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# Some Resources for the History of Probability and Statistics

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# 1 Books

The classification offered here is very imperfect but may be helpful.

## 1.1 Early probability

[1] Florence Nightingale David. *Games, Gods, and Gambling: The origins and history of probability and statistical ideas from the earliest times to the Newtonian era*. Griffin, London, 1962. Readable and interesting. Includes some historical context. Includes a standard translation of the letters between Fermat and Pascal.

[2] A. W. F. Edwards. *Pascal's Arithmetic Triangle: The Story of a Mathematical Idea*. Johns Hopkins, Baltimore, second edition, 2002.

[3] James Franklin. *The Science of Conjecture: Evidence and Probability before Pascal*. Johns Hopkins, 2001.

[4] Ralph Hexter, Laura Pfuntner, Justin Haynes, translators and editors. *Appendix Ovidiana: Latin Poems Ascribed to Ovid in the Middle Ages*. Includes the original and accompanying translation of the 13th-century Latin poem *De Vetula*, which includes the earliest known correct calculation of the chances for three dice. Harvard University Press, 2020.

[5] Ian Hacking *The Emergence of Probability*. Cambridge University Press, 1975.

[6] Isaac Todhunter (1820–1884). *History of the mathematical theory of probability from the time of Pascal to that of Laplace.* Cambridge and London, Macmillan and Co., 1865. Chronological, reporting concisely on each mathematical contribution. Comprehensive for the period it covers.

## 1.2 Statistics before it was probabilistic

[7] John Koren, editor. *History of Statistics: Their Development and Progress in Many Countries. In Memoirs to Commemorate the Seventy Fifth Anniversary of The American Statistical Association* Published by Macmillan for the ASA. This volume illustrates the absence of probability theory from the official concept of statistics in 1918.

[8] August Meitzen. *History, Theory, and Technique of Statistics. Part First: History of Statistics*. American Academy of Political and Social Science, Philadelphia, 1891. This is a translation of Meitzen's *Geschichte, Theorie, und Technik der Statistik*, published in Berlin in 1886.

[9] Harald Westergaard. *Contributions to the History of Statistics*. King, London, 1932.

## 1.3 Relatively broad-ranging mathematical histories

[10] Jan von Plato. *Creating Modern Probability: Its Mathematics, Physics, and Philosophy in Historical Perspective*. Cambridge University Press, Cambridge, 1994.

[11] Herbert I. Weisberg. *Willful Ignorance: The mismeasure of uncertainty*. Wiley, Hoboken, 2014.

[12] Marie-France Bru and Bernard Bru. *Les jeux de l'infini et du hasard*. Presses universitaires de Franche-Comté, Besançon, France, 2018. Two volumes.

[13] Emanuel Czuber. *Die Entwickung der Wahrscheinlichkeitstheorie und ihrere Anwendungen.* Teubner, Leipzig, 1899. This book was issued as part two of volume 7 of the *Jahresbericht der Deutschen Mathematiker-Vereinigung.* Czuber, a member of the Viennese artistrocracy, was also the author of the most advanced German-language textbooks on probability and statistics in the first decade of the 20th century.

[14] Prakash Gorroochurn. *Classic Topics on the History of Modern Mathematical Statistics: From Laplace to More Recent Times.* Wiley, Hoboken, 2016. Gorrochurn's style is to follow the reasoning of the original sources closely. The coverage extends to developments after World War II, including Robbins's work and the Bayesian revival.

[15] Anders Hald. *A History of Mathematical Statistics from 1750 to 1930.* Wiley, New York, 1998. Very comprehensive and precise.

[16] Anders Hald. *A history of probability and statistics and their applications before 1750.* Wiley, New York, 2003. Again, very comprehensive and precise.

[17] Anders Hald. *A history of parametric statistical inference from Bernoulli to Fisher, 1713–1935.* Wiley, New York, 2007. Perhaps less faithful to the record than Hald's earlier books, insomuch as it projects the 20th-century notion of a parametric model back into earlier times.

[18] Leonid E. Maistrov. *Probability Theory: A Historical Sketch.* Academic Press, New York, 1974. Translated and edited by Samuel Kotz.

