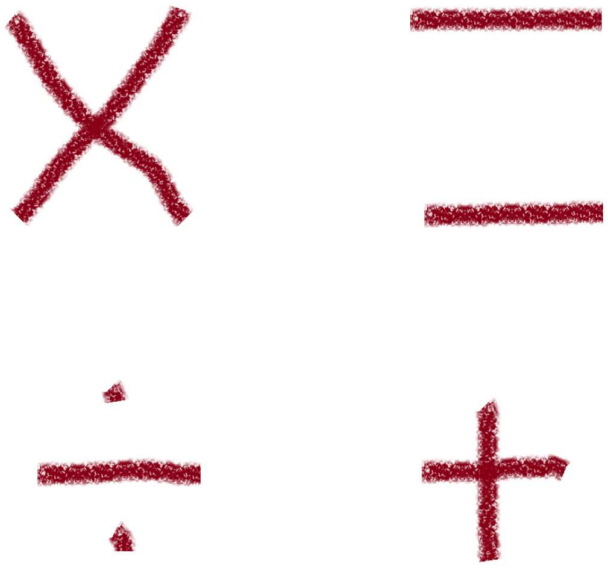
Catalogue 282

# *HISTORY OF MATHEMATICS*

*Including selections from the library of*

*Jürgen Ritter*



JEFF WEBER RARE BOOKS

MONTREUX SWITZERLAND

ARCHIMEDES
Thomas SIMPSON
Daniel BERNOULLI
Etienne BEZOUT
Charles BOSSUT
Franz Friedrich Wilhelm BESSEL
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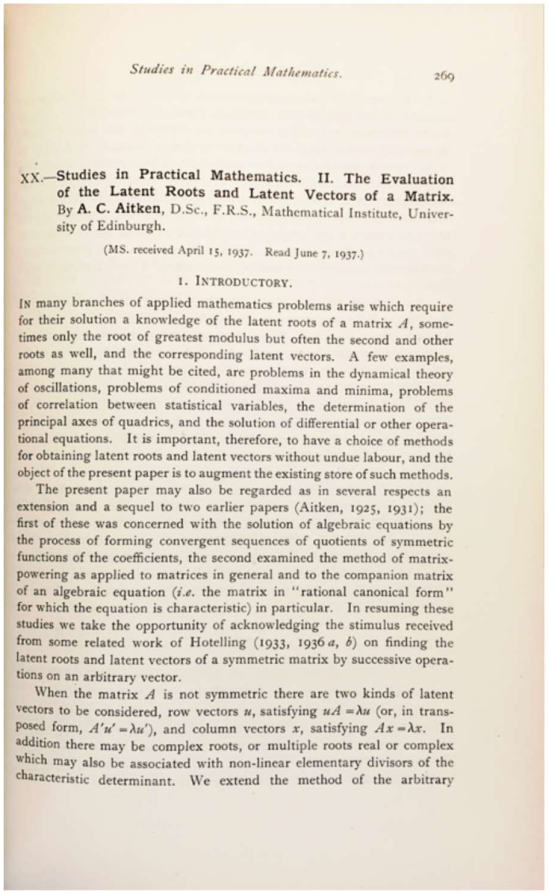


*Studies in Practical Mathematics.* 269

XX.—**Studies in Practical Mathematics. II. The Evaluation of the Latent Roots and Latent Vectors of a Matrix.** By **A. C. Aitken**, D.Sc., F.R.S., Mathematical Institute, University of Edinburgh.

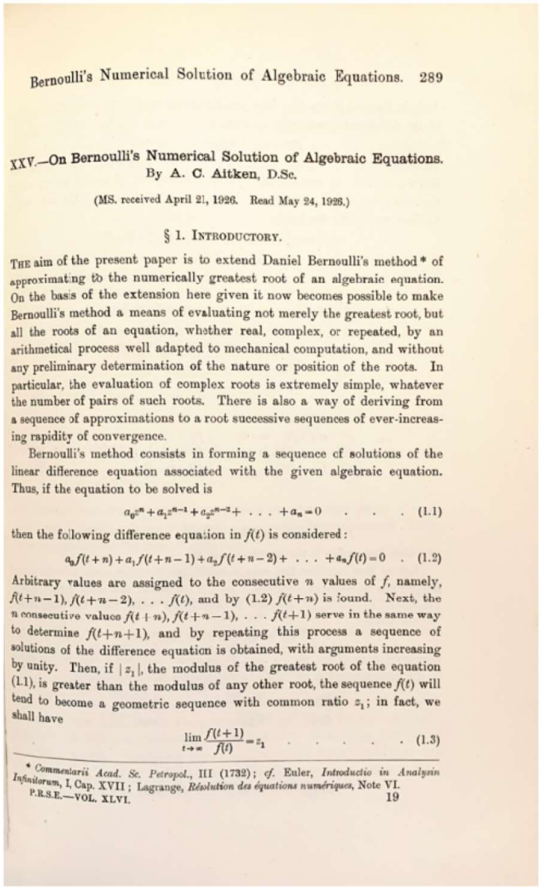
(MS. received April 15, 1937. Read June 7, 1937.)

1. INTRODUCTORY.

IN many branches of applied mathematics problems arise which require for their solution a knowledge of the latent roots of a matrix $A$, sometimes only the root of greatest modulus but often the second and other roots as well, and the corresponding latent vectors. A few examples, among many that might be cited, are problems in the dynamical theory of oscillations, problems of conditioned maxima and minima, problems of correlation between statistical variables, the determination of the principal axes of quadrics, and the solution of differential or other operational equations. It is important, therefore, to have a choice of methods for obtaining latent roots and latent vectors without undue labour, and the object of the present paper is to augment the existing store of such methods.

The present paper may also be regarded as in several respects an extension and a sequel to two earlier papers (Aitken, 1925, 1931); the first of these was concerned with the solution of algebraic equations by the process of forming convergent sequences of quotients of symmetric functions of the coefficients, the second examined the method of matrix-powering as applied to matrices in general and to the companion matrix of an algebraic equation (*i.e.* the matrix in "rational canonical form" for which the equation is characteristic) in particular. In resuming these studies we take the opportunity of acknowledging the stimulus received from some related work of Hotelling (1933, 1936 *a*, *b*) on finding the latent roots and latent vectors of a symmetric matrix by successive operations on an arbitrary vector.

When the matrix $A$ is not symmetric there are two kinds of latent vectors to be considered, row vectors $u$, satisfying $uA = \lambda u$ (or, in transposed form, $A'u' = \lambda u'$), and column vectors $x$, satisfying $Ax = \lambda x$. In addition there may be complex roots, or multiple roots real or complex which may also be associated with non-linear elementary divisors of the characteristic determinant. We extend the method of the arbitrary



Bernoulli's Numerical Solution of Algebraic Equations. 289

XXV.—**On Bernoulli's Numerical Solution of Algebraic Equations.** By **A. C. Aitken**, D.Sc.

(MS. received April 21, 1926. Read May 24, 1926.)

§ 1. INTRODUCTORY.

THE aim of the present paper is to extend Daniel Bernoulli's method * of approximating to the numerically greatest root of an algebraic equation. On the basis of the extension here given it now becomes possible to make Bernoulli's method a means of evaluating not merely the greatest root, but all the roots of an equation, whether real, complex, or repeated, by an arithmetical process well adapted to mechanical computation, and without any preliminary determination of the nature or position of the roots. In particular, the evaluation of complex roots is extremely simple, whatever the number of pairs of such roots. There is also a way of deriving from a sequence of approximations to a root successive sequences of ever-increasing rapidity of convergence.

Bernoulli's method consists in forming a sequence of solutions of the linear difference equation associated with the given algebraic equation. Thus, if the equation to be solved is

$$a_0 x^n + a_1 x^{n-1} + a_2 x^{n-2} + \ldots + a_n = 0 \quad . \quad . \quad . \quad (1.1)$$

then the following difference equation in $f(t)$ is considered:

$$a_0 f(t+n) + a_1 f(t+n-1) + a_2 f(t+n-2) + \ldots + a_n f(t) = 0 \quad . \quad (1.2)$$

Arbitrary values are assigned to the consecutive $n$ values of $f$, namely, $f(t+n-1)$, $f(t+n-2)$, . . . $f(t)$, and by (1.2) $f(t+n)$ is found. Next, the $n$ consecutive values $f(t+n)$, $f(t+n-1)$, . . . $f(t+1)$ serve in the same way to determine $f(t+n+1)$, and by repeating this process a sequence of solutions of the difference equation is obtained, with arguments increasing by unity. Then, if $|z_1|$, the modulus of the greatest root of the equation (1.1), is greater than the modulus of any other root, the sequence $f(t)$ will tend to become a geometric sequence with common ratio $z_1$; in fact, we shall have

$$\lim_{t\to\infty} \frac{f(t+1)}{f(t)} = z_1 \quad . \quad . \quad . \quad . \quad . \quad . \quad (1.3)$$

* *Commentarii Acad. Sc. Petropol.*, III (1732); *cf.* Euler, *Introductio in Analysin Infinitorum*, I, Cap. XVII; Lagrange, *Résolution des équations numériques*, Note VI.

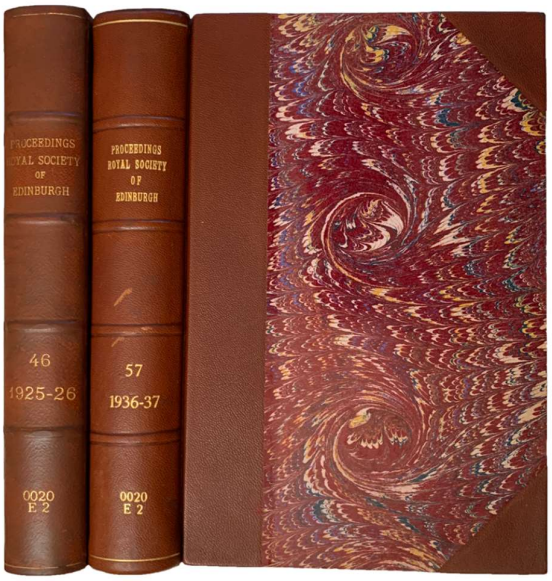
P.R.S.E.—VOL. XLVI. 19

1. **AITKEN, A. C.** [**Alexander Craig**] (1895-1967). "*On Bernoulli's numerical solution of algebraic equations.*" with: "*On the theory of graduation.*" with: "*Studies in practical mathematics. I. The evaluation, with applications, of a certain triple product matrix." with: "Studies in practical mathematics. II. The evaluation of the latent roots and latent vectors of a matrix*." In: *Proceedings of the Royal Society of Edinburgh*, Vol. XLVI, 1925-1926; Vol. LVII, 1936-1937. Edinburgh: Neill, 1927, 1938. ¶ Two volumes. 8vo. Pages 289-305; 36-45; 172-181; 269-304. [Entire volume: viii, 458; vii, 520 pp.] A few figs. and tables. Quarter brown morocco, morocco corners, marbled sides, raised bands, gilt spine. Blind stamp of the Carnegie Institution of Washington, Mount Wilson Observatory. Fine. [S6715]

$ 125

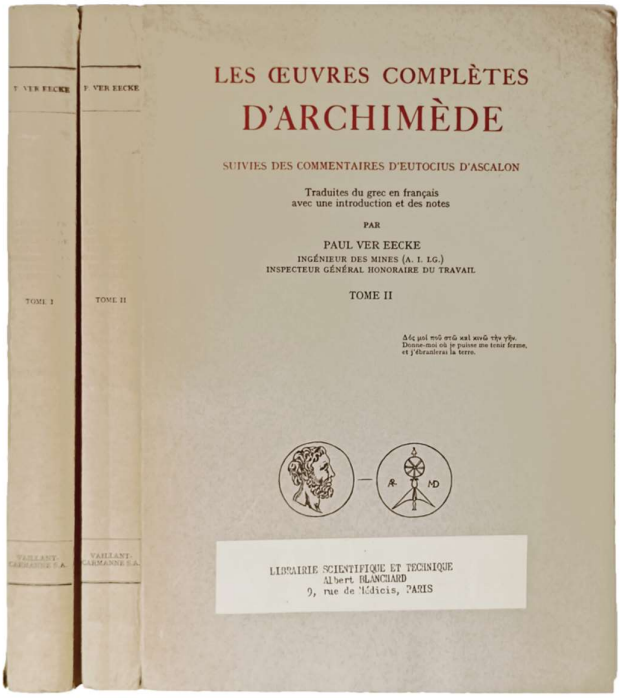
FIRST PRINTINGS.

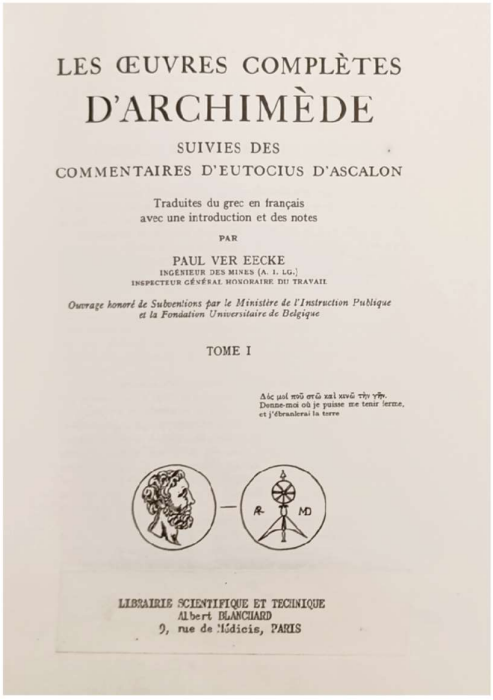
“The aim of the present paper is to extend Daniel Bernoulli's method of approximating to the numerically greatest root of an algebraic equation. On the basis of the extension here given it now becomes possible to make Bernoulli's method a means of evaluating not merely the greatest root, but all the roots of an equation, whether real, complex, or repeated, by an arithmetical process well adapted to mechanical computation, and without any preliminary determination of the nature or position of the roots. In particular, the evaluation of complex roots is extremely simple, whatever the number of pairs of such roots. There is also a way of deriving from a sequence of approximations to a root successive sequences of ever-increasing rapidity of convergence.” – Cambridge Univ. Press.




