyday life*; Cambridge Univ. Press, 1989.
- I. Hacking, *The emergence of probability: a philosophical study of early ideas about probability, induction, and statistical inference*, 2<sup>nd</sup> ed.; Cambridge Univ. Press, 2006.
- I. Hacking, *The taming of chance*; Cambridge Univ. Press, 1990.
- A. Hald, *A history of mathematical statistics from 1750 to 1930*; Wiley, 1998.
- A. Hald, *A history of probability and statistics and their applications before 1750*; Wiley, 1990.
- D. Howie, *Interpreting probability. Controversies and developments in the early twentieth century*, Cambridge Univ. Press, 2007.
- R. Jeffrey, *Probability and the art of judgment*; Cambridge Univ. Press, 1992.
- N. L. Johnson and S. Kotz (eds.), *Leading personalities in statistical science from the seventeenth century to the present*; Wiley, 1997.
- L. Krüger et al (eds.), *The probabilistic revolution*, 2 vols.; MIT Press, 1987.
- D. Mackenzie, *Statistics in Britain, 1865-1930: The social construction of scientific knowledge*; Edinburgh Univ. Press, 1981.
- L. E. Maistrov, *Probability theory: A historical sketch*; Academic Press, 1974.
- D. B. Owen, *On the history of statistics and probability*; Marcel Dekker, 1976.
- E. S. Pearson, M. G. Kendall, & R. L. Plackett, *Studies in the history of statistics and probability*; Griffin, 1970.
- K. Pearson, *The history of statistics in the 17th and 18th centuries against the changing background of intellectual, scientific and religious thought*; Griffin, 1978.
- T. M. Porter, *The rise of statistical thinking, 1820-1900*; Princeton Univ. Press, 1986.
- B. J. Shapiro, *Probability and certainty in seventeenth-century England*; Princeton Univ. Press, 1983.
- W. R. Shea, *Designing experiments and games of chance: the unconventional science of Blaise Pascal*, Science History Publications, 2003.
- S. Stigler, *Statistics on the table: The history of statistical concepts and methods*; Harvard Univ. Press, 1999.



S. Stigler, *The history of statistics: The measurement of uncertainty before 1900*; Harvard Univ. Press, 1986.

J.W. Tankard, *The statistical pioneers*; Schenkman Publ. Co., 1984.

I. Todhunter, *A history of the mathematical theory of probability (from Pascal to Laplace)*; Chelsea, 1965 (orig. 1865).

J. Von Plato, *Creating modern probability: Its mathematics, physics and philosophy in historical perspective*; Cambridge University Press, 1994.

S. L. Zabell, *Symmetry and its discontents: essays on the history of inductive probability*, Cambridge Univ. Press, 2005.

H Walken, *Studies in the history of the statistical method*; Williams & Wilkins, 1931.

## VII. *Combinatorics and Graph Theory:*

M. L. Briggs, E. K. Llyod and R. J. Wilson, *History of graph theory*; Clarendon Press, 1976.

I. R. Fritsch and G. Fritsch, *The four-color theorem: History, topological foundations, and the idea of proof*; Springer-Verlag, 1998.

G. Szpiro, *Kepler's conjecture: how some of the greatest minds in history helped solve one of the oldest math problems in the world*, Wiley, 2003.

R. Wilson, *Four colours suffice: How the map problem was solved*; Princeton Univ. Press, 2002.

## VIII. *Greek Mathematics:*

A. Aaboe, *Episodes from the early history of mathematics*; Random House, 1964.

B Artmann, *Euclid – the creation of mathematics*; Springer-Verlag, 1999.

W. Burkert, *Lore and science in ancient pythagoreanism*; Harvard Univ. Press, 1972.

J. Christianidis (ed), *Classics in the history of Greek mathematics*, Kluwer, 2004.

S. Cuomo, *Ancient mathematics*, Routledge, 2001.

D. H. Fowler, *The mathematics of Plato's Academy: A new reconstruction, expanded second ed.*; Oxford Univ. Press, 1998.

M. N. Fried & S. Unguru, *Apollonius of Perga's Conica*, Brill, 2001.

T. L. Heath, *History of Greek mathematics*, 2 vols.; Dover, 1981 (orig. 1921).

T. L. Heath, *Mathematics in Aristotle*; Garland Publ., 1980 (orig. 1949).

- T. L. Heath, *Diophantus of Alexandria*, 2<sup>nd</sup> ed.; Dover, 1964.
- T. L. Heath, *The thirteen books of Euclid's Elements*, 3 vols.; Dover, 1956.
- T. L. Heath, *The works of Archimedes*; Dover, 1950s.
- J. Klein, *Greek mathematical thought and the origin of algebra*; Dover, 1992 (orig. 1932-34).
- W. Knorr, *The evolution of the Euclidean Elements*; Reidel, 1975.
- W. Knorr, *The ancient tradition of geometric problems*; Birkhäuser, 1986.
- W. Knorr, *Textual studies in ancient and medieval geometry*; Birkhäuser, 1989.
- F. Lasserre, *The birth of mathematics in the age of Plato*; Hutchison&Co., 1964.
- I. Mueller (ed.), *Peri ton matematon*; Academic Printing and Publishing (Edmonton), 1991.
- I. Mueller, *Philosophy of mathematics and deductive structure in Euclid's Elements*; M.I.T. Press, 1981.
- R. Netz, *Ludic proof: Greek mathematics and the Alexandrian aesthetic*, Cambridge Univ. Press, 2009.
- R. Netz, *The transformation of mathematics in the early Mediterranean world: from problems to equations*, Cambridge Univ. Press, 2004.
- R. Netz, *The works of Archimedes, translated into English, together with Eutocius' commentary and critical editions of the diagrams, vol. 1: the two books On the Sphere and On the Cylinder*, Cambridge Univ. Press, 2004.
- R. Netz, *The shaping of deduction in Greek mathematics: A study in cognitive history*; Cambridge Univ. Press, 1999.
- R. Netz & W. Noel, *The Archimedes codex: How a medieval prayer book is revealing the true genius of antiquity's greatest scientist*, Da Capo Press, 2007.
- O. Neugebauer, *The exact sciences in antiquity*; Dover, 1969 (orig. 1949).
- S. Stein, *Archimedes: What did he do besides cry eureka?*; Math. Assoc. of America, 1999.
- C. M. Taisbak, *Division and logos: a theory of equivalent couples and sets of integers*, Odense Univ. Press, 1971.
- B. L. van der Waerden, *Science awakening I*; The Scholar's Bookshelf, 1988 (orig. 1954).
- B. L. van der Waerden, *Geometry and algebra in ancient civilizations*; Springer-Verlag, 1976.