[19] Jean-Jacques Samueli and Jean-Claude Boudenot. *Une Histoire des Probabilités des origines à 1900.* Ellipses, Paris, 2009.

[20] Stephen M. Stigler. *The History of Statistics: The Measurement of Uncertainty before 1900.* Harvard University Press, Cambridge, MA, 1986. This book, together with his many articles, has made Stigler the best known historian of statistics among mathematical statisticians. The book begins with the invention of least squares and concludes with the development of multiple regression by Yule. It is written at high level both conceptually, mathematically, and computationally; it sometimes resorts to replicating the classical authors calculations in order to understand what they really did.

## 1.4 Medical statistics and epidemiology

[21] Major Greenwood (1880–1949). *Epidemics and Crowd-Diseases: An Introduction to the Study of Epidemiology.* Macmillan, New York, 1935. Greenwood, who studied with Karl Pearson, was a leader in medical statistics. This introduction to epidemiology is valuable not only for its information about the history of the subject but also for its insights into how epidemiology was understood in the 1930s.

[22] Peter S. Harper. *A Short History of Medical Genetics.* Oxford, 2008.

[23] J. Rosser Matthews *Quantification and the Quest for Medical Certainty* Princeton University Press, 1995.

[24] Theordore Porter. *Genetics in the Madhouse: The Unknown History of Human Genetics.* Princeton, 2018.

### 1.5 Econometrics

[25] R. J. Epstein. *A History of Econometrics.* North-Holland, Amsterdam, 1987.

[26] David F. Hendry and Mary S. Morgan. *The Foundations of Econometric Analysis.* Cambridge, 1995.

[27] Judy L. Klein. *Statistical Visions in Time: A History of Time Series Analysis, 1662–1938.* Cambridge, New York, 2005.

[28] Mary S. Morgan. *The History of Econometric Ideas.* Cambridge, 1990.

### 1.6 Demography, annuities, insurance, finance

[29] David R. Bellhouse. *Leases for Lives: Life Contingent Contracts and the Emergence of Actuarial Science in Eighteenth-Century England.* Cambridge University Press, 2017. As Bellhouse reveals, De Moivre mostly made his living by pricing the life-time leases of land to farmers. Before Bellhouse's research, historians of probability were puzzled by why De Moivre wrote a whole book on the topic of "annuities", because at the time no one was using his probability theory to price annuities.

[30] Geoffrey Poitras. *The Early History of Financial Economics, 1478–1776: From Commercial Arithmetic to Life Annuities and Joint Stocks.* Edward Elgar, 2000.

[31] Edward J. Swan. *Building the Global Market: A 4000 Year History of Derivatives.* Kluwer, The Hague, 2000.

### 1.7 Central limit theorem

[32] William J. Adams. *The Life and Times of the Central Limit Theorem.* American Mathematical Society, Providence, second edition, 2009. Emphasizes the Russian work. Includes a very interesting paper, with discussion, by Lucien Le Cam. More readable but much less comprehensive than Fischer's book on the topic [33].

[33] Hans Fischer. *A History of the Central Limit Theorem from Classical to Modern Probability Theory.* Springer, New York, 2011.

## 1.8 Bayesian statistics

[34] Andrew I. Dale. *A History of Inverse Probability From Thomsas Bayes to Karl Pearson.* Springer, New York, second edition, 1999.

[35] Sharon Bertsch McGrayne. *The Theory that Would Not Die: How Bayes' Rule Cracked the Enigma Code, Hunted Down Russian Submarines & Emerged Triumphant from Two Centuries of Controversy* Yale 2011.

## 1.9 Institutional and social history

[36] Alan Agresti and Xiao-Li Meng, editors. *Strength in Numbers: The Rising of Academic Statistics Departments in the U.S.*. Springer, New York, 2013. Includes an article for each department, usually written by people in the department.

[37] Joshua Cole. *The Power of Large Numbers: Population, Politics, and Gender in Nineteenth-Century France.* Cornell, 2000.

[38] Lorraine Daston. *Classical Probability in the Enlightenment.* Princeton University Press, Princeton, NJ, 1988.