A. C. Aitken, of the Mathematical Institute, University of Edinburgh, made important contributions in the field of numerical analysis, powerful methods for the solution of general mathematical problems in numerical terms. These methods, in turn, provided the logical basis for modern computers. A practical method for finding a numerical value of f(x), for a given value of x, when several values of x and f(x) are known, as Aitken's process of iteration. These methods are well adapted to computing machinery. It consists of an iteration of the familiar process of linear interpolation. These and other methods, such as that in Aitken's paper on Bernoulli's method for solving algebraic equations, are offered here. Engineering Research Associates, High-speed computing devices, pp. 108-109; Fox, "Early numerical analysis in the United Kingdom," in Nash, A history of scientific computing, p. 284; Hartree, Numerical analysis, pp. 84 & 280.

Alexander Craig "Alec" Aitken FRS FRSE FRSL FRSNZ (1 April 1895 – 3 November 1967) was one of New Zealand's most eminent mathematicians.



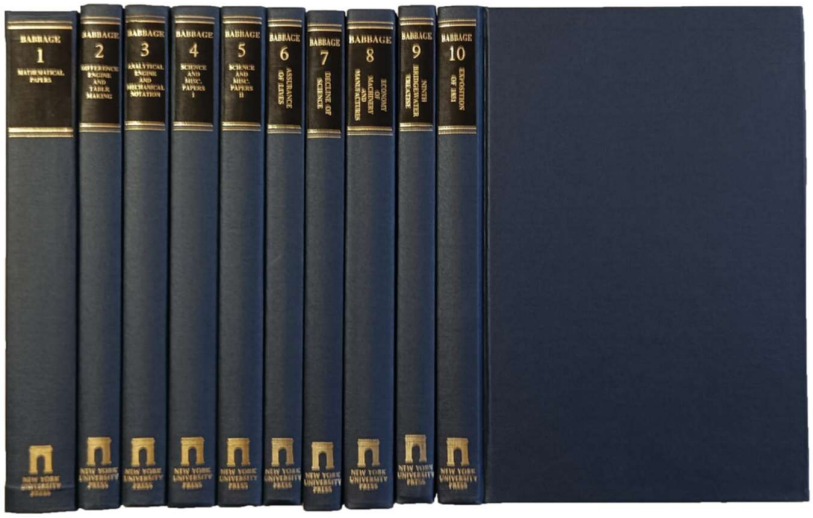



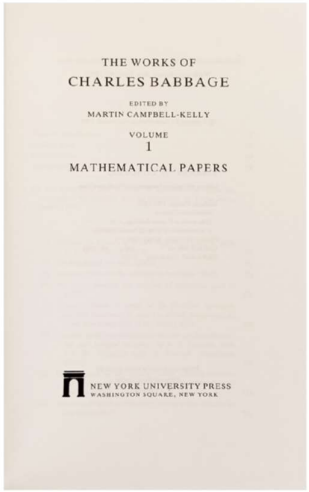

2. **ARCHIMEDES** (ca. 287-212 B.C.); **Paul Ver EECKE** (1867-1959). *Oeuvres complètes d'Archimède; suivies des commentaires d'Eutocius d'Ascalon. Traduites du grec en français avec une introduction et des notes par Paul Ver Eecke*. Paris: Librairie Scientifique et Technique Albert Blanchard, (1960). ¶ Second edition. Two volumes. 4to. lix, [1], 374 (+374 a-c); (375)-763 [1] pp. Frontispieces, numerous diagrams, index. Original printed wrappers. Very good+. Scarce. S10223

$ 185

The collected works of Archimedes as edited by Paul Ver Eecke, himself a historian of Greek mathematics.

In 1960, the year of his death, another reissue of the *Oeuvres complètes d'Archimède* appeared, supplemented by a translation of Askalon's *Commentaires of Eutocius*. Ver Eecke very faithfully followed the Greek text; mathematical clarifications were made in the footnotes.



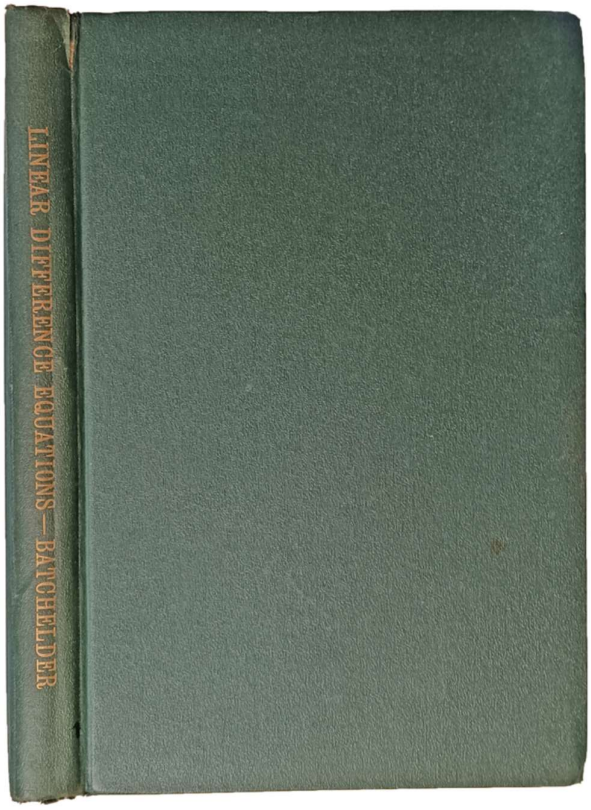


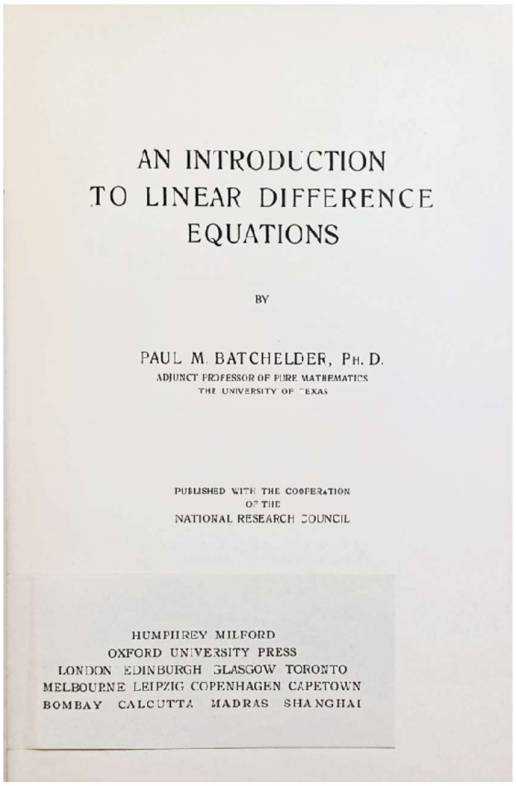

3. **BABBAGE, Charles** (1791-1871). *The Works of Charles Babbage. Edited by Martin Campbell-Kelly.* New York: New York University Press, 1989. ¶ Eleven volumes. 8vo. Figs., index. Full gilt stamped blue cloth. FINE. [S7159]

$ 700

The complete works of this pioneer mathematician and statistician. Babbage is the father of the modern computer, and worked tirelessly on advancing machinery to reduce human involvement. This comprehensive and attractive set includes all of his most celebrated papers on early calculating machines as well as many others that display the breadth of his talent and interests. *DSB.*

Martin Campbell-Kelly is an Emeritus Professor at the University of Warwick who has specialized in the history of computing. His books include "Computer: A History of the Information Machine," co-authored with William Aspray, "From Airline Reservations to Sonic the Hedgehog: A History of the Software Industry," and "ICL: A Business and Technical History." He is editor of the Collected Works of Charles Babbage. Professor Campbell-Kelly is a Fellow of the British Computer Society, visiting professor at Portsmouth University, and a columnist for the Communications of the ACM. He is a member of the ACM History Committee, a council member of the British Society for the History of Mathematics, and a committee member of the BCS Computer Conservation Society. He is a member of the editorial boards of the IEEE Annals of the History of Computing, the International Journal for the History of Engineering and Technology, the Rutherford Journal, and editor-in-chief of the Springer Series in the History of Computing.





AN INTRODUCTION
TO LINEAR DIFFERENCE
EQUATIONS

BY

PAUL M. BATCHELDER, PH. D.
ADJUNCT PROFESSOR OF PURE MATHEMATICS
THE UNIVERSITY OF TEXAS

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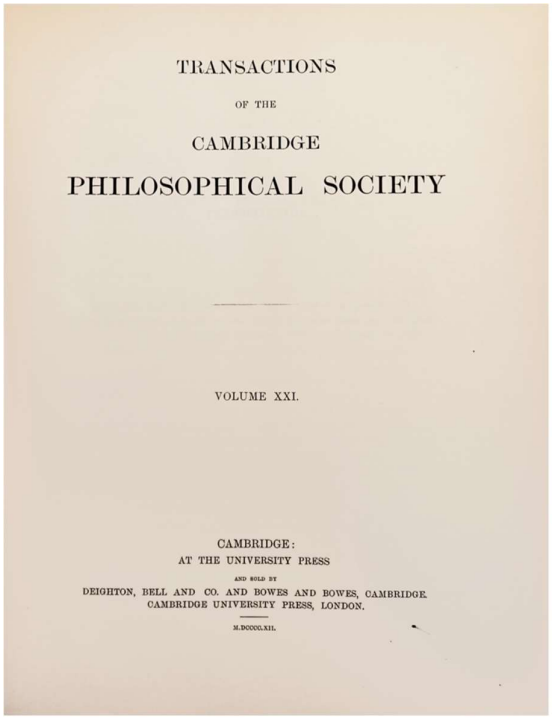
BOMBAY CALCUTTA MADRAS SHANGHAI

4. **BATCHELDER, Paul M.** (1886-1971). *An introduction to linear difference equations.* Cambridge: Harvard University Press, 1927. ¶ 8vo. vii, 209 pp. 29 figs.; top corners crushed, affecting corners of pages. Original green cloth; 1 inch tear at hinge top. Good. [S1200] $ 20

FIRST EDITION. A work on differential equations based on Poincare's theorems.

Paul Mason Batchelder was a professor of mathematics at the University of Texas at Austin. His mathematical interests included difference equations, number theory, and astronomy.



TRANSACTIONS

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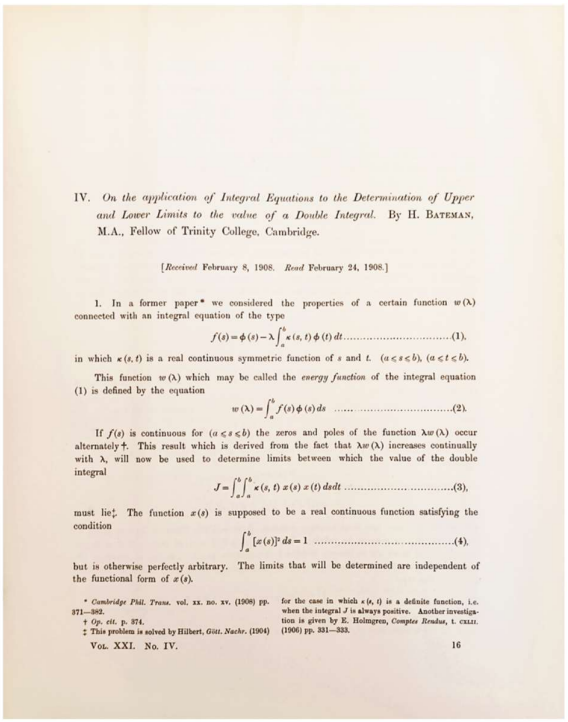


IV. *On the application of Integral Equations to the Determination of Upper and Lower Limits to the value of a Double Integral.* By H. BATEMAN, M.A., Fellow of Trinity College, Cambridge.

[*Received* February 8, 1908. *Read* February 24, 1908.]

1. In a former paper* we considered the properties of a certain function $w(\lambda)$ connected with an integral equation of the type

$$f(s) = \phi(s) - \lambda \int_a^b \kappa(s,t)\,\phi(t)\,dt \quad \ldots\ldots (1),$$

in which $\kappa(s,t)$ is a real continuous symmetric function of $s$ and $t$. $(a \leqslant s \leqslant b)$, $(a \leqslant t \leqslant b)$.

This function $w(\lambda)$ which may be called the *energy function* of the integral equation (1) is defined by the equation

$$w(\lambda) = \int_a^b f(s)\,\phi(s)\,ds \quad \ldots\ldots (2).$$

If $f(s)$ is continuous for $(a \leqslant s \leqslant b)$ the zeros and poles of the function $\lambda w(\lambda)$ occur alternately †. This result which is derived from the fact that $\lambda w(\lambda)$ increases continually with $\lambda$, will now be used to determine limits between which the value of the double integral

$$J = \int_a^b \int_a^b \kappa(s,t)\,x(s)\,x(t)\,ds dt \quad \ldots\ldots (3),$$

must lie‡. The function $x(s)$ is supposed to be a real continuous function satisfying the condition

$$\int_a^b [x(s)]^2\,ds = 1 \quad \ldots\ldots (4),$$

but is otherwise perfectly arbitrary. The limits that will be determined are independent of the functional form of $x(s)$.

* *Cambridge Phil. Trans.* vol. XX. no. XV. (1908) pp. 371—392.
† *Op. cit.* p. 374.
‡ This problem is solved by Hilbert, *Gött. Nachr.* (1904) for the case in which $\kappa(s,t)$ is a definite function, i.e. when the integral $J$ is always positive. Another investigation is given by E. Holmgren, *Comptes Rendus*, t. CXLII. (1906) pp. 331—333.