- IX. *Non-Western Mathematics and Ethnomathematics (Egyptian, Babylonian, Chinese, Indian, Islamic...)* :
- A. Aaboe, Episodes from the early history of mathematics; Random House, 1964.
- M. Ascher, Mathematics elsewhere: An exploration of ideas across cultures; Princeton Univ. Press, 2002.
- M. Ascher, Ethnomathematics: A multicultural view of mathematical ideas; Brooks/ Cole, 1991.
- M. Ascher and R. Ascher, Mathematics of the Incas: Code of the quipu; Dover, 1981.
- M. Ascher and U. D'Ambrosio (eds.), "Ethnomathematics in Mathematical Education"; Special Issue of *For the Learning of Mathematics*, vol. 14, no. 2, 1994.
- J. L. Berggren, Episodes in the mathematics of medieval Islam; Springer-Verlag, 1986.
- C. Burnett et al, Studies in the history of the exact sciences in honour of David Pingree, Brill, 2004.
- M. P. Closs (ed.), Native American mathematics; University of Texas Press, 1986.
- C. Cullen, Astronomy and mathematics in ancient China: The Zhou Bi Suan Jing; Cambridge Univ. Press, 1996.
- B. Datta and A. N. Singh, History of Hindu mathematics, 2 vols.; Asia Publ. House (Bombay), 1962 (orig. 1935-1938).
- W.M. Feldman, Rabbinical mathematics and astronomy, 4th ed.; Sepher Herman Press, 1991 (orig. 1931).
- M. Folkers, The development of mathematics in medieval Europe: the Arabs, Euclid, Regiomontanus, Variorum, 2006.
- M. Folkers (ed), Essays on early medieval mathematics. The Latin tradition, Ashgate Publ., 2003.
- J. Friberg, A remarkable collection of Babylonian mathematical texts. Manuscripts in the Shoyen collection: cuneiform texts I, Springer, 2007.
- J. Friberg, Unexpected links between Egyptian and Babylonian mathematics, World Scientific, 2005.
- P. Gerdes, Sona geometry from Angola. Mathematics of an African tradition, Polimetria, 2006.
- P. Gerdes, Geometry from Africa: Mathematical and educational explorations; Math. Assoc. of America, 1999.
- P. Gerdes, Women, art, and mathematics in Southern Africa; Africa World Press, 1998.

- P. Gerdes & A. Djebbar, *Mathematics in African history and culture: an annotated bibliography*, new ed., Lulu.com. 2007.
- R. J. Gillings, *Mathematics in the time of the Pharaohs*; Dover, 1982 (orig. 1972).
- J. Hoyrup, *Lengths, widths, surfaces: A portrait of old Babylonian algebra and its kin*; Springer-Verlag, 2001.
- G. G. Joseph, *The crest of the peacock: The non-European roots of mathematics*, 2<sup>nd</sup> ed.; Princeton Univ. Press, 2000.
- S. Kangshen, J. Crossley, and A. Lun (eds), *The nine chapters on the mathematical art: Companion and commentary*; Oxford Univ. Press, 1999.
- L. Y. Lam, *Fleeting footsteps: Tracing the conception of arithmetic and algebra in ancient China*, revised ed.; World Scientific Publ., 2004.
- U. Libbrecht, *Chinese mathematics in the thirteenth century*; M.I.T. Press, 1973.
- Li Yun and Du Shiran, *Chinese mathematics: A concise history*; Clarendon Press, 1987.
- D. Lindberg, *The beginnings of Western science. The European scientific tradition in philosophical, religious and institutional context, prehistory to AD 1450*, 2<sup>nd</sup> ed., Univ of Chicago Press, 2008.
- J. -C. Martzloff, *A history of Chinese mathematics*; Springer-Verlag, 2006 (orig. French, 1988).
- Y. Mikami, *The development of mathematics in China and Japan*; Chelsea, 1974.
- J. Needham, *Science and civilization in China* (vol. 3); Cambridge Univ. Press, 1959.
- R. Netz & W. Noel, *The Archimedes codex: How a medieval prayer book is revealing the true genius of antiquity's greatest scientist*, Da Capo Press, 2007.
- O. Neugebauer, *The exact sciences in antiquity*; Dover, 1969.
- K. Plofker, *Mathematics in India*, Princeton Univ. press, 2008.
- K. G. Poulouse (ed), *Scientific heritage of India – mathematics*; Government Sanskrit College Committee, 1991.
- B. Rao, *Indian mathematics and astronomy*; Juana Deep Publ., 1994.
- R. Rashed, *The development of Arabic mathematics: Between arithmetic and algebra*; Kluwer, 1994.
- E. Robson, *Mathematics in ancient Iraq: a social history*, Princeton Univ. Press, 2008.
- E. Robson, *Mesopotamian mathematics, 2100-1600 BC: technical constants in bureaucracy and education*; Oxford Univ. Press, 1999.