[39] Walter A. Friedman. *Fortune Tellers: The Story of America's First Economic Forecasters.* Princeton, 2014.

[40] Loren Graham and Jean-Michel Kantor. *Naming Infinity: A True Story of Religious Mysticism and Mathematical Creativity.* Belknap, Harvard, Cambridge, London, 2009.

[41] Ian Hacking. *The Taming of Chance.* Cambridge University Press, 1990.

[42] Daniel J. Kevles. *In the Name of Eugenics.* Harvard, 1995. This edition added a preface to the original edition, published in 1985.

[43] Donald A. MacKenzie. *Statistics in Britain 1865–1930.* Edinburgh University Press, Edinburgh, 1981.

[44] Laurent Mazliak and Rossana Tazzioli. *Mathematicians at war: Volterra and his French colleagues in World War I.* Springer, 2009.

[45] Pauline M. H. Mazumdar. *Eugenics, Human Genetics and Human Failings: The Eugenics Society, its Sources and its Critics in Britain.* Routledge, 1992. Places British eugenics, and the Eugenics Society in particular, in the context of the larger middle-class "progressive" movement of its time.

[46] Nell Irvin Painter. *The History of White People.* Norton, 2010.

[47] Jamie L. Pietruska, *Looking Forward: Prediction & Uncertainty in Modern America.* Chicago, 2017.

[48] Theodore Porter. *The Rise of Statistical Thinking, 1820–1900.* Princeton University Press, Princeton, NJ, 1986.

[49] Theodore Porter. *Trust in Numbers.* Princeton, 1995.

[50] Libby Schweder. *Disciplining Statistics: Demography and Vital Statistics in England, 1830–1885.* Duke University Press, Durham & London, 2006.

[51] Reinhard Siegmund-Schultze. *Rockefeller and the Internationalization of Mathematics between the Two World Wars.* Birkhäuser, Basel, 2001.

[52] Reinhard Siegmund-Schultze. *Mathematicians Fleeing from Nazi Germany: Individual Fates and Global Impact.* Princeton University Press, Princeton, 2009.

[53] Ilona Svetlikova. *The Moscow Pythagoreans : mathematics, mysticism, and anti-semitism in Russian symbolism.* Palgrave Macmillan, New York, 2013.

[54] Helen M. Walker. *Studies in the History of Statistical Method.* Wilkins, Baltimore, 1929.

## 1.10 Miscellaneous

[55] Michael Friendly and Howard Wainer. *A History of Data Visualization & Graphic Communication* Harvard, 2021.

[56] Prakash Gorroochurn. *Classic Problems of Probability.* Wiley, Hoboken, 2012.

[57] Jens Høyrup. *Jacopo da Firenze's Tractatus Algorismi and Early Italian Abbacus Culture.* Birkhäuser, 2007.

[58] Othmar Sterzinger. *Zur Logik und Naturphilosophie der Wahrscheinlichkeitslehre: Ein umfassender Lösungsversuch.* Xenien, Leipzig, 1911.

[59] Stephen M. Stigler. *The Seven Pillars of Statistical Wisdom.* Harvard University Press, Cambridge, MA, 2016.

[60] Stephen M. Stigler. *Casanova's Lottery: The History of a Revolutionary Game of Chance.* University of Chicago Press, 2022.

[61] Lam Lay Yong and Ang Tian Se. *Fleeting Footsteps (Revised Edition): Tracing the Conception of Arithmetic and Algebra in Ancient China.* World Scientific, Singapore, 2004.

## 1.11 Biographies

[62] Lluìs Barbé. *Francis Ysidro Edgeworth: A portrait with Family and Friends*. Elgar, Cheltenham, 2010. Trained in the classics, Edgeworth (1845–1926) learned mathematics and economics on his own and became a professor of economics at Oxford. He was studying the philosophy of probability and its applications to statistics when Karl Pearson became engaged in the subject. His contributions were largely eclipsed by the work of Pearson and Fisher. He is especially remembered for introducing the term "significance" into statistical testing.