5. **BATEMAN, Harry** (1882-1946). *On the application of integral equations to the determination of upper and lower limits to the value of a double integral. with: The solution of linear differential equations by means of definite integrals. with: The determination of solutions of the equation of wave motion involving an arbitrary function of three variables which satisfies a partial differential equation.* In: Transactions of the Cambridge Philosophical Society, Volume XXI. Cambridge: University Press, 1912. ¶ 280 x 229 mm. 4to. Pages 123-128; 171-196; 257-280. [Entire volume: vi, 481 pp.] Full brown cloth; lightly freckled, spine ends frayed. Blind stamp of the Carnegie Institution, Washington, D.C. Very good. [S3077]

$ 175

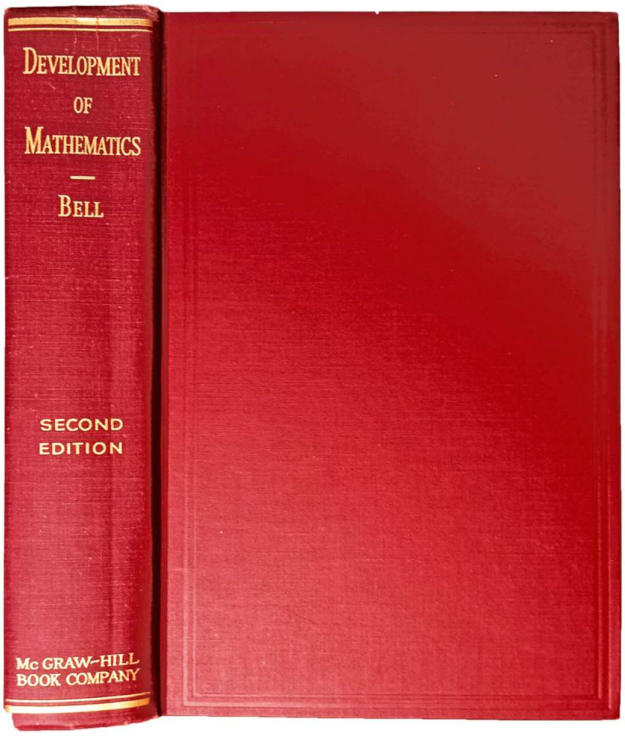
"General theories had little attraction for Bateman; he was a master of the special instance. Much of his work consisted of finding special functions to solve partial differential equations. . .. Bateman's most significant single contribution to mathematical physics was a paper (1909) in which, following the work of Lorentz and Einstein on the invariance of the equations of electromagnetism under change of coordinates of constant velocity and constant acceleration, he showed that the most general group of transformations which reserve the electromagnetic equations and total charge of the system and are independent of the electromagnetic field is the group of conformal maps of four-dimensional space." *DSB*, I, pp. 499-500.

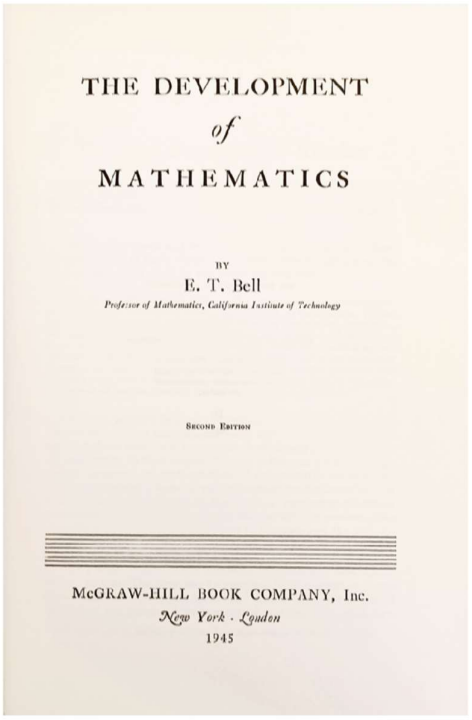

*Using a Michelson Interferometer*

6. **BELL, E. E.** "*Measurement of the Far Infrared Optical Properties of Solids with a Michelson Interferometer Used in the Asymmetric Mode: Part I, Mathematical Formulation*." [with:] **RUSSELL, E.E**. & **E.E. BELL**. "*Measurement of the Far Infrared Optical Properties of Solids with a Michelson Interferometer Used in the Asymmetric Mode: Part II, the Vacuum Interferometer*." In: Infrared Physics: An International Research Journal, Vol. 6, No. 2, June 1966, pp. 57-74; 75-84. Oxford, et al.: Pergamon Press, 1966. ¶ 8vo. 47-109 pp. Plates, figs. Printed wrappers; spine frayed. Library stamp on front cover. Good. [S10099]

$ 15

The ability of the Michelson Interferometer to give phase information permits a complete determination of the indices of refraction and extinction coefficients of solids. Measurements on the reflectivity of Nal and other substances will be given as examples. This work was done in part under a contract between The Air Force Cambridge Research Laboratories and The Ohio State University Research Foundation.



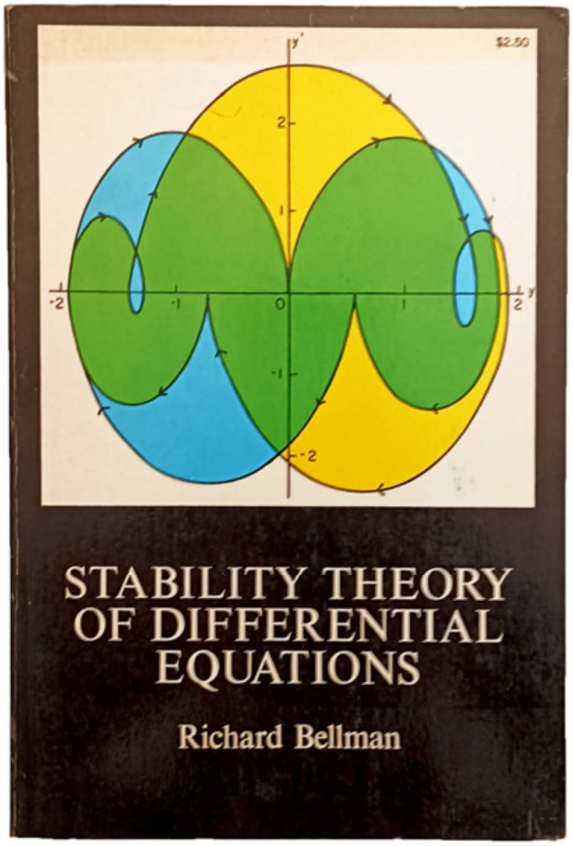


THE DEVELOPMENT
*of*
MATHEMATICS

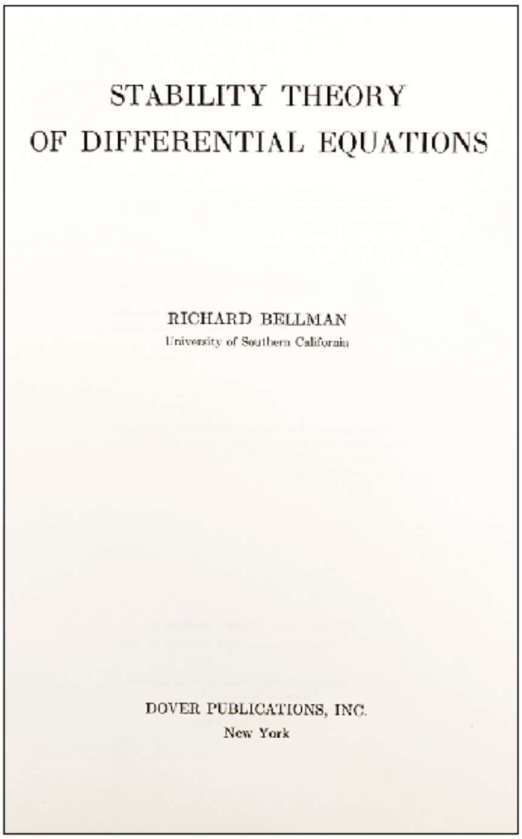
BY
E. T. Bell
*Professor of Mathematics, California Institute of Technology*

SECOND EDITION

McGRAW-HILL BOOK COMPANY, Inc.
*New York · London*
1945

7. **BELL, Eric Temple** (1883-1960). *The Development of Mathematics*. New York & London: McGraw-Hill, 1945. ¶ Second edition. 8vo. xiii, 637 pp. Notes, index. Red cloth, gilt-stamped spine title. Gift inscription on front flyleaf. [S9013] $ 20





STABILITY THEORY
OF DIFFERENTIAL EQUATIONS

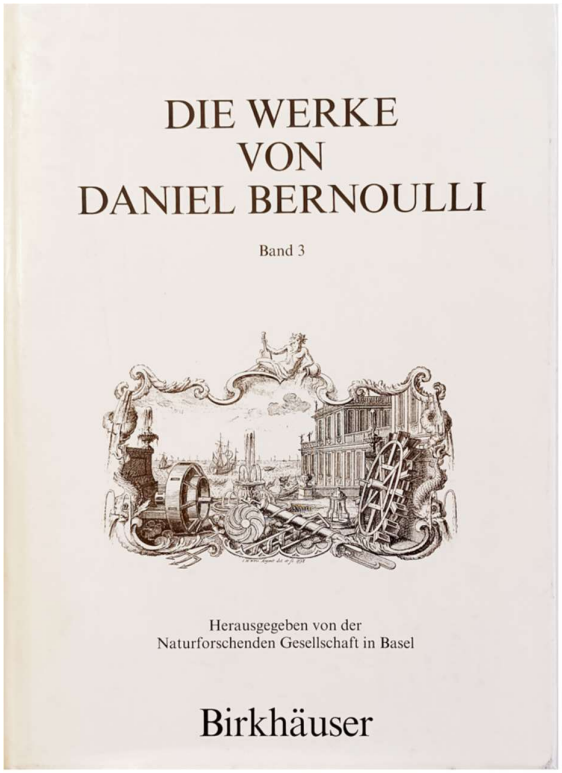
RICHARD BELLMAN
University of Southern California

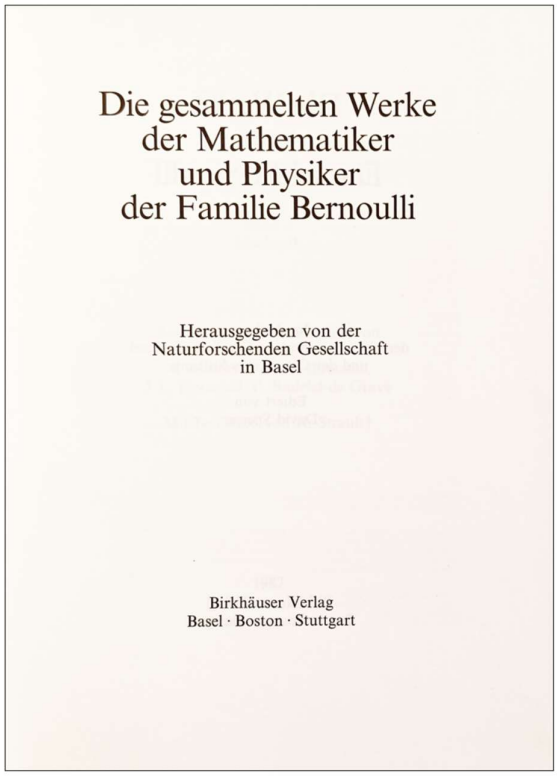
DOVER PUBLICATIONS, INC.
New York

8. **BELLMAN, Richard** (1920-1984). *Stability Theory of Differential Equations*. New York: Dover, (1969). ¶ Reprint. 8vo. xiii, 166 pp. Figs., bibliog., index. Pictorial wrappers. Ownership signature of Dexter Strawther. Very good. [S9091]

$ 12

Richard Ernest Bellman was an American applied mathematician, who introduced dynamic programming in 1953, and made important contributions in other fields of mathematics, such as biomathematics. He founded the leading biomathematical journal Mathematical Biosciences.

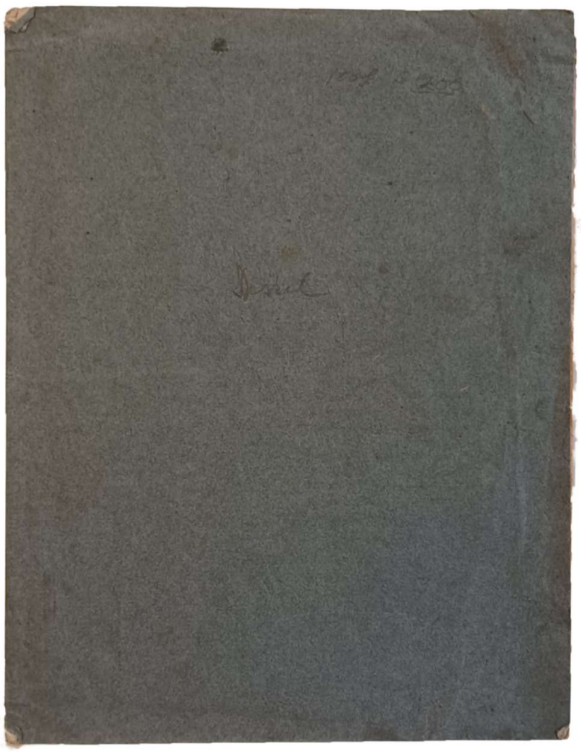


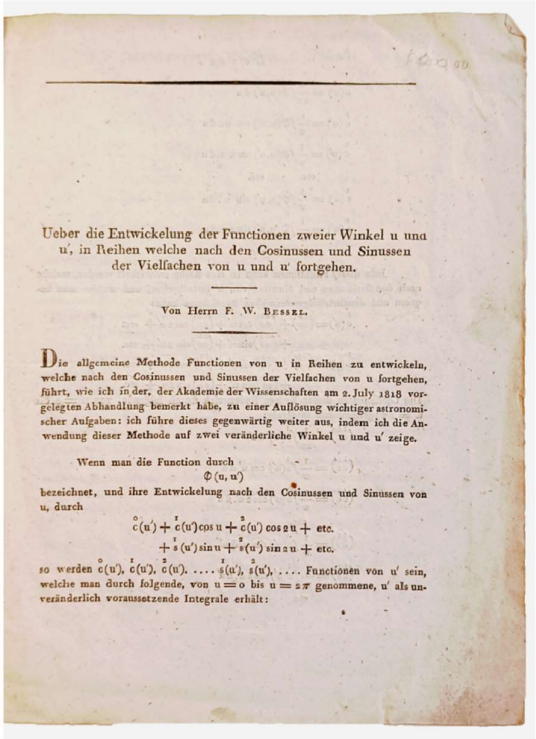




9. **BERNOULLI, Daniel** (1700-1782). *Die Werke von Daniel Bernoulli, Band 3: Mechanik. Bearbeitet und kommentiert von David Speiser, A. de Baenst-Vandenbroucke, J. L. Pietenpol, and P. Radelet-de Grave. Mit beitragen von H. Straub*. Basel, Switzerland: Birkhauser, 1987. ¶ Series: Die Gesammelten Werke der Mathematiker und Physiker der Familie Bernoulli. 8vo. xxvii, 457 pp. Frontispiece, index. Gilt-stamped maroon cloth, dust-jacket; rear jacket a bit smudged. Bookplate. Very good. [S11037]

$ 45

Daniel Bernoulli FRS was a Swiss mathematician and physicist and was one of the many prominent mathematicians in the Bernoulli family from Basel. He is particularly remembered for his applications of mathematics to mechanics, especially fluid mechanics, and for his pioneering work in probability and statistics.