- A. Sarasvati, *Geometry in ancient and medieval India*; Delhi, 1979.
- H. SEline (ed), *Mathematics across cultures: the history of non-western mathematics*, Kluwer, 2000.
- S. N. Sen and A. K. Bag (eds), *The Sulvasutras of Baudhayana, Apastamba, Katayana, and Manavra*; New Delhi, 1983.
- D. E. Smith and Y. Mikami, *A history of Japanese mathematics*; Open Court Publ., 1914.
- C. N. Srinivasiengar, *The history of ancient Indian mathematics*; The World Press (Calcutta), 1967.
- F. J. Swetz, *Mathematics education in China: Its growth and development*; MIT Press, 1974.
- F. J. Swetz and T. I. Kao, *Was Pythagoras Chinese?* Pennsylvania State Univ. Press, 1977.
- G. Urton, *The social life of numbers: A Quechna ontology of numbers and philosophy of arithmetic*; Univ. of Texas Press, 1997.
- B. L. van der Waerden, *Science awakening I*; The Scholar's Bookshelf, 1988 (orig. 1954).
- B. L. Van der Waerden, *Geometry and algebra in ancient civilizations*; Springer-Verlag, 1976.
- M. Wilson, *Education in the earliest schools . Cuneiform manuscripts in the Costen collection*, Costen Occasional Press, 2008.
- A. P. Youshkevitch, *Les mathématiques Arabes (VIIIe - XVe siècles)*; J. Vrin (Paris), 1976.
- C. Zaslavsky, *Africa counts: Number and pattern in African culture*; Prindle, Weber & Schmidt, 1973.

**X. *Astronomy, Computing, Mathematics and Science:***

- W. Aspray, *John von Neumann and the origins of modern computing*; M.I.T. Press, 1990.
- J. Barrow-Green, *Poincaré and the three-body problem*; Amer. Math. Society, 1997.
- M. Blay, *Reasoning with the infinite*; Univ. of Chicago Press, 1998.
- S. Bochner, *The role of mathematics in the rise of science*; Princeton Univ. Press, 1966.
- C. Brezinski & L. Wuytack (eds), *Numerical analysis: historical developments in the 20<sup>th</sup> century*, North Holland, 2001.

- M. Campbell-Kelley and W. Aspray, *Computer: A history of the information machine*; Basic Books, 1997.
- M. Cambell-Kelly et al, *The history of mathematical tables: from Sumer to spreadsheets*, Oxford Univ. Press, 2003.
- J. - L. Chabert (ed), *A history of algorithms: From the pebble to the micro-chip*; Springer-Verlag, 1999.
- I. B. Cohen, *The triumph of numbers: how they shaped modern life*, W. W. Norton, 2005.
- I. B. Cohen & A. Whitman (eds), *Newton's Principia*, Univ. of California Press, 1999. (Accompanied by a guide describing the work, its history, and a guide to reading it.)
- M. J. Crowe, *Theories of the world from antiquity to the Copernican revolution*; Dover, 1990.
- M. Davis, *The universal computer: The road from Leibniz to Turing*; W. W. Norton, 2000.
- D. Densmore, *Newton's Principia: The central argument; translations, notes, and expanded proofs*; Green Lion Press, 1996.
- E. J. Dijksterhuis, *The mechanization of the world picture: Pythagoras to Newton*; Princeton Univ. Press, 1986 (orig. 1950).
- J. L. E. Dreyer, *A history of astronomy from Thales to Kepler*; Dover, 1953 (orig. 1906).
- I. Ekeland, *Mathematics and the unexpected*; Univ. of Chicago Press, 1988.
- C. Fraser, *Calculus and analytical mechanics in the age of the Enlightenment*; Varorium, 1997.
- M. Gessen, *perfect rigor. A genius [G. Perelman] and the mathematical breakthrough of the century*, Houghton Mifflin Harcourt, 2009.
- J. Gleick, *Chaos: Making a new science*; Penguin, 1987.
- H. O. Goldstine, *A history of numerical analysis from the 16th through the 19th century*; Springer-Verlag, 1977.
- H. O. Goldstine, *The computer from Pascal to von Neumann*; Princeton Univ. Press, 1972.
- J. Gray (ed), *The symbolic universe: Geometry and physics 1890-1930*; Oxford Univ. Press, 1999.
- D. A. Grier, *When computers were human*, Princeton Univ. Press, 2005.
- N. Guicciardini, *Reading the Principia: The debate on Newton's mathematical methods for natural philosophy from 1687 to 1736*; Cambridge Univ. Press, 1999.

- T. L. Heath, *Greek astronomy*; J.M. Dent & Sons, 1991
- T. L. Heath, *Aristarchus of Samos, the ancient Copernicus*; Dover, 1981.
- R. Hubbard, *The world according to wavelets: The story of a mathematical technique in the making*; A. K. Peters, 1998.
- J. H. Johnson & M. J. Loomes (eds.), *The mathematical revolution inspired by computing*; Oxford Univ. Press, 1991.
- M. Kline, *Mathematics and the search for knowledge*; Oxford Univ. Press, 1985.
- C. Linton, *From Eudoxus to Einstein: a history of mathematical astronomy*, Cambridge Univ. Press, 2004.
- J. P. McCorduck, *Machines who think*; Freeman, 1979.
- N. Metropolis et al (eds.), *A history of computing in the twentieth century*; Academic Press, 1980.
- M. Monastyrsky, *Riemann, topology and physics*, 2<sup>nd</sup> ed.; Birkhauser, 1999.
- A. Naess, *Galileo Galilei: when the world stood still*, Springer, 2005.
- P. J. Nahin, *When least is best: how mathematicians discovered many clever ways to make things as small (or as large) as possible*, Princeton Univ. Press, 2004. (Deals with optimization.)
- O. Neugebauer, *A history of ancient mathematical astronomy*, 3 vols.; Springer-Verlag, 1975.
- O. Neugebauer, *Astronomy and history: Selected essays*; Springer-Verlag, 1983.
- O. Pederson, *A survey of the *Almagest**; Odense Univ. Press, 1974.
- G. Polya, *Mathematical methods in science*; Math. Assoc. of America, 1977 (orig. 1963).
- K. Reich, *Die Entwicklung des Tensorkalkuls: Vom absoluten Differentialkalkul zur Relativitatstheorie*; Birkhauser, 1994.
- E. G. Richards, *Mapping time: The calendar and its history*; Oxford Univ. Press, 1998.
- E. Rudolph and I. O. Stamatescu (eds.), *Philosophy, mathematics and modern physics: A dialogue*; Springer-Verlag, 1994.
- M. M. Schiffer & L. Bowden, *The role of mathematics in science*; Math. Assoc. of America, 1984.
- D. Shasha and C. Lazere, *Out of their minds: The lives and discoveries of 15 great computer scientists*; Springer-Verlag, 1995.
- S. Singh, *The code book: The evolution of secrecy from Mary, Queen of Scots to quantum cryptography*; Doubleday, 1999.