[63] David R. Bellhouse. *Abraham De Moivre: Setting the Stage for Classical Probability and Its Applications*. CRC Press, 2011. De Moivre was a religious refugee in England, a friend and ally of Newton who was regarded as the best mathematician in England after Newton's death. His 1718 book "The Doctrine of Chances", really a book at the probabilities in different games of chance, was the standard reference for probability theory internationally for a century. An early biographer was critical of his personality, but Bellhouse has largely restored his positive reputation.

[64] George E. P. Box. *An Accidental Statistician: The Life and Memories of George E. P. Box*. Wiley, 2013. A light-hearted autobiography.

[65] Andrew I. Dale and Samuel Kotz. Arthur L. Bowley. A Pioneer in Modern Statistics and Economics. World Scientific Publishing, 2011. Bowley (1869–1957) was professor economics at the London School of Economics. He gradually learned probabilistic methods from Edgeworth and incorporated them into his textbooks on statistics.

[66] Joan Box Fisher. *R.A. Fisher: The Life of a Scientist*. Wiley, 1978. Biography of Fisher by one of his daughters, defending his stature as a scientist while struggling with his treatment of her mother.

[67] Maria Carla Galavotti, editor. *Bruno de Finetti, Radical Probabilist*. College Publications, 2009.

[68] Christopher C. Heyde and Eugene Seneta. *I. J. Bienaymé: Statistical theory anticipated*. Springer, New York, 1977. In the estimation of the authors, Irénée-Jules Bienaymé (1796–1878) was the most accomplished mathematical statistician of his time. He worked, however, at a time when the use of probability in statistics was falling out of favor.

[69] Christopher C. Heyde and Eugene Seneta. *Statisticians of the Centuries*. Springer, 2001. Brief profiles of 103 individuals.

[70] David Howie. *Interpreting Probability: Controversies and Developments in the Early Twentieth Century*. Cambridge, 2002. This book chronicles the friendly debates between the geophysicist Harold Jeffreys, known to statisticians for his advocacy of Bayesian inference with uninformative priors, and

the very influential mathematical statistician R. A. Fisher, who disdained Bayesian statistical methods. Although Fisher was a sharp polemicist, he was always friendly with Jeffreys, whom he respected as a fellow scientist.

[71] Steffen L. Lauritzen. *Thiele. Pioneer in Statistics*. Oxford University Press, Oxford, 2002.

[72] Erich L. Lehmann. *Fisher, Neyman, and the Creation of Classical Statistics*. Springer, New York, 2011.

[73] Michael Lewis. *The Undoing Project: A Friendship That Changed Our Minds*. Concerns the friendship and the scholarship of Amos Tversky and Daniel Kahneman. Norton, New York, 2017.

[74] E. S. Pearson, primary author. *'Student': A Statistical Biography of William Sealy Gosset*. Oxford, 1990.

[75] Karl Pearson. *The life, letters, and labours of Francis Galton. Volume IIIa, correlation, personal identification, and eugenics*. Cambridge, 1930. Of particular interest is the section entitled, "Eugenics as religious faith", beginning on p. 89. Here Pearson quotes passage from a note written by Galton, in which Galton discusses how far a "fanatic" supporter of eugenics might be willing to go.

[76] Theodore Porter. *Karl Pearson: The Scientific Life in a Statistical Age*. Princeton University Press, Princeton, NJ, 2004.

[77] Constance Reid. *Neyman*. Springer, New York, 1998.

[78] Oscar Sheynin. *Aleksandr A. Chuprov: Life, Work, Correspondence. The making of mathematical statistics*. V&R unipress, Goettingen, 2011. Second revised edition, edited by Heinrich Strecker. The first edition appeared in 1996.

## 1.12 Correspondence

[79] Marc Barbut, Bernard Locker, and Laurent Mazliak. *Paul Lévy and Maurice Fréchet, 50 Years of Correspondence in 107 letters*. Springer, London, 2014. Translation from the French edition, published in 2004 by Hermann in Paris. Lévy was an important contributor to mathematical probability from the 1920s through the 1950s. Fréchet had contributed in the 1910s and the 1920s to the functional analysis that led to Kolmogorov's axioms, and he later worked on mathematical statistics. Their letters, along with a comprehensive introduction by the editors, tell us about the development of probability theory in France from the 1930s to the 1960s.