Ueber die Entwickelung der Functionen zweier Winkel u und u', in Reihen welche nach den Cosinussen und Sinussen der Vielfachen von u und u' fortgehen.

Von Herrn F. W. Bessel.

Die allgemeine Methode Functionen von u in Reihen zu entwickeln, welche nach den Cosinussen und Sinussen der Vielfachen von u fortgehen, führt, wie ich in der, der Akademie der Wissenschaften am 2. July 1818 vorgelegten Abhandlung bemerkt habe, zu einer Auflösung wichtiger astronomischer Aufgaben: ich führe dieses gegenwärtig weiter aus, indem ich die Anwendung dieser Methode auf zwei veränderliche Winkel u und u' zeige.

Wenn man die Function durch

$$\Phi(u, u')$$

bezeichnet, und ihre Entwickelung nach den Cosinussen und Sinussen von u, durch

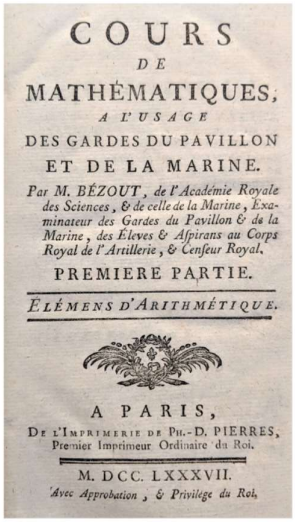
$$\overset{0}{c}(u') + \overset{1}{c}(u')\cos u + \overset{2}{c}(u')\cos 2u + \text{etc.}$$
$$+ \overset{1}{s}(u')\sin u + \overset{2}{s}(u')\sin 2u + \text{etc.}$$

so werden $\overset{0}{c}(u')$, $\overset{1}{c}(u')$, $\overset{2}{c}(u')$, .... $\overset{1}{s}(u')$, $\overset{2}{s}(u')$, .... Functionen von u' sein, welche man durch folgende, von $u = 0$ bis $u = 2\pi$ genommene, u' als unveränderlich vorausetzende Integrale erhält:

10. **BESSEL, Franz Friedrich Wilhelm** (1784-1846). *Ueber die Entwickelung der Functionen zweier Winkel u und u' in Reihen, welche nach den Cosinussen und Sinussen der Vielfachen von u and u' fortgehen*. [Berlin]: [c. 1822]. ¶ Offprint. 8vo. 6 pp. Original blue wrappers; spine ends slightly chipped, rear cover slightly stained. Very Good. RARE. [S11042]

$ 100

Bessel (1784-1846) was a German astronomer "whose works laid the foundations for a better determination than any previous method had allowed of the scale of the universe and the sizes of stars, galaxies, and clusters of galaxies." He determined the positions of over fifty thousand stars, and was the first to correctly measure the parallax. "Much credit for the final establishment of a scale for the universe in terms of and terrestrial distances, which depends vitally on accurate measurement of the distances of the nearest stars from Earth, must go to Bessel" (Encyclopaedia Britannica, available on-line). Akademie der Wissenschaften. Verzeichniss der abhandlungen der Koniglich preussischen akademie der wissenscaften. Berlin: 1871, p. 27; Lakowitz, Waldmar. Katalog der bibliotekder Naturforschenden gesellschaft in Danzig, Vols. 1-3. Danzig, Germany: Naturforschende Gesellschaft, 1904. The only copy in WorldCat is in Bern.

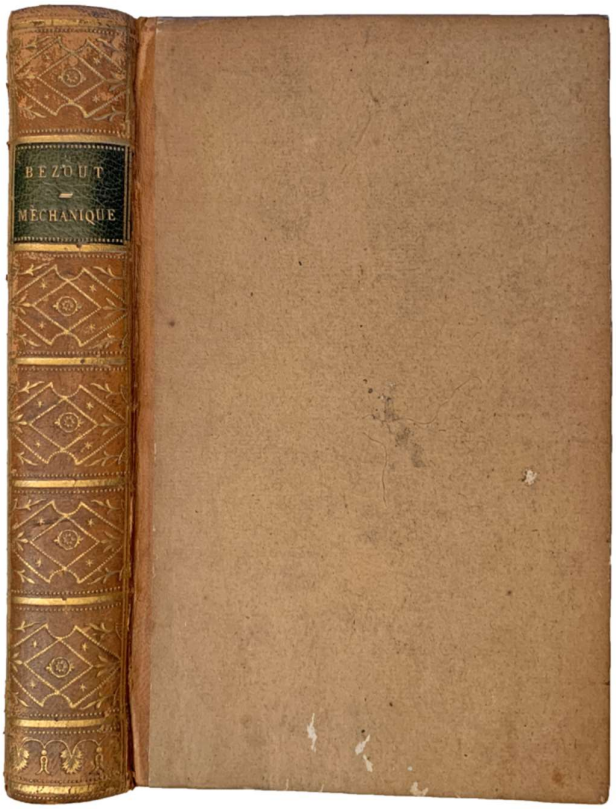

COURS
DE
MATHÉMATIQUES,
A L'USAGE
DES GARDES DU PAVILLON
ET DE LA MARINE.
Par M. BÉZOUT, de l'Académie Royale des Sciences, & de celle de la Marine, Examinateur des Gardes du Pavillon & de la Marine, des Élèves & Aspirans au Corps Royal de l'Artillerie, & Censeur Royal.
PREMIERE PARTIE.
ÉLÉMENS D'ARITHMÉTIQUE.
A PARIS,
De l'Imprimerie de Ph.-D. PIERRES, Premier Imprimeur Ordinaire du Roi.
M. DCC. LXXXVII.
Avec Approbation, & Privilège du Roi.

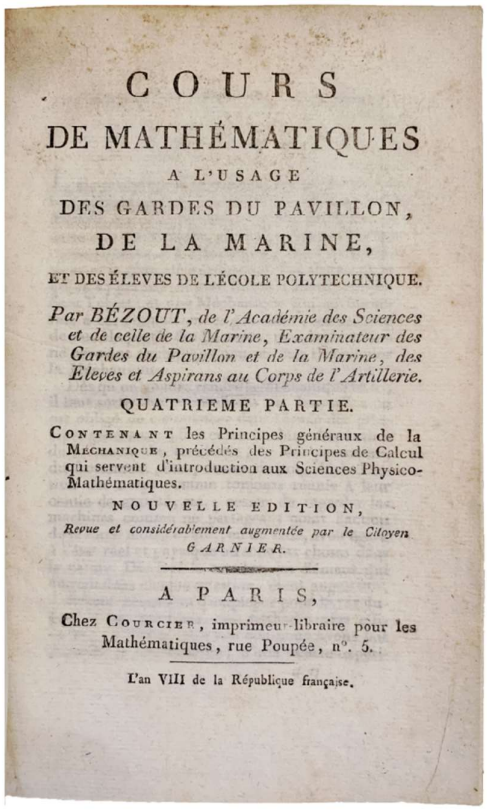
11. **BEZOUT, Etienne** (1730-1783). *Cours de Mathematiques; a l'Usage des Gardes du Pavillon et de la Marine*. Paris: Ph. -D. Pierres, 1787, 1782, 1787, 1784, 1784, 1781. ¶ 6 volumes. 8vo. xvi, 256; viii, 357, [1]; xii, 488; viii, 432; viii, 479, [1]; [ii], xiv, 319, [1], 98 pp. Title woodcut vignettes, vol. VI with half-title [Traite de Navigation], extensive logarithmic tables, 37 [=7 + 4 + 5 + 11 +10] engraved folding plates (incl. atlas & star maps). Contemporary full calf, gilt-decorated spine, red leather gilt-stamped spine labels; minor wear to spine ends. Near fine, a choice complete set. RW1318

$ 1,250

Bezout was a French mathematician and member of the French Academy of Science who did pioneering work in elimination theory. He is the namesake of Bezout's Theorem, which plays a crucial role in the study of intersection of manifolds in algebraic geometry. While his impact on mathematical research was significant, he played a larger role in the development of mathematical education, as his textbooks dramatically influenced the course of math education in both France and abroad. His works were popular and thus frequently reprinted. "Bezout treated geometry before algebra, observing that beginners were not yet familiar enough with mathematical reasoning to understand the force of algebraic demonstrations, although they did appreciate proofs in geometry. He eschewed frightening terms like 'axiom,' 'theorem,' 'scholium,' and tried to avoid arguments that were too close and detailed. Although criticized occasionally for their lack of rigor, his texts were widely used in France. In the early nineteenth century, they were translated into English for use in American schools; one translator, John Farrar, used them to teach the calculus at Harvard University. The obvious practical orientation, as well as the clarity of exposition, made the books especially attractive in America. These translations considerably influenced the form and content of America mathematical education in the nineteenth century." – *DSB* II, p. 112.

☼ Jean Polak, *Bibliographie Maritime Francaise*, 811-812; Poggendorff I, 184. Note: Honeyman had only a Spanish translation in one volume, 1805.





COURS
DE MATHÉMATIQUES
A L'USAGE
DES GARDES DU PAVILLON,
DE LA MARINE,
ET DES ÉLEVES DE L'ÉCOLE POLYTECHNIQUE.

*Par BÉZOUT, de l'Académie des Sciences et de celle de la Marine, Examinateur des Gardes du Pavillon et de la Marine, des Elèves et Aspirans au Corps de l'Artillerie.*

QUATRIEME PARTIE.

CONTENANT les Principes généraux de la MÉCHANIQUE, précédés des Principes de Calcul qui servent d'introduction aux Sciences Physico-Mathématiques.

NOUVELLE EDITION,

*Revue et considérablement augmentée par le Citoyen GARNIER.*

A PARIS,

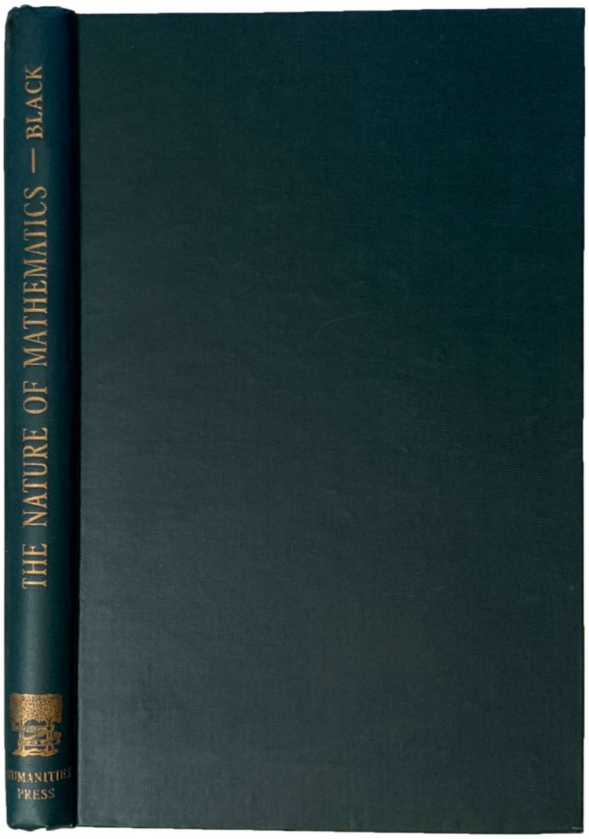
Chez COURCIER, imprimeur-libraire pour les Mathématiques, rue Poupée, n°. 5.

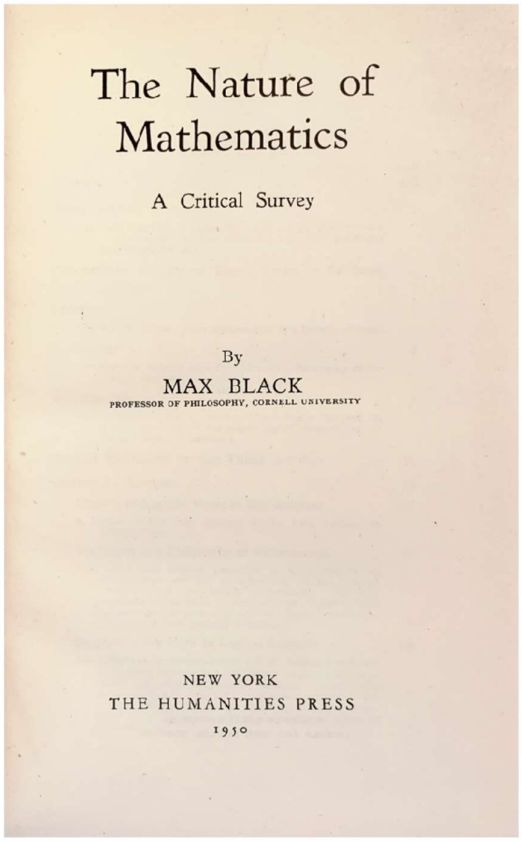
L'an VIII de la République française.