I. Stewart, *Does God play dice?: The mathematics of chaos*; Penguin, 1989.

G. Szpiro, *Poincaré's prize*, Penguin, 2007.

L. C. Taub, *Ptolemy's universe: The natural, philosophical and ethical foundations of Ptolemy's astronomy*; Open Court, 1993.

B. L. van der Waerden, *Science awakening II: The birth of astronomy*; Oxford Univ. Press, 1974.

J.G. Yoder, *Unrolling time: Christiaan Huygens and the mathematization of nature*; Cambridge Univ. Press, 1988.

**XI. "Modern" Mathematics (Nineteenth Century-):**

V. Arnold, M. Atiyah, P. Lax, and B. Mazur (eds), *Mathematics: Frontiers and perspectives*; Amer. Math. Soc., 2000.

W. Aspray and P. Kitcher (eds.), *History and philosophy of modern mathematics*; Univ. of Minnesota Press, 1988.

M. Atiyah and D. Iagolnitzer (eds.), *Fields medallists' lectures*; World Scientific, 1997.

R. G. Ayoub, *Musings of the masters*, MAA, 2004.

A. Bolibruch et al (eds), *Mathematical events of the twentieth century [in which Russian and Soviet mathematicians figures prominently]*, Springer, 2006.

F. E. Browder (ed.), *Mathematical developments arising from Hilbert Problems*, 2 vols.; Amer. Math. Soc., 1976.

J. Carleson, A. Jaffe, and W. Wiles, *The millennium prize problems*, AMS, 2006.

C. Casacuberta and M. Castellet (eds.), *Mathematical research today and tomorrow: Viewpoints of seven Fields medalists*; Springer-Verlag, 1993.

B. Cipra, *What's happening in the mathematical sciences?* Amer. Math. Soc., annual volumes, 1993- .

K. Devlin, *The millennium problems: the seven greatest mathematical puzzles of our time*, Basic books, 2002.

P. Duren (ed.), *A century of mathematics in America*, I, II, III; Amer. Math. Soc., 1988-89.

B. Enquist and W. Schmid (eds), *Mathematics unlimited – 2001 and beyond*; Springer-Verlag, 2001.

J. Ewing (ed.), *A century of mathematics, through the eyes of the Monthly*; Math. Assoc. of America, 1994.



- J. Ferreiros & J. Gray (eds), *The architecture of modern mathematics; essays in history and philosophy*, Oxford Univ. Press, 2006.
- J. V. Grabiner, *A historian looks back: The calculus as algebra and selected writings*, MAA, 2010.
- I. Grattan-Guinness, *Routes of learning: highways, pathways, and byways in the history of mathematics*, The Johns Hopkins Univ. Press, 2009.
- I. Grattan-Guinness, *Convolutions in French mathematics, 1800-1840*, 3 vols.; Birkhäuser, 1986.
- J. Gray, *Plato's ghost: the modernist transformation of mathematics*, Princeton Univ. Press, 2008.
- J. Gray, *The Hilbert challenge*; Oxford Univ. Press, 2000.
- J. Gray, *Linear differential equations and group theory from Riemann to Poincaré*; Birkhäuser, 1986.
- J. Horvath, *A panorama of Hungarian mathematics in the twentieth century*, I, Springer, 2005.
- K. Iwasaki et al, *From Gauss to Painlevé: A modern theory of special functions*; Viewig, 1991.
- J. H. Johnson and M. J. Loomes (eds.) *The mathematical revolution inspired by computing*; Oxford Univ. Press, 1991.
- F. Klein, *Lectures on mathematics*; Amer. Math. Soc., 2000.
- F. Klein, *Development of mathematics in the 19th century*. In: *Lie Groups*, by R. Hermann, Math. Sci. Press, 1979 (orig. 1928).
- A. N. Kolmogorov and A. P. Yushkevich, *Mathematics of the 19th century: Algebra, logic, number theory, probability*; Birkhäuser, 1992.
- A. N. Kolmogorov and A.P. Yushkevich, *Mathematics of the 19th century: Geometry and analytic function theory*; Birkhäuser, 1996.
- A. N. Kolmogorov and A. P. Yushkevich, *Mathematics of the 19th century: Constructive function theory according to Chebyshev, ordinary differential equations, calculus of variations, theory of finite differences*; Birkhäuser, 1998.
- R. Kromer, *Tool and object: a history and philosophy of category theory*, Birkhauser, 2006.
- O. Lehto, *Mathematics without borders: A history of the International Mathematical Union*; Springer-Verlag, 1998.
- J. - P. Marquis, *from a geometrical point of view: a study of the history and philosophy of category theory*, Springer, 2009.
- H. Mehrtens, H. Bos, and I. Schneider (eds.), *Social history of nineteenth-century mathematics*; Birkhäuser, 1981.