[80] J. H. Bennett. *Statistical Inference and Analysis: Selected Correspondence of R. A. Fisher*. Clarendon Press, Oxford, 1990.

[81] Roger Hahn, ed. *Correspondance de Pierre Simon Laplace (1749–1827).* Brepols, Turnhout, 2013, 2 volumes

[82] Kh. O. Ondar, editor. *The Correspondence Between A. A. Markov and A. A. Chuprov on the Theory of Probability and Mathematical Statistics.* Springer, New York, 1981.

## 1.13 Some books with historical notes

[83] Vladimir Bugachev *Measure Theory.* Springer, 2007. This very dense and very mathematical two-volume book is loaded with historical notes, covering the mathematical work on measure theory almost comprehensively. Not for the faint of heart.

[84] Michael Cowles. *Statistics in Psychology: An Historical Perspective.* Routledge, New York, 2016. Emphasizes the roles of R. A. Fisher and Jerzy Neyman.

[85] Stewart N. Ethier. *The Doctrine of Chances: Probabilistic Aspects of Gambling.* Springer, New York, 2010. Begins as a textbook on stochastic processes in discrete time, without measure theory, and then turns to particular games of chance. The title deliberately evokes De Moivre's classic, which was also mainly about particular games of chance.

[86] Glenn Shafer and Vladimir Vovk. *Probability and Finance: It's Only a Game!* Wiley, 2001

[87] Glenn Shafer and Vladimir Vovk. *Game-Theoretic Foundations for Probability and Finance* Wiley, 2019

## 1.14 Some randomly selected original works

[88] Jacob Bernoulli. *The Art of Conjecturing, together with Letter to a Friend on Sets in Court Tennis.* Johns Hopkins University Press, Baltimore, 2006. Edith Sylla's Translation of Bernoulli's *Ars Conjectandi*, published in Latin in 1713. This translation was long overdue. The book includes Bernoulli's proof of the law of large numbers, considered the beginning of mathematical statistics.

[89] Julian Lowell Coolidge. *An Introduction to Mathematical Probability*, Constable, London, 1924.

[90] Thomas Galloway. *Treatise on Probability.* Black, Edinburgh, 1839.

[91] Jules Gavarret. *Principes généraux de statistique médicale, ou développement des règles qui doivent présider à son emploi.* Bechet, Paris, 1840.

[92] Andrei Nikolaevich Kolmogorov. *Foundations of the Theory of Probability.* Second edition of an English translation of *Grundbegriffe der Wahrscheinlichkeitsrechnung*, published in 1933. Chelsea, New York, 1956.

[93] John Venn. *The Logic of Chance. An Essay on the Foundations and Province of the Theory of Probability, with Especial Reference to its Applications to Moral and Social Science.* Macmillan and Co., London & Cambridge, 1866. The third edition, published in 1888, is available at `http://www.gutenberg.org/ebooks/57359`.

# 2 Articles

## 2.1 Collections of articles

[1] Gerd Gigerenzer, Zeno Swijtink, Theodore Porter, Lorraine Daston, John Beatty, and Lorenz Krüger. *The Empire of Chance: How probability changed science and everyday life.* Cambridge, 1989.

[2] Lorenz Krüger, Lorraine J. Daston, and Michael Heidelberger, editors. *The Probabilistic Revolution. Volume 1: Ideas in History.* MIT Press, Cambridge, 1987.

[3] Lorenz Krüger, Gerd Gigerenzer, and Mary S. Morgan, editors. *The Probabilistic Revolution. Volume 2: Ideas in the Sciences.* MIT Press, Cambridge, 1987.

[4] Henry E. Kyburg Jr. and Howard E. Smokler, editors. *Studies in Subjective Probability.* Wiley, New York, 1964. A second edition, with a slightly different selection of readings, was published by Krieger, New York, in 1980.

[5] Laurent Mazliak and Glenn Shafer, editors. *The Splendors and Miseries of Martingales: Their History from the Casino to Mathematics.* Birkhäuser, 2022.