12. **BEZOUT, Etienne** (1730-1783). *Cours de Mathématiques à l'Usage des Gardes du Pavillon, de la Marine, et des Elevés de l'Ecole Polytechnique. Quatrième Partie: Contenant les Principles généraux de la Mécanique, précèdes des Principes de Calcul qui servent d'introduction aux Sciences Physico-Mathématiques*. Paris: Chez Courcier, "L'an VIII de la République française" [c. 1799]. ¶ Vol. four (of six) only. "Nouvelle edition." 8vo. viii, 356, [2] pp. Five fold-out plates. Quarter gilt-stamped leather over brown paper-backed boards, purple place-keeping ribbon; spine edges rubbed, left edge slightly cracked. Very good. [S11043]

$ 35

Son of a magistrate from Nemours, Bézout was appointed by Étienne François de Choiseul in 1763 examiner of the guards of the navy. He was given the task of writing a mathematics course which would lead to the mathematics course for the use of the guards of the flag and of the navy.

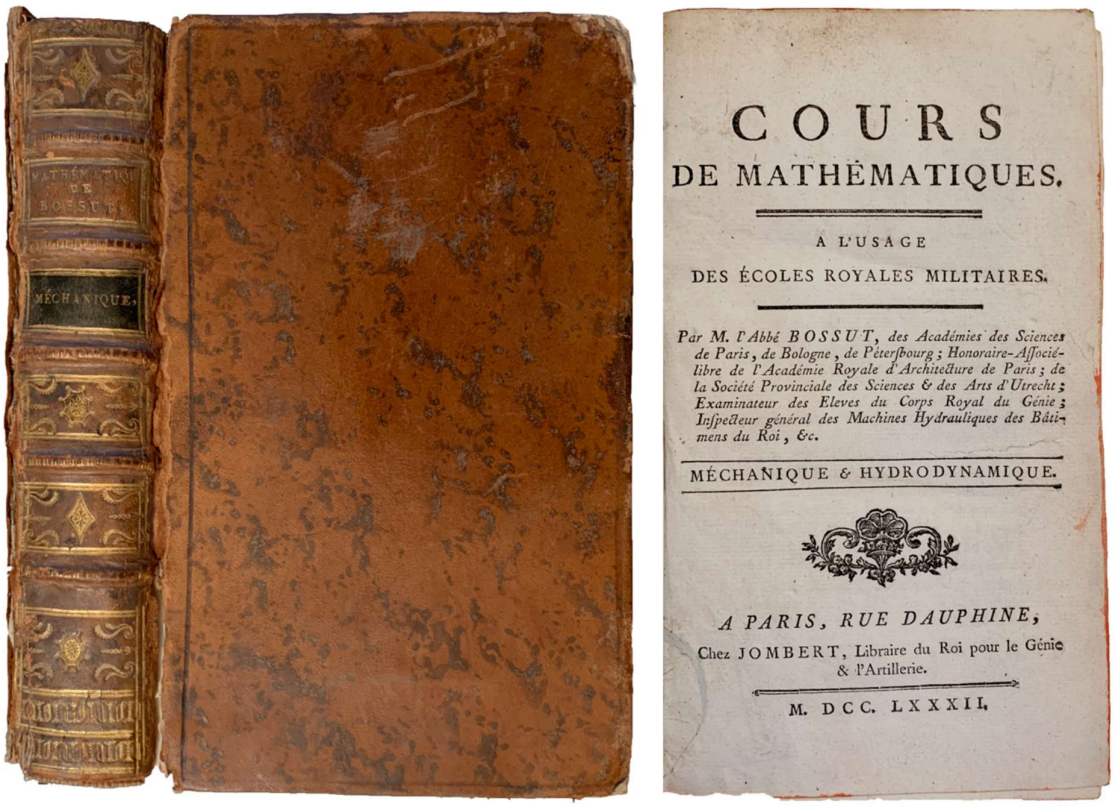



13. **BLACK, Max** (1909-1988). *The nature of mathematics. A critical survey*. New York: Humanities Press, 1950. ¶ 8vo. xiv, 219, 7 (ads.) pp. Green cloth, gilt-stamped spine title. Fine. [S9969]

$ 10

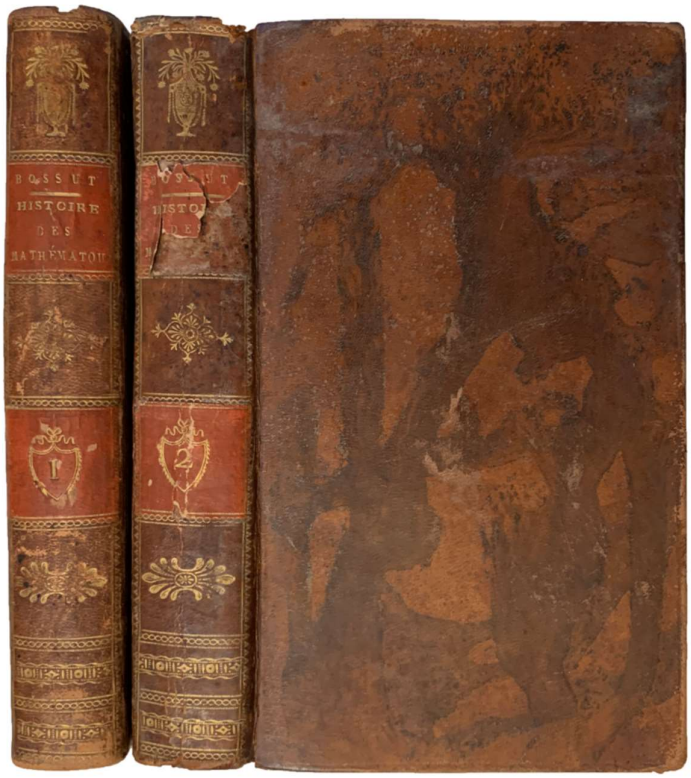
The philosopher's first book, who made important contributions to the philosophy of mathematics , the philosophy of language, and the metaphor theory.

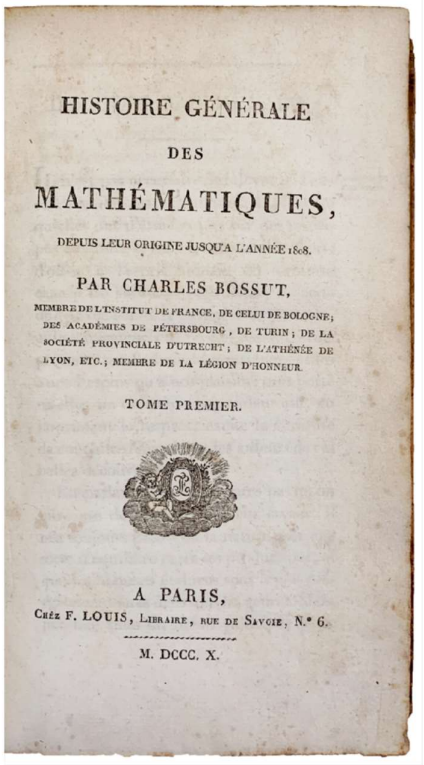



14. **BOSSUT, Charles** (1730-1814). *Cours de Mathematiques. A l'usage des Ecoles Royales Militaires. Mechanique et Hydrodynamique*. Paris: Jombert, 1782. ¶ Two volumes in one. 8vo. [2], 463; 106, [1] pp. 13 folding plates; title-page torn and repaired. Early full calf, five raised spine bands, gilt-stamped spine, gilt-stamped black leather spine label; outer hinges cracked but cords holding, rear cover detached. As is. [S11047]

$ 30

The Abbot Charles Bossut, born in Tarare, came to Paris where he accepted the protection of Clairaut and d'Alembert, which later allowed him to assist with the drafting of articles on mathematical science for the Encyclopaedia. He joined the Academy of Science, in 1768, where he became the chair of hydrodynamics, a position created for him. His didactic works were, with those of Bezout, utilized by scholars for many years.



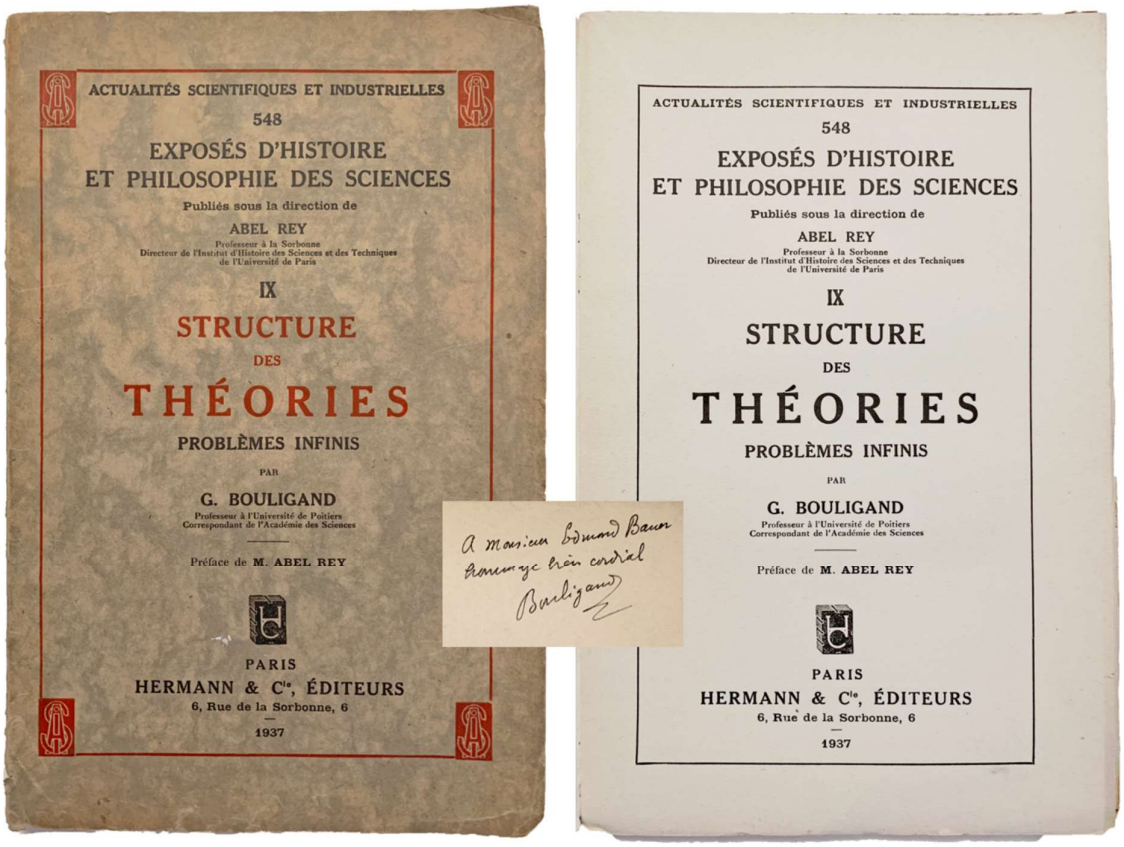



15. **BOSSUT, Charles** (1730-1814). *Histoire générale des mathématiques, depuis leur origine jusqu'a l'année 1808*. Paris: F. Louis, 1810. ¶ Two volumes. 8vo. [iv], xxviii, 459, [1 blank]; [iv], 533, [2, 1 blank, ads 4] pp. Half-titles, Engraved frontis. port. in Vol. I, woodcut title-page vignettes, index, table; foxed, Vol. II: margins water-stained, bottom margins of pages 257-282 damaged. Contemporary tree calf, red leather spine labels, gilt spines; rubbed, spine label chipped (Vol. II). Very good. [S7048]

$ 175

LATER EDITION of Charles Bossut's important history of mathematics (first edition, Paris, 1802, 2 vols.). "Bossut's importance for the history of science lies in his role as a major contributor to European scientific education." - *DSB*.

☼ *DSB*, II, pp. 334-335; Poggendorf, I, col. 249.



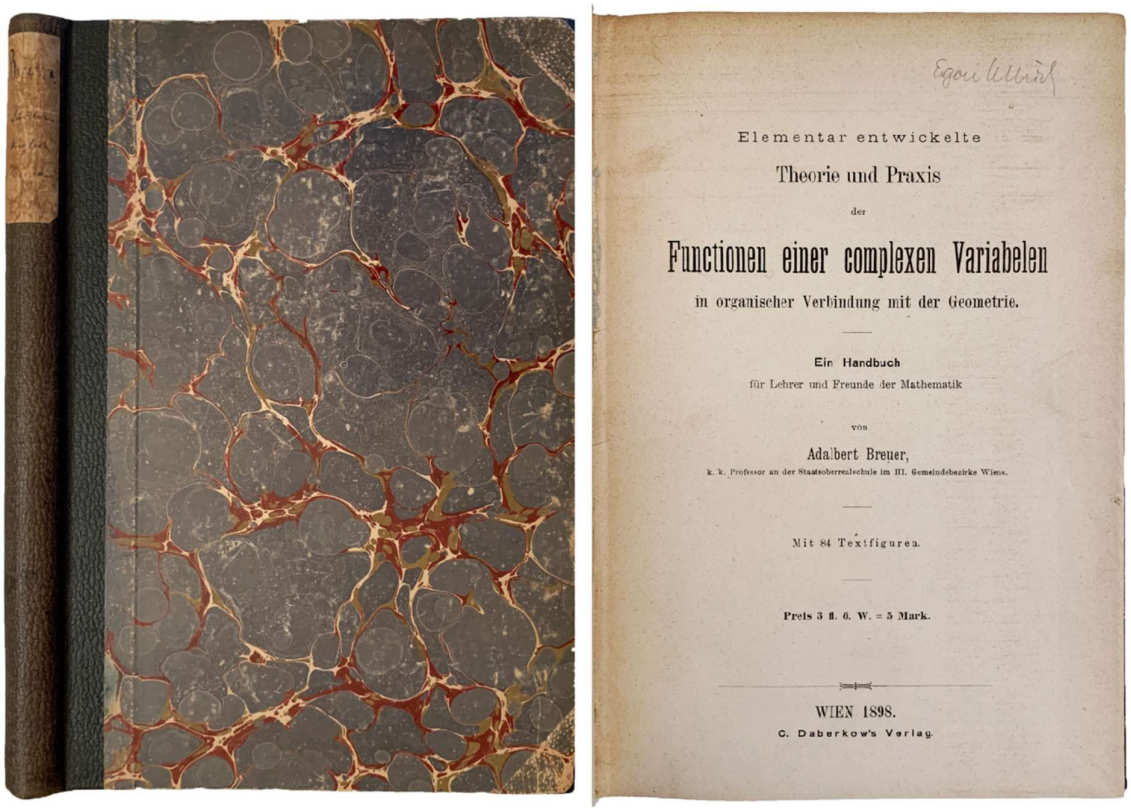

16. **BOULIGAND, Georges** (1889-1979). *Structure des Théories Problèmes Infinis*. Paris: Hermann & Cie, 1937. ¶ Series: *Actualités scientifiques et industrielles*, 548; Exposes d'histoire et y philosophie des sciences, IX. 8vo. 57, [1], [3] pp. Original printed wrappers; spine end worn. Good. INSCRIBED BY THE AUTHOR to Edmond Henri Bauer (1880-1963). [S11541]

$ 75

Georges Bouligand (1889–1979) was a French mathematician who introduced paratingent cones and contingent cones.