- M. Monastyrsky, *Modern mathematics in the light of the Fields medals*; A. K. Peters, 1996.
- P. Odifreddi, *The mathematical century: the 30 greatest problems of the last 100 years*, Princeton Univ. Press, 2004.
- K. H. Parshall and D. E. Rowe, *The emergence of the American mathematical community, 1876-1900: J. J. Sylvester, Felix Klein, and E. H. Moore*; Amer. Math. Society, 1994.
- E. R. Phillips (ed.), *Studies in the history of mathematics*; Math. Assoc. of America, 1987.
- J. - P. Pier, *Mathematical analysis during the twentieth century*, Oxford Univ. Press, 2001.
- J.-P. Pier (ed.), *Development of mathematics, 1900-1950*; Birkhäuser, 1994.
- M. Ronan, *Symmetry and the monster: one of the greatest quests of mathematics*, Oxford Univ. Press, 2006.
- H. Rossi (ed), *Perspectives in mathematics*; Amer. Math. Soc., 1999.
- D. E. Rowe & J. McCleary (eds.), *The history of modern mathematics*, 3 vols.; Academic Press, 1989 & 1994.
- R. Siegmund-Schultze, *Mathematicians fleeing from Nazi Germany: individual fates and global impact*, Princeton Univ. Press, 2009.
- G. Temple, *100 years of mathematics*; Springer-Verlag, 1981.
- I. M. Yaglom, *Felix Klein and Sophus Lie: Evolution of the idea of symmetry in the nineteenth century*; Birkhäuser, 1988.
- B. Yandell, *The honors class: Hilbert's problems and their solvers*; AK Peters, 2001.
- S. Zdravkovska & P. Duren, *Golden years of Moscow mathematics*; Amer. Math. Soc., 1993.

## ***XII. Miscellaneous Topics and Periods :***

- A. Alexander, *Duel at dawn. Heroes, martyrs, and the rise of modern [17<sup>th</sup>-19<sup>th</sup> centuries] mathematics*, Harvard Univ. Press, 2010.
- D. S. Alexander, *A history of complex dynamics: From Schröder to Fatou and Julia*; Viewig, 1994.
- M. Anderson, V. Katz, and R. Wilson (eds), *Sherlock Holmes in Babylon, and other tales of mathematical history*, MAA, 2004.

- M. Anderson, V. Katz, and R. Wilson (eds), *Who gave you the epsilon? and other tales of mathematical history*, MAA, 2009.
- E. Ausejo and M. Hormigón (eds.), *Messengers of mathematics: European mathematical journals (1800-1946)*; Siglo XXI de España Editores, 1993.
- R. G. Ayoub, *Musings of the masters*, MAA, 2004.
- P. Beckmann, *A history of  $\pi$* ; Golem Press, 1970.
- H. Begehr et al (eds.), *Mathematics in Berlin*; Birkhäuser, 1998.
- D. C. Benson, *A smoother pebble. Mathematical explorations*, Oxford Univ. Press, 2003.
- H. Bos, *Lectures in the history of mathematics*; Amer. Math. Soc., 1993.
- U. Bottazzini & A. Dahan Dalmedico (eds), *Changing images in mathematics. From the French revolution to the new millenium*, Routledge, 20011.
- F. Cajori, *A history of mathematical notation*, Dover, 1993 (orig. 1928).
- S. Chikara, S. Mitsuo, and J. Dauben (eds.), *The intersection of history and mathematics*; Birkhäuser, 1994.
- A. W. Crosby, *The measure of reality: Quantification and western society*; Cambridge Univ. Press, 1997.
- J. W. Dauben (ed.), *Mathematical perspectives: Essays on mathematics and its historical development*; Academic Press, 1981.
- J. W. Dauben et al (eds.), *History of mathematics: The states of the art*; Academic Press, 1996.
- W. Dunham, *Journey through genius: The great theorems of mathematics*; Wiley, 1990.
- W. Dunham, *The mathematical universe: An alphabetical journey through the great proofs, problems, and personalities*; Wiley, 1994.
- A. W. F. Edwards, *Cogwheels of the mind. The story of Venn diagrams*, Johns Hopkins Univ. Press, 2004.
- A.W.F. Edwards, *Pascal's arithmetical triangle*; Johns' Hopkins Press, 2002.
- J. Fauvel, R. Flood and R. Wilson (eds), *Mathematics and music: from Pythagoras to fractals*, Oxford Univ. Press, 2003.
- J. Fauvel et al (eds), *Oxford Figures: 800 years of the mathematical sciences*; Oxford Univ. Press, 1999.
- J. V. Field, *The invention of infinity: Mathematics and art in the Renaissance*; Oxford Univ. Press, 1997.

- M. Fitzgerald & I. James, *The mind of the mathematician*, Johns Hopkins Univ. Press, 2007.
- M. J. Gazalé, *Gnomon: From Pharaohs to fractals*; Princeton Univ. Press, 1999.
- L. Garding, *Mathematics and mathematicians: Mathematics in Sweden before 1950*, Amer. Math. Society, 1998.
- D. Gillies (ed), *Revolutions in mathematics*; Oxford Univ. Press, 1992.
- C. Goldstein, J. Gray, and J. Ritter, *Mathematical Europe: History, myths, identity*; Editions de la maison des sciences de l'homme, 1996.
- I. Grattan-Guinness, *Routes of learning. Highways, pathways, and byways in the history of mathematics*, Johns Hopkins Univ. Press, 2009.
- I. Grattan-Guinness, *Landmark writings in western mathematics 1640-1940*, Elsevier, 2005.
- S. Hawking (ed.), *God created the integers: the mathematical breakthroughs that changed history*, Running Press, 2007.
- C. Hay (ed.), *Mathematics from manuscript to print, 1300-1600*; Clarendon Press, 1988.
- H. Hellman, *Great feuds in mathematics: ten of the liveliest disputes ever*, Wiley, 2006.
- L. D. Henderson, *The fourth dimension and non-Euclidean geometry in modern art*; Princeton Univ. Press, 1983.
- R. Herz-Fischler, *The shape of the great pyramid*; Wilfred Laurier Univ. Press, 2000.
- R. Herz-Fischler, *A mathematical history of the golden number*; Dover, 1998.
- H. Hillman, *Great feuds in mathematics: ten of the liveliest disputes ever*, Wiley, 2006.
- J. Høyrup, *In measure, number, and weight: Studies in mathematics and culture*; State Univ. of New York Press, 1994.
- I. James, *Driven to innovate: a century of Jewish mathematicians and physicists*, Peter Lang, 2009.
- M. Kinion & G. V. Brummelen (eds), *mathematics and the historical craft*, Springer, 2005.
- M. Kline, *Mathematics in Western culture*; Oxford Univ. Press, 1953.
- S. Kranz, *An episodic history of mathematics: mathematical culture through problem solving*, MAA, 2010.