[6] Owen, D. B. editor. *On the History of Statistics and Probability.* Dekker, 1976.

[7] E. S. Pearson and M. G. Kendall, editors. *Studies in the history of statistics and probability : a series of papers.* Two volumes. C. Griffin, London, 1970, 1978.

[8] Stephen M. Stigler. *Statistics on the Table: The History of Statistical Concepts and Methods.* Harvard University Press, Cambridge, MA, 1999.

[9] Sandy L. Zabell. *Symmetry and its Discontents.* Cambridge, Cambridge, 2005.

## 2.2 A few randomly selected articles

[10] K. Alexander Brownlee. Statistics of the 1954 polio vaccine trials. *Journal of the American Statistical Association.* 50(272):1005–1013, 1955.

[11] John N. Crossley and Alan S. Henry. Thus Spake al-Khwarizmi: A Translation of the Text of Cambridge University Library Ms. Ii.vi.5. *Historia Mathematica.* 17, 103–131, 1990.

[12] A. W. F. Edwards. Pascal and the problem of points. *International Statistical Review*, 50:259–266, 1982. Reprinted on pp. 144–156 of [2].

[13] Paul Meier. Safety testing of poliomyelitis vaccine. *Science* 125(3, 257):1067–1071, 1957.

[14] Stephen M. Stigler. Thomas Bayes's Bayesian Inference. *Journal of the Royal Statistical Society, Series A.* 145:250–258, 1982.

[15] P. D. Stolley. When genius errs: R.A. Fisher and the lung cancer controversy. *Am J Epidemiol.* 1991, March 1, 133(5):416–25; discussion 426–8.

## 2.3 My own historical articles

1. Non-additive probabilities in the work of Bernoulli and Lambert. *Archive for History of Exact Sciences* 19:309–370, 1978

2. Bayes's two arguments for the rule of conditioning. *Annals of Statistics* 10:1075–1089, 1982

3. The Bernoullis. *Encyclopedia of Statistical Sciences* 1:214–219. S. Kotz and N. L. Johnson, eds., Wiley, 1982

4. Johann Heinrich Lambert. *Encyclopedia of Statistical Sciences* 4:466–468. S. Kotz and N.L. Johnson, eds., Wiley, 1985

5. Moral certainty. *Encyclopedia of Statistical Sciences* 5:623–624. S. Kotz and N. L. Johnson, eds., Wiley, 1985

6. The combination of evidence. *International Journal of Intelligent Systems* 1:155–179, 1986

7. Saint Petersburg paradox. *Encyclopedia of Statistical Sciences* 8:865–870. S. Kotz and N. L. Johnson, eds., Wiley, 1988

8. The early development of mathematical probability. Pp. 1293–1302 of *Companion Encyclopedia of the History and Philosophy of the Mathematical Sciences*, edited by I. Grattan-Guinness. Routledge, London, 1993

9. The significance of Jacob Bernoulli's *Ars Conjectandi* for the philosophy of probability today. *Journal of Econometrics* 75:15–32, 1996

10. Kolmogorov's contributions to the foundations of probability (with Vladimir Vovk). *Problems of Information Transmission* 39:21–31, 2003

11. The sources of Kolmogorov's *Grundbegriffe* (with Vladimir Vovk). *Statistical Science* 21(1):70–98, 2006. Unabridged version: The origins and legacy of Kolmogorov's *Grundbegriffe*

12. From Cournot's principle to market efficiency. Pp. 55–95 of *Augustin Cournot: Modelling Economics*, edited by Jean-Philippe Touffut and published by Edward Elgar, 2007

13. The education of Jean André Ville, *Electronic Journal for History of Probability and Statistics* 5(2), June 2009

14. On the history of martingales in the study of randomness (with Laurent Bienvenu and Alexander Shen) *Electronic Journal for History of Probability and Statistics* 5(2), June 2009

15. What does the arrest and release of Emile Borel and his colleagues in 1941 tell us about the German Occupation of France? (with Laurent Mazliak). *Science in Context* 24:587–623, 2011. Related documents.