PROVENANCE: Edmond Henri Bauer (1880-1963), French physicist born in Paris, worked at the Ecole Supérieure de Physique et Chimie Industrielles de la Ville de Paris (ESPCI) under Langevin in 1905.

See: obituary of Bauer by Karl K. Darrow, *Physics Today*, June 1964, page 86.



Elementar entwickelte

Theorie und Praxis

der

Functionen einer complexen Variabelen

in organischer Verbindung mit der Geometrie.

Ein Handbuch

für Lehrer und Freunde der Mathematik

von

Adalbert Breuer,

k. k. Professor an der Staatsoberrealschule im III. Gemeindebezirke Wiens.

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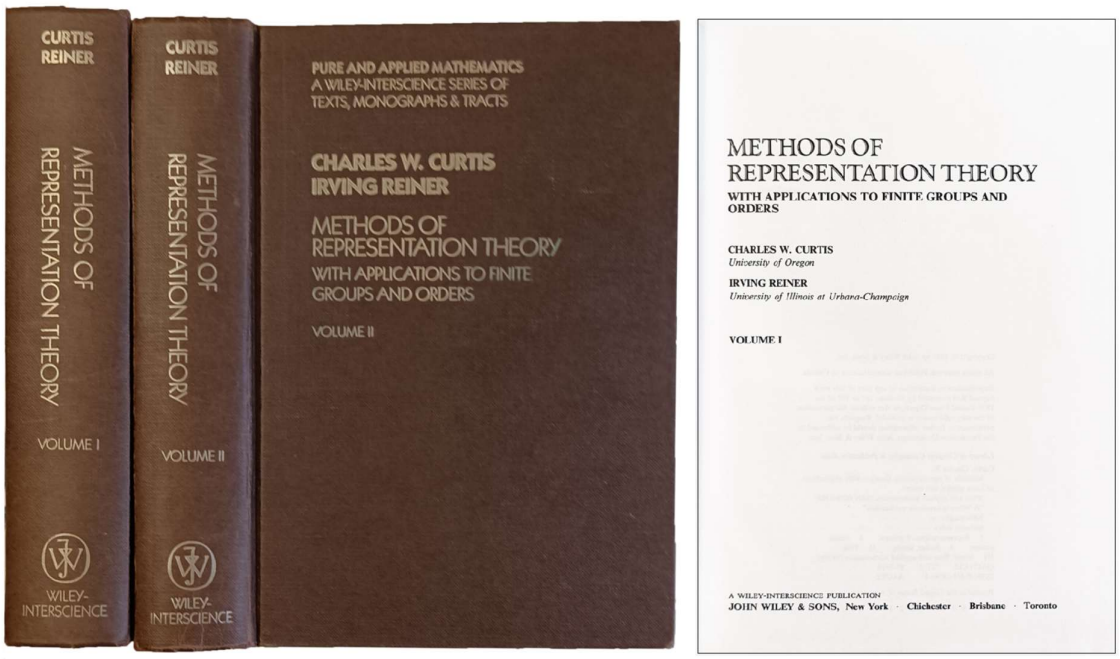
WIEN 1898.

C. Daberkow's Verlag.

17. **BREUER, Adalbert**. *Elementar entwickelte Theorie und Praxis der Functionen einer complexen Variabelen in organischer Verbindung mit der Geometrie*. Vienna: C. Daberkow, 1898. ¶ 8vo. viii, 205 pp. Figs., index. Toned throughout, pencil signature on title-page, bookseller's ticket inside front cover. Quarter green pebbled cloth over marbled boards, paper spine title label; extremities rubbed, spine label worn. Ownership signature of Egon Ullrich. Rare. [S9014]

$ 45

PROVENANCE: Egon Ullrich (1902-1957) was an Austrian mathematician who worked on the theory of functions. His experiences included stays at University of Graz, University of Berlin, studied under Ernst Lindelöf and Rolf Nevanlinna in Helsinki, assistant to Robert König in Jenaand, University of Marburg, Gottingen, University of Giessen, Frankfurt am Main, Tübingen.

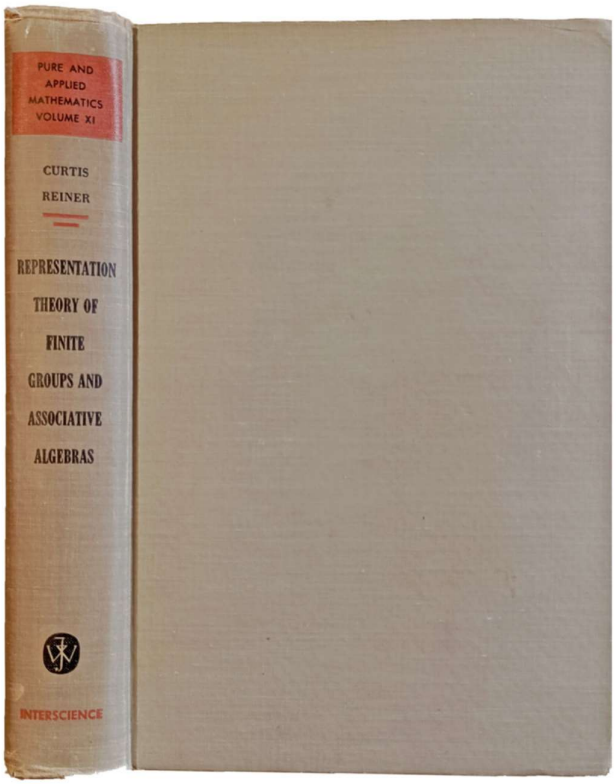


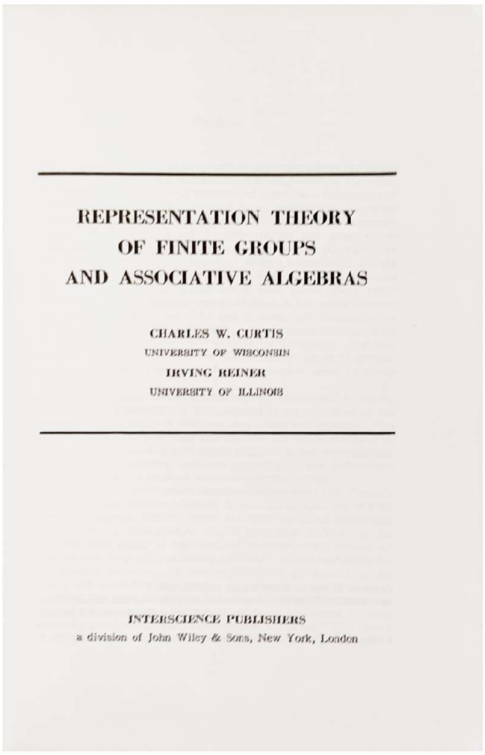

18. **CURTIS, Charles W.** (1926-); **Irving REINER** (1924-1986). *Methods of representation theory with applications to finite groups and orders.* New York: John Wiley & Sons, 1981, 1987. ¶ Two volumes. 8vo. xxi, 819; xv, 951 pp. Indexes. Original brown gilt-stamped cloth; spine end worn. Rubber-stamp of Jürgen Ritter. Scarce as a set.

$ 250

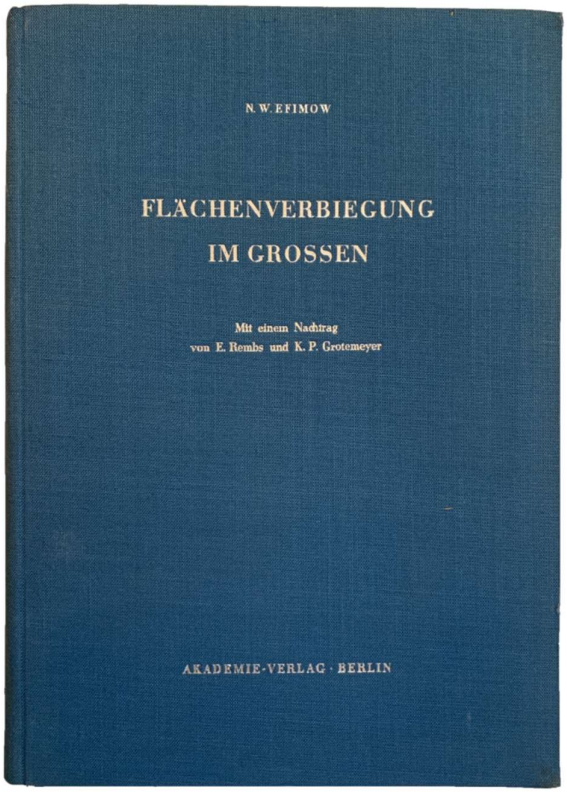
Charles Whittlesey Curtis is a mathematician and historian of mathematics, known for his work in finite group theory and representation theory. He is a retired professor of mathematics at the University of Oregon.

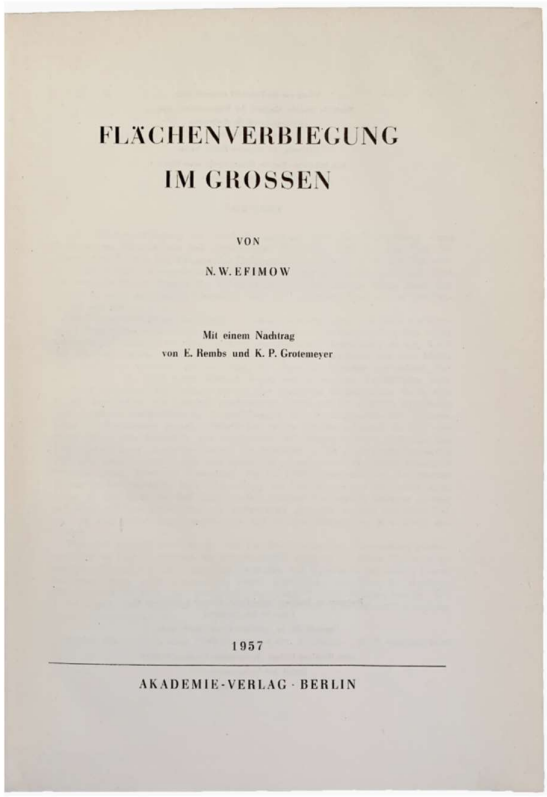
Irving Reiner (1924-1986) was a mathematician at the University of Illinois who worked on representation theory. He solved the problem of finding which abelian groups have a finite number of indecomposable modules. His book with Charles W. Curtis, (Curtis & Reiner 1962), was for many years the standard text on representation theory.




19. **CURTIS, Charles W.** (1926-); **Irving REINER** (1924-1986). *Representation theory of Finite Groups and Associative Algebras*. New York: John Wiley & Sons, 1962. ¶ Series: Pure and Applied Mathematics, XI. 8vo. xiv, 685 pp. Index. Beige cloth; spine ends worn. Good. Rubber-stamp of Jürgen Ritter. $ 12.50



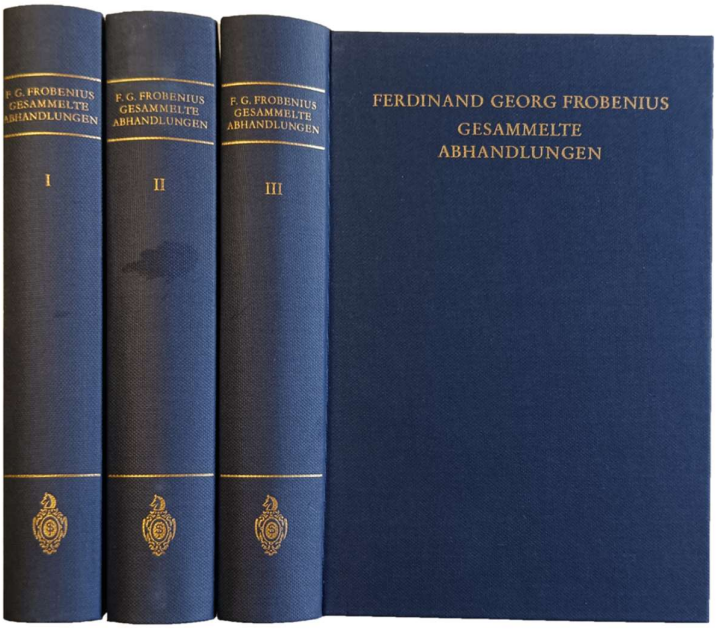



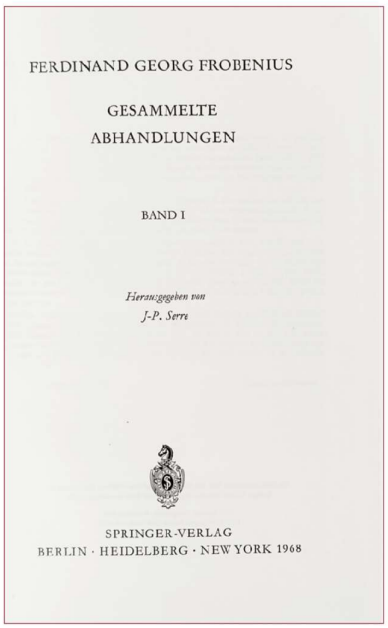

20. **EFIMOW, N. W. [Nikolai Wladimirowitsch]** (1910-1982). *Flachenverbiegung im Grossen*. Berlin: Akademie, 1957. ¶ Series: Mathematische Lehrbucher und Monographien. Herausgegeben von der Deutschen Akademie der Wissenschaften zu Berlin Forschungsinstitut fur Mathematik. Band 7. 8vo. xi, 233 pp. Figs., bibliography; stamp on front flyleaf. Blue cloth, silver-stamped cover and spine title; spine a bit sunned. Rare. [S9017]

$ 45

Nikolai Vladimirovich Efimov, a Soviet mathematician, was known for his work in geometry and his books at Éditions Mir.