- T. Koetsier & L. Bergmans (eds), *Mathematics and the divine: a historical study*, Elsevier, 2004.
- R. Krömer, *Tool and object. A history and philosophy of category theory*, Birkhauser, 2007.
- N. Lehto, *Mathematics without borders: A history of the International Mathematical Union*; Springer-Verlag, 1998.
- M. Livio, *The golden ratio: the story of phi, the world's most astonishing number*, Broadway Books, 2002.
- R. Mankiewicz, *The story of mathematics*; Princeton Univ. Press, 2004.
- E. Maor, *e: the story of a number*, Princeton Univ. Press, 2009.
- E. Maor, *The Pythagorean theorem: a 4000-year history*, Princeton Univ. Press, 2007.
- E. Maor, *Trigonometric delights*; Princeton Univ. Press, 1998.
- C. C. Moore, *mathematics at Berkeley: a history*, A K Peters, 2007.
- P. J. Nahin, *Dr. Euler's fabulous formula [ $e^{\pi i} + 1 = 0$ ] cures many mathematical ills*, Princeton Univ. Press, 2006.
- D. O'shea, *The Poincaré conjecture: in search of the shape of the universe*, Walker, 2007.
- K. H. Parshall and D. E. Rowe, *The emergence of the American mathematical community, 1876-1900: J. J. Sylvester, Felix Klein, and E. H. Moore*; Amer. Math. Society, 1994.
- H. L. Resnikoff and R. O. Wells, *Mathematics in civilization*; Dover, 1984 (orig. 1973).
- E. G. Richards, *Mapping time: The calendar and its history*; Oxford Univ. Press, 1998.
- P. Rose, *The Italian Renaissance of mathematics*; Droz, 1975.
- W. W. Rouse Ball, *A history of the study of mathematics at Cambridge*; Cambridge Univ. Press, 1889.
- W. L. Schaaf (ed.), *Our mathematical heritage*; Collier-Macmillan, 1963.
- M. Schabas, *A world ruled by number: Stanley Jevons and the rise of mathematical economics*; Princeton Univ. Press, 1990.
- A. Shenitzer & J. Stillwell (eds), *Mathematical evolutions*, MAA, 2002.
- G. Shubring, *Conflict between generalization, rigor and intuition: number concepts underlying the development of analysis in 17<sup>th</sup>-19<sup>th</sup> century France and Germany*, Springer, 2005.

J. Siegel (ed.), *Recountings: conversations with MIT mathematicians*, A K Peters, 2009.

R. Siegmund-Schultze, *Mathematicians fleeing from Nazi Germany: individual fates and global impact*, Princeton Univ. Press, 2009.

R. Siegmund-Schultze, *Rockefeller and the internationalization of mathematics between the two world wars*; Birkhäuser, 2001.

E. Sondheim and A. Rogerson, *Numbers and infinity: A historical account of mathematical concepts*; Cambridge University Press, 1981.

B. Szénássy, *History of mathematics in Hungary until the 20<sup>th</sup> century*; Springer-Verlag, 1992.

G. Szpiro, *Poincaré's prize: the hundred-year quest to solve one of math's greatest puzzles*, Dutton, 2007.

G. Van Brummelen & M. Kinyon (eds), *Mathematics and the historian's craft: the Kenneth O. May Lectures*, Springer, 2005.

L. M. Wapner, *The pea and the sun*, A K Peters, 2005.

B. Wardhaugh, *How to read history*, Princeton Univ. Press, 2010.

R. L. Wilder, *Mathematics as a cultural system*; Pergamon Press, 1981.

R. L. Wilder, *Evolution of mathematical concepts: An elementary study*; Wiley, 1968.

R. Wilson, *Stamping through mathematics*; Springer-Verlag, 2001.

#### F. *History and Pedagogy*

M. Ascher and U. D'Ambrosio (eds.), "Ethnomathematics in Mathematics Education"; Special Issue of *For the Learning of Mathematics*, vol. 14, no. 2, 1994.

E. Barbin (ed), *Stories of problems: History of mathematics*; IREM, 1992.

W. P. Berlinghoff & F. Q. Gouvêa, *Math through the ages: a gentle history for teachers and others*, expanded ed., MAA, 2004.

J. Bewersdorff, *Galois theory for beginners: a historical perspective*, AMS, 2006.

L. N. H. Bunt, P. S. Jones, & J. D. Bedient, *The historical roots of elementary mathematics*; Prentice-Hall, 1976.

F. Cajori, *The teaching and history of mathematics in the United States*; Washington, 1890.

R. Calinger (ed.), *Vita mathematica: Historical research and integration with*

teaching; MAA, 1996.

P.J. Davis, R. Hersh, and E. A. Marchisotto, *The mathematical experience*, Study Edition (with Companion Guide); Birkhäuser, 1995 (orig. 1981).