16. When to call a variable random. Working Paper 41, `www.probabilityandfinance.com`, 2015

17. Cournot in English. Working Paper 48, `www.probabilityandfinance.com`, 2018

18. Marie-France Bru and Bernard Bru on dice games and contracts. *Statistical Science* 33(2):277–284, 2018

19. Pascal's and Huygens's game-theoretic foundations for probability. *Sartoniana* 32:117–145, 2019

20. On the History and Limitations of Probability Updating. *Statistical Science* 36(2):191–195, 2021

21. On the nineteenth-century origins of significance testing and p-hacking. Working Paper 55, `www.probabilityandfinance.com`, 2022

22. "So much data. Who needs probability?" Have we been here before?. *International Journal of Approximate Reasoning* 141:183–189, 2022

23. Martingales at the casino. In [5], 2022

24. Did Jean Ville invent martingales? In [5], 2022

25. "That's what all the old guys said": The many faces of Cournot's principle. Working Paper 60, `www.probabilityandfinance.com`, 2022

# 3 Internet resources

*Electronic Journal for History of Probability and Statistics.* This open-access journal published 9 volumes from 2005 to 2013. It also included a very valuable compilation, by John Aldrich, of articles on the history of probability and statistics in other journals during this period. `www.jehps.net`

*The James Lind Library: Illustrating the development of fair tests of treatments in health care.* This is a wonderful resource for exploring the history of medical statistics.

Michael Friendly's website `DataVis.ca`, devoted to the history of data visualization, is a marvelous complement to his recent book with Howard Wainer [55].

*Project Euclid.* This site provides open access to older issues of many but not all journals in mathematics and statistics. `https://projecteuclid.org/browse`

Personal website for John Aldrich (Southampton). Aldrich's work has emphasized British statisticians, including Harold Jeffreys, Karl Pearson, and R. A. Fisher. `http://www.economics.soton.ac.uk/staff/aldrich/aldrich.htm`.

Personal website for Oscar Sheynin (Berlin). The most prolific author on the history of probability, Sheynin has posted many of his translations and studies on his website, which is mirrored with his permission at `http://probabilityandfinance.com/sheynin.html`.

Personal website for Prakash Gorroochurn (New York). Gorroochurn currently one of the most active historians of statistics. `http://www.columbia.edu/~pg2113/#_PUBLICATIONS_2`.

Materials for the History of Statistics, maintained by Peter M. Lee (York) `http://www.york.ac.uk/depts/maths/histstat/`.

Sources in the History of Probability and Statistics, by Richard J. Pulskamp (Xavier). Includes many translations. Archived at `http://probabilityandfinance.com/pulskamp/index.html`

MacTutor History of Mathematics Archive `http://www-history.mcs.st-and.ac.uk/`. Very extensive and useful biographies of mathematicians. Like the articles in Wikipedia, these biographies should be considered less reliable than articles in peer-reviewed journals.

Mathematics Genealogy Project `http://www.genealogy.math.ndsu.nodak.edu/index.php`. **NOT RECOMMENDED FOR HISTORICAL WORK!** This huge database does not distinguish the different senses in which individuals were advisors. It calls all doctoral degrees "Ph.D."s.

See John Aldrich's comments at http://www.economics.soton.ac.uk/staff/aldrich/PhD.htm.

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Haiti Books https://www.hathitrust.org/ Available through university libaries. Their pdfs are usually searchable.

Open Library https://openlibrary.org/. Often easier to use than Google Books or Haithi Trust.

Project Gutenberg https://www.gutenberg.org/

Gallica www.gallica.bnf.fr. French National Library.

All-Russian Mathematical Portal http://www.mathnet.ru.

The European Digital Mathematics Library https://eudml.org.

Digizeitschriften http://www.digizeitschriften.de. German academic journals.

Nundam http://www.numdam.org. French mathematics journals.

The National Library of Medicine has a good search engine for articles and other material in their domain.

Google Scholar, especially its advanced search, is an excellent search engine for scholarly articles. It tries to list all the articles that have cited a given article.

JSTOR, available through most university libraries, offers some functionality not available in Google Scholar: you can narrow your search to journals in statistics or some other field and order hits by date.