PROVENANCE: Egon Ullrich (1902-1957) was an Austrian mathematician who worked on the theory of functions. His experiences included stays at University of Graz, University of Berlin, studied under Ernst Lindelöf and Rolf Nevanlinna in Helsinki, assistant to Robert König in Jenaand, University of Marburg, Gottingen, University of Giessen, Frankfurt am Main, Tubingen.



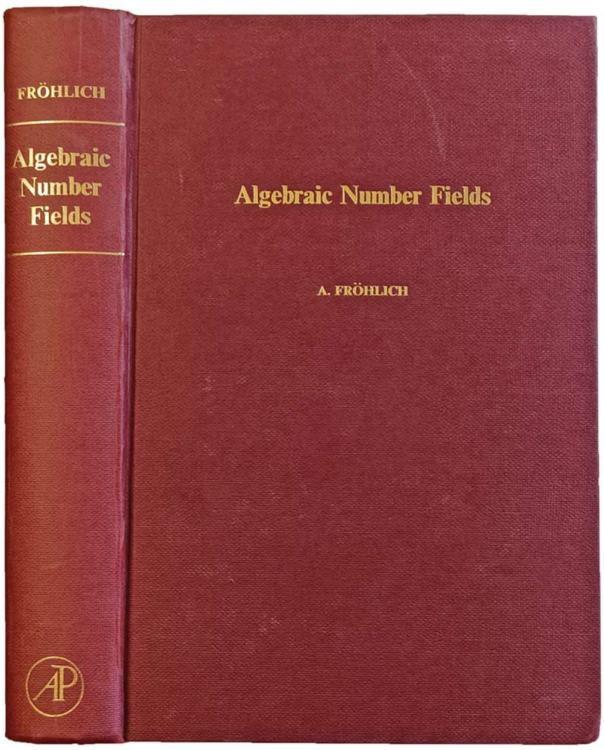



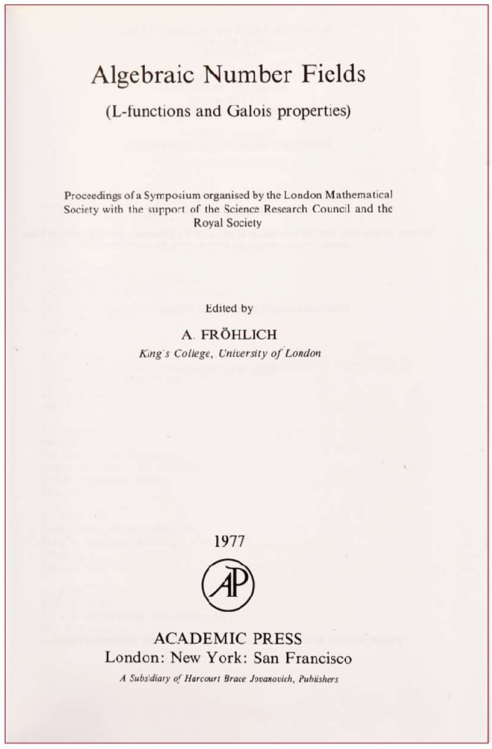

21. **FROBENIUS, Ferdinand Georg** (1849-1917); **Jean-Pierre SERRE** (b.1926)(editor). *Gesammelte Abhandlungen*. Berlin: Springer, 1968. ¶ Three volumes. 8vo. VI, [2], 650; [4], 733; IV, 740 pp. Frontis. Blue gilt-stamped cloth. Rubber-stamp of Jürgen Ritter. Nice set.

$ 275

Collected works.

Ferdinand Georg Frobenius was a German mathematician, best known for his contributions to the theory of elliptic functions, differential equations, number theory, and to group theory. Group theory was one of Frobenius' principal interests in the second half of his career. One of his first contributions was the proof of the Sylow theorems for abstract groups. Earlier proofs had been for permutation groups. His proof of the first Sylow theorem (on the existence of Sylow groups) is one of those frequently used today. … More important was his creation of the theory of group characters and group representations, which are fundamental tools for studying the structure of groups. This work led to the notion of Frobenius reciprocity and the definition of what are now called Frobenius groups.

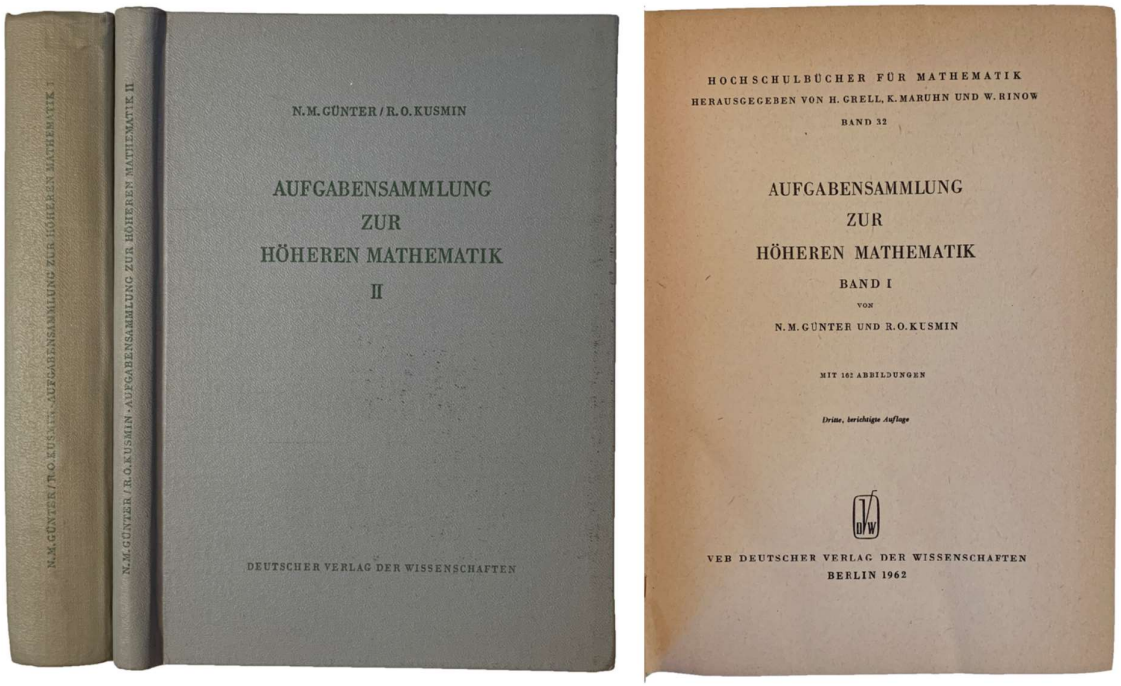



22. **FROHLICH, Albrecht** (1916-2001). *Algebraic Number Fields (L-functions and Galois properties). Proceedings of a symposium organised by the London Mathematical Society with the support of the Science Research Council and the Royal Society*. London & New York: Academic Press, 1977. ¶ 8vo. XII, 704 pp. Maroon gilt-stamped cloth. Rubber-stamp of Jürgen Ritter. Very good.

$ 100

Albrecht Fröhlich FRS was a German-born British mathematician, famous for his major results and conjectures on Galois module theory in the Galois structure of rings of integers.

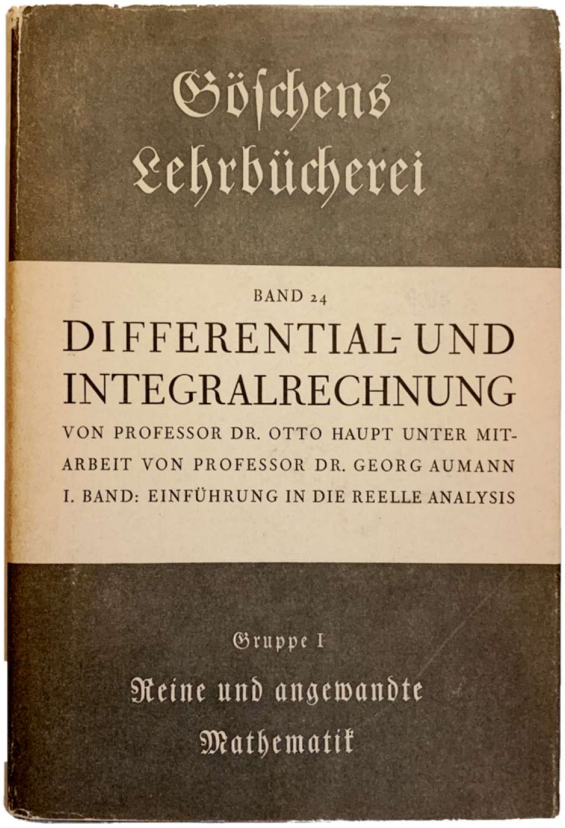


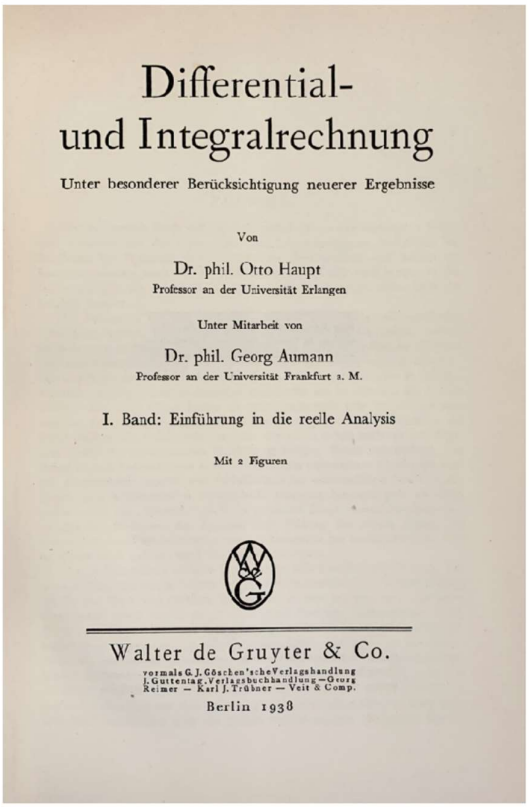

23. **GUNTER, N. M. (Nikolai Maximowitsch)** (1871-1941)**; Rodion O. [Ossijewitsch] KUSMIN** (1891-1949). *Aufgabensammlung zur Hoheren Mathematik. Band I & II*. Berlin: VEB Deutscher, 1962, 1957. ¶ Two volumes. *Hochschulebucher fur Mathematik*, Herausgegeben von H. Grell, K. Maruhn und W. Rinow, Band 32, 33. Volume I, [stated] third edition. 8vo. viii, 507, [1]; vi, 289 pp. 162+24 illustrations, bibliography, index. Volume I: browned throughout. Grey cloth, green stamping on covers and spines; Volume I front board creased. [S9019]

$ 40

Nikolai Maximovich Günther was a Russian mathematician known for his work in potential theory and in integral and partial differential equations: later studies have uncovered his contributions to the theory of Gröbner bases.

Rodion Ossievich Kuzmin, also a Russian mathematician, wrote more than 50 mathematical works.



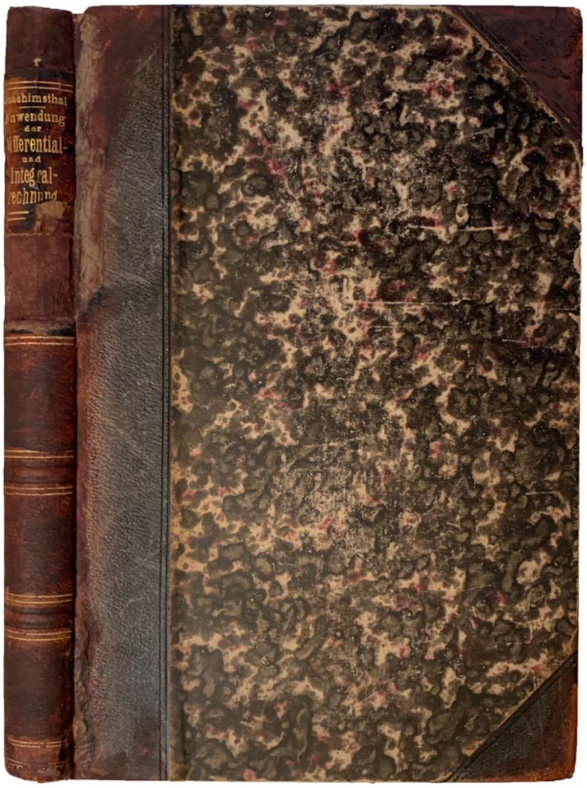



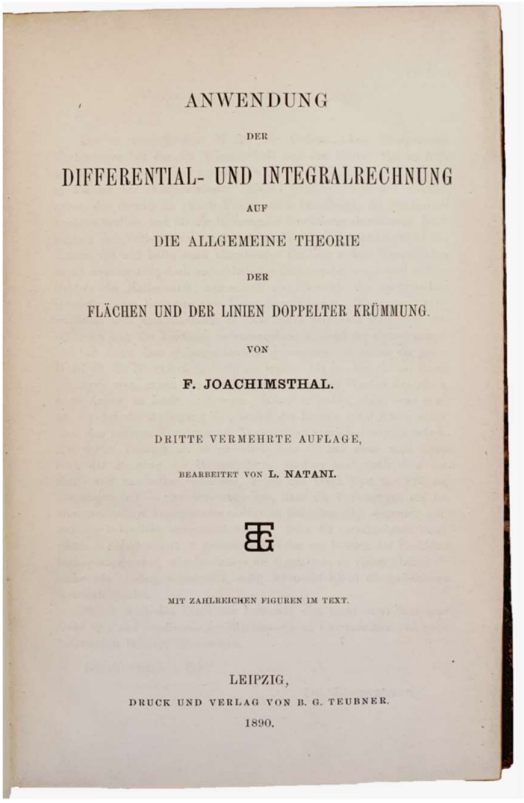

24. **HAUPT, Otto** (1887-1988) & **Georg AUMANN** (1906-1980). *Differential- und Integralrechnung. Unter besonderer Berucksichtigung neuerer Ergebnisse.* Berlin: Walter de Gruyter & Co., 1938. ¶ Series: Goschens Lehrbucherei, Gruppe I. Reine und angerwandre Mathematik, Band 24. 8vo. 196 pp. 2 figs., index. Blue-printed grey cloth, blue-printed spine title, dust-jacket. Ownership pen notation of Federico Grabiel [Space Systems Division, Hughes Aircraft, ca. 1967] on front endpaper. Very good. [S9020]

$ 30

Haupt specialized in geometry and real analysis; many of his research publications related to the four-vertex theorem on local minima and maxima of curvature. He also wrote textbooks on algebra and calculus.

Georg Aumann, German mathematician, was known for his work in general topology and regulated functions. During World War II, he worked as part of a group of five mathematicians, recruited by Wilhelm Fenner, and which included Ernst Witt, Alexander Aigner, Oswald Teichmueller and Johann Friedrich Schultze, and led by Wolfgang Franz, to form the backbone of the new mathematical research department in the late 1930s, which would eventually be called: Section IVc of Cipher Department of the High Command of the Wehrmacht (abbr. OKW/Chi). He also worked as a cryptanalyst, on the initial breaking of the most difficult cyphers. He also researched and developed cryptography theory. [Wikip.].




ANWENDUNG

DER

DIFFERENTIAL- UND INTEGRALRECHNUNG

AUF

DIE ALLGEMEINE THEORIE

DER

FLÄCHEN UND DER LINIEN DOPPELTER KRÜMMUNG.

VON

F. JOACHIMSTHAL.

DRITTE VERMEHRTE AUFLAGE,

BEARBEITET VON L. NATANI.

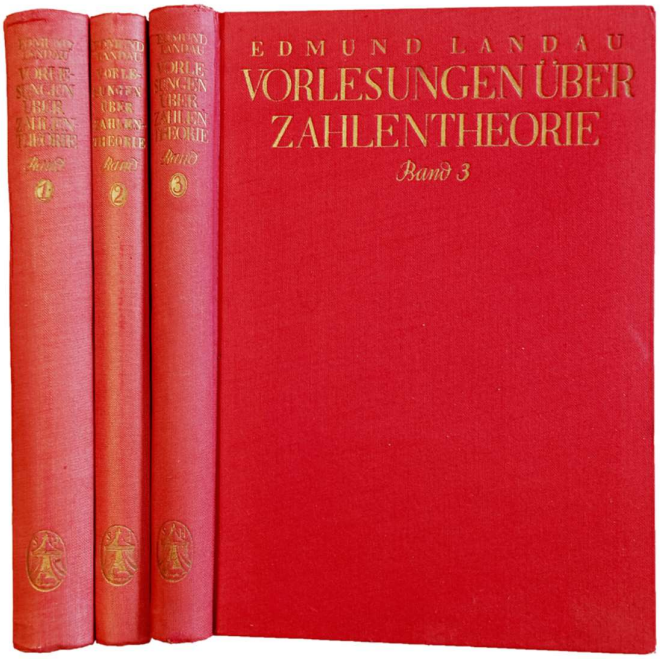
MIT ZAHLREICHEN FIGUREN IM TEXT.

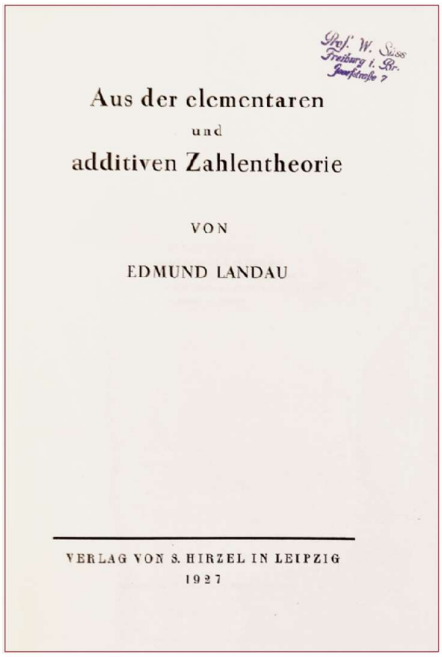
LEIPZIG,
DRUCK UND VERLAG VON B. G. TEUBNER.
1890.

25. **JOACHIMSTAHL, Ferdinand** (1818-1861). *Anwendung der Differential-und Integralrechnung auf die Allgemeine Theorie der Flachen und der Linien Doppelter Krummung*. Leipzig: B. G. Teubner, 1890. ¶ Third edition. 8vo. x, 308 pp. Figs. Original half morocco over marbled boards, gilt-ruled spine, gilt-stamped title; spine label detached, part of spine missing, worn extremities. Previous owner's signature on front flyleaf. [S9021]

$ 25

Joachimsthal, German mathematician, known for his work in conic sections, he was professor of mathematics at Halle (1856), and at Breslau (1858).



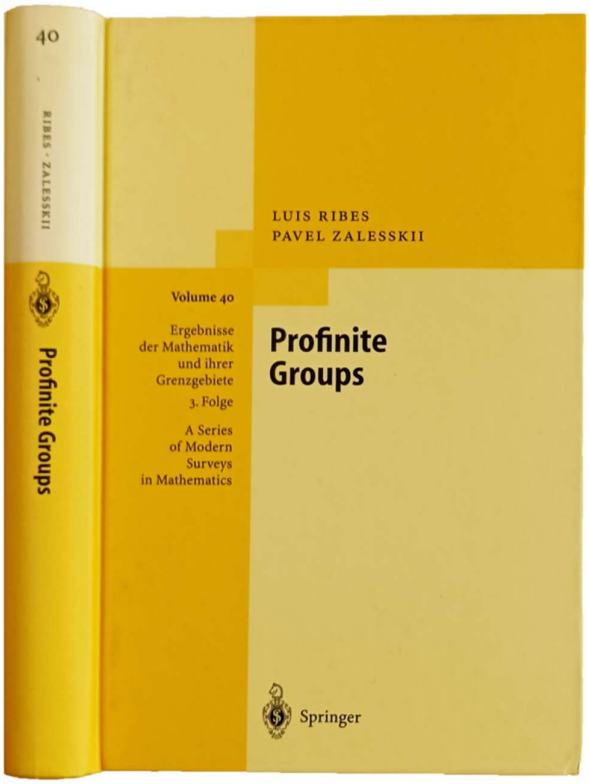

26. **LANDAU, Edmund** (1877-1938). *Vorlesungen über Zahlentheorie. [I]: Aus der elementaren additiven Zahlentheorie. [II]: Aus der analytischen und geometrischen Zahlentheorie. [III]: Aus der algebraischen Zahlentheorie und über die Fermatsche Vermutung*. Leipzig: S. Hirzel, 1927. ¶ Three volumes. 8vo. XII, 360; VII, 308; VII, 341 pp. Inscribed (probably from Peter Roquette) to Jürgen Ritter; rubber-stamp of Prof. W. [Wilhem] Süss, Freiburg.

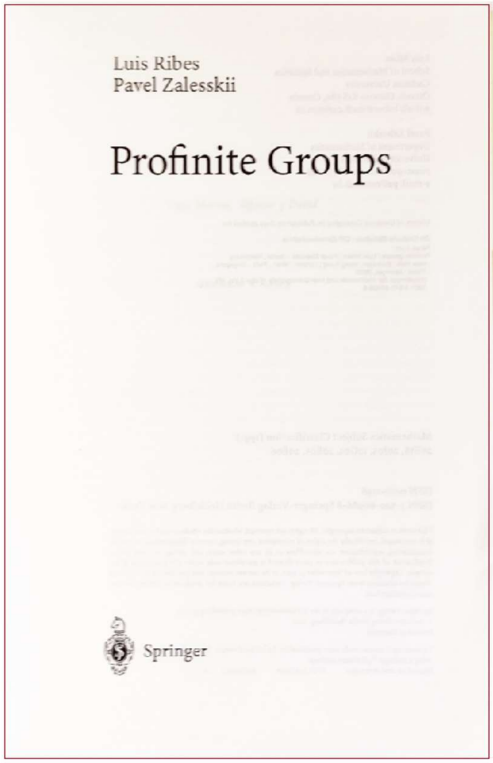
$ 180

First editions. Volume I: From elementary and additive number theory. II: From analytic and geometric number theory. III: From algebraic number theory and on Fermat's conjecture.

Edmund Landau, German mathematician, of the University of Göttingen, worked in the fields of number theory and complex analysis.

PROVENANCE: Wilhelm Süss (1895-1958) was a German mathematician. He was founder and first director of the Mathematical Research Institute of Oberwolfach. In 1928 he took a lecturing position at the University of Greifswald, and in 1934 he became a Professor at the University of Freiburg.



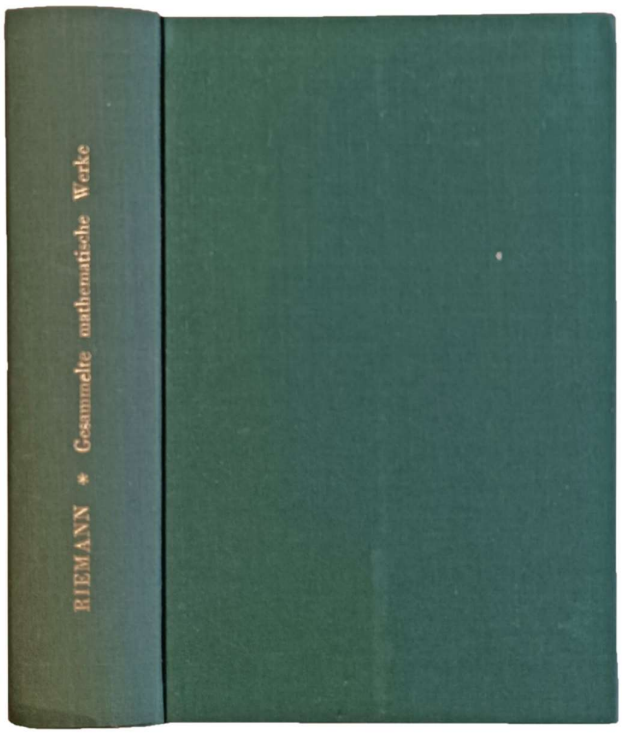



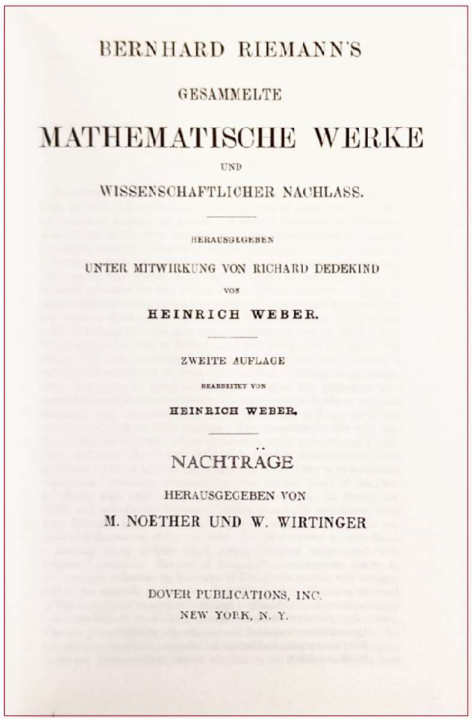

27. **RIBES, Luis**; **Pavel ZALESSKII**. *Profinite groups*. New York: Springer, 1991. ¶ Series: A series of Modern Surveys in Mathematics, vol. 40. 3. Folge. 8vo. XIV, 435 pp. Index. Yellow boards. Jürgen Ritter; rubber-stamp of Provenance: rubber-stamp of Jürgen Ritter. Very good. Scarce.

$ 25

"The aim of this book is to serve both as an introduction to profinite groups and as a reference for specialists in some areas of the theory. In neither of these two aspects have we tried to be encyclopedic. After some necessary background, we thoroughly develop the basic properties of profinite groups and introduce the main tools of the subject in algebra, topology and homology. Later we concentrate on some topics that we present in detail, including recent developments in those areas. Interest in profinite groups arose first in the study of the Galois groups of infinite Galois extensions of fields. Indeed, profinite groups are precisely Galois groups and many of the applications of profinite groups are related to number theory. Galois groups carry with them a natural topology, the Krull topology. Under this topology they are Hausdorff compact and totally dis- connected topological groups; these properties characterize profinite groups. Another important fact about profinite groups is that they are determined by their finite images under continuous homomorphisms: a profinite group is the inverse limit of its finite images. This explains the connection with abstract groups. If G is an infinite abstract group, one is interested in deducing properties of G from corresponding properties of its finite homomorphic images." – publisher.

Table of contents (9 chapters): Inverse and Direct Limits [by] Ribes, Luis (et al.); Profinite Groups; Free Profinite Groups; Some Special Profinite Groups; Discrete and Profinite Modules; Homology and Cohomology of Profinite Groups; Cohomological Dimension; Normal Subgroups of Free Pro-Free Constructions of Profinite Groups.