P. Dedron and J. Itard, *Mathematics and mathematicians*, 2 vols.; Transworld Publ., 1974.

W. Dunham, *Euler: The master of us all*; Math. Assoc. of America, 1999.

W. Dunham, *Journey through genius: The great theorems of mathematics*; Wiley, 1990.

M. R. Eagle, *Exploring mathematics through history* [for high schools]; Cambridge Univ. Press, 1995.

H. Eves, *Great moments in mathematics* (a) before 1650, (b) after 1650; Math. Assoc. of America, 1980/1981.

J. Fauvel, *Mathematics education* [annotated guide of 58 items relating to history and pedagogy]; in: Dauben (ed.), *The history of mathematics on CD ROM*, 2000 (see p. 11).

J. Fauvel (ed.), *Open University: Topics in the history of mathematics*; Open Univ. Press (U.K.), 1987.

J. Fauvel (ed.), *History in the mathematics classroom*, the IREM Papers, vol. 1; The Mathematical Association, 1990.

J. Fauvel (ed.), "History in Mathematics Education"; Special issue of *For the Learning of Mathematics*, vol. 11, no. 2, 1991.

J. Fauvel and J. van Maanen (eds), *History in mathematics education: The ICMI study*; Kluwer, 2000.

H. A. Freebury, *A history of mathematics for secondary schools*; Cassell, 1958.

I. Grattan-Guinness (ed.), *History in mathematics education*; Belin, 1983.

M. J. Greenberg, *Euclidean and non-Euclidean geometries: Development and history*; Freeman, 1980.

E. Hairer and G. Wanner, *Analysis by its history*; Springer-Verlag, 1996.

A. Hallerburg (ed.), *Historical topics for the mathematics classroom*; National Council of Teachers of Mathematics, 1989 (orig. 1969).

G. Hanna, *Rigorous proof in mathematics education*; Ontario Institute for Studies in Education (OISE) Press, 1983.

IREM Committee on Epistemology and History of Mathematics: *Towards a historical perspective in the teaching of mathematics*; IREM, ca 1986.

Inter-IREM Commission, *History of mathematics: histories of problems*; Ellipses, 1997.

V. Katz (ed), Using history to teach mathematics: An international perspective; MAA, 2000.

V. Katz & K. D. Michalowicz (eds), Historical modules for the teaching and learning of mathematics (on CD), MAA, 2005.

I. Kleiner, A history of abstract algebra, Birkhauser, 2007.

I. Lakatos, Proofs and refutations: The logic of mathematical discovery; Cambridge Univ. Press, 1976.

R. Laubenbacher and D. Pengelley, Mathematical expeditions; Springer-Verlag, 1999.

Leapfrogs, Five monographs on standard topics in mathematics from a historical point of view (complex numbers, conics, noneuclidean geometry, imaginary logs, rectification); Leapfrogs (England), 1978-81.

N. MacKinnon (ed.), Special issue of *The Mathematical Gazette* (vol. 76, March 1992) on the use of the history of mathematics in teaching the subject.

W. Popp, History of mathematics: Topics for schools; Open Univ. Press, 1978.

A. Renyi, Dialogues on mathematics; Holden-Day, 1967.

A. Renyi, Letters on probability; Wayne State Univ. Press, 1977.

A. Shell-Gellasch (ed), Hands on history: a resource for teaching mathematics, MAA, 2007.

A. Shell-Gellasch & R. Jardine, From calculus to computers: using the last 200 years of mathematical history in the classroom, MAA, 2005.

E. Sondheim and A. Rogerson, Numbers and infinity: A historical account of mathematical concepts; Cambridge Univ. Press, 1981.

S. Stahl, Real analysis: A historical approach; Wiley, 1999.

F. Swetz (ed.), From five fingers to infinity: A journey through the history of mathematics; Open Court, 1994.

F. Swetz et al (eds.), Learn from the masters; MAA, 1995.

O. Toeplitz, The calculus: A genetic approach; Graylock Press, 1965.

N. Y. Vilenkin, In search of infinity (formerly: Stories about sets); Birkhauser, 1995.

**G. *Miscellaneous Topics (Not Necessarily Historical)***

M. Aigner & E. Behrends (eds), Mathematics everywhere. AMS, 2010.



- G. L. Alexanderson & P. Ross (eds), *The harmony of the world; 75 years of Mathematics Magazine*, MAA, 2007.
- C. Alsina & R. B. Nelson, *Charming proofs*, MAA, 2010.
- D. H. Bailey, J. Brown et al, *Experimental mathematics in action*, A K Peters, 2007.
- E.T. Bell, *Mathematics: Queen and servant of science*; Math. Assoc. of America, 1987 (orig. 1951).
- L. Berggren, J. Borwein, and P. Borwein,  *$\pi$ : A source book*, 3<sup>rd</sup> ed., Springer-Verlag, 2004.
- D. Berlinski, *The advent of the algorithm: The idea that rules the world*; Harcourt, 2000.
- E. J. Borowski and J. M. Borwein, *The Harper Collins dictionary of mathematics*; Harper Collins, 1991.
- B. Bunch, *The kingdom of infinite number: A field guide*; Freeman, 2000.
- J. H. Conway and R. K. Guy, *The book of numbers*; Springer-Verlag, 1996.
- J. H. Conway & D. A. Smith, *On quaternions and octonions: their geometry, arithmetics, and symmetry*, A K Peters, 2003.
- R. Courant & H. Robbins, *What is mathematics?*, revised by I. Stewart, Oxford Univ. Press, 1996 (orig. 1941).
- G. P. Curbera, *Mathematicians of the world, unite!: the International Congresses of mathematicians – a human endeavour*, A K Peters, 2009.
- D. M. Davis, *The nature and power of mathematics*; Princeton Univ. Press, 1993.
- P. J. Davis, *Mathematics and common sense: a case of creative tension*, A K Peters, 2006.
- P. J. Davis, R. Hersh, and E. A. Marchisotto, *The mathematical experience, Study Edition (with Companion Guide)*; Birkhäuser, 1995 (orig. 1981).
- P. J. Davis and R. Hersh, *Descartes' dream: The world according to mathematics*; Harcourt Brace Jovanovich, 1986.
- J. De Pillis, *777 mathematical conversation starters*, MAA, 2002.
- K. Devlin, *Mathematics: The new golden age*; Penguin, 1988.
- J. Dieudonné, *Mathematics – the music of reason*; Springer-Verlag, 1992.
- H. Dorrie, *100 great problems of elementary mathematics: Their history and solution*; Dover, 1965 (orig. 1932).
- A. Doxiadis, *Uncle Petros and Goldbach's conjecture*; 2000.

- R. A. Dunlap, *The golden ratio and Fibonacci numbers*; World Scientific Publ., 1997.
- M. Emmer (ed), *Mathematics and culture II*, Springer, 2005.
- H. Eves, *In mathematical circles, etc.*, 6 vols.; Prindle, Weber & Schmidt, 1969-1977.
- J. Fauvel, R. F. Flood, and R. Wilson, *Music and mathematics*, Oxford Univ. Press, 2003.
- J. V. Field, *Piero della Francesca. A mathematician's art*, Yale Univ. Press, 2005 [deals with his study of mathematical perspective].
- S. R. Finch, *mathematical constants*, Cambridge Univ. Press, 2003.
- T. Franzen, *Godel's theorem: an incomplete guide to its use and abuse*, A K Peters, 2005.
- C. C. Gaither and A. E. Cavazos-Gaither, *Mathematically speaking: A dictionary of quotations*; Institute of Physics Publ., 1998.
- T. Gowers, *The Princeton companion to mathematics*, Princeton Univ. Press, 2008.
- T. Gowers, *Mathematics; a very short introduction*, Oxford Univ. Press, 2002.
- J. Gullberg, *Mathematics: From the birth of numbers*; W. W. Norton, 1997.
- P.R. Halmos, *I have a photographic memory*; Amer. Math. Soc., 1987.
- G. H. Hardy, *A mathematician's apology*; Cambridge University Press, 1969.
- J. Havil, *Gamma: Exploring Euler's constant*; Princeton Univ. Press, 2003.
- M. Hazenwinkel (ed.), *Encyclopedia of mathematics*, 10 vols., (transl. of the *Soviet Mathematical Encyclopaedia*); Reidel, 1988-.
- R. Hersh & V. John-Steiner, *Loving and hating mathematics: challenging the myths of mathematical life*, Princeton Univ. Press, 2011.
- P. Hoffman, *Archimedes' revenge*; W.W. Norton, 1988.
- S. Iyanaga and Y. Kawada, *Encyclopaedic dictionary of mathematics*, 2 vols.; M.I.T. Press, 1977.
- K. Jacobs, *Invitation to mathematics*; Princeton Univ. Press, 1992 (German orig. 1987).
- M. Kac, G.-C. Rota, and J. T. Schwartz, *Discrete thoughts: Essays on mathematics, science, and philosophy*; Birkhäuser, 1986.
- M. Kac and S. Ulam, *Mathematics and logic*; Mentor, 1969.

- E. Kasner and J. R. Newman, *Mathematics and the imagination*; Simon & Schuster, 1940.
- S. Kranz, *Mathematical apocrypha redux: more stories and anecdotes of mathematicians and the mathematical*, MAA, 2005.
- S. Kranz, *Mathematical apocrypha*, MAA, 2002.
- I. Lakatos, *Proofs and refutations: The logic of mathematical discovery*; Cambridge Univ. Press, 1976.
- M. Livio, *The equation that couldn't be solved: how mathematical genius discovered the language of symmetry*, Simon & Schuster, 2005.
- S. MacLane, *Mathematics: Form and function*; Springer-Verlag, 1986.
- P. Mancosu, K. Jorgensen, and S. Pedersen (eds), *Visualization, explanation, and reasoning styles of mathematics* (eds), Springer, 2005.
- R.E. Moritz, *On mathematics and mathematicians*; Dover, 1958 (orig. 1914).
- O. O'Shea & U. Dudley, *The magic numbers of the professor*, MAA, 2007.
- I. Peterson, *The mathematical tourist*; Freeman, 1988.
- M. Pitici (ed), *The best writing on mathematics 2010*, Princeton Univ. Press, 2010.
- G. Pólya, *The Pólya picture album: Encounters of a mathematician*; Birkhäuser, 1987.
- A. S. Posamentier & I. Lehman, *The (fabulous) Fibonacci numbers*, Prometheus books, 2007.
- G. Schmaltz, *Out of the mouths of mathematicians: A quotation book for philomaths*; Math. Assoc. of America, 1993.
- D. Ruelle, *The mathematician's brain*, Princeton Univ. Press, 2007.
- S. Schwartzman, *The words of mathematics: An etymological dictionary of mathematical terms used in English*; Math. Assoc. of America, 1994.
- I. Stewart, *Why beauty is truth: a history of symmetry*, Basic books, 2007.
- I. Stewart, *Letters to a young mathematician*, Basic books, 2006.
- I. Stewart, *From here to infinity: A guide to today's mathematics*; Oxford Univ. Press, 1996.
- J. Stillwell, *Yearning for the impossible: the surprising truths of mathematics*, A K Peters, 2006.
- J. Stillwell, *The four pillars of geometry*, Springer, 2005.
- J. Stillwell, *Elements of number theory*; Springer-Verlag, 2003.

G. Szpiro, *A mathematical medley: fifty easy pieces on mathematics*, AMS, 2010.

G. Szpiro, *Poincaré's prize*, Plume, 2008.

H. Walser, *The golden section*; Math. Assoc. of America, 2002.

L. M. Wapner, *The pea and the sun: a mathematical paradox*, A K Peters, 2005.

P. Wiener, *Dictionary of the history of ideas*, 5 vols.; Scribner, 1968.

R. M. Young, *Excursions in calculus: An interplay of the continuous and the discrete*, MAA, 1992.

Israel Kleiner

Updated July 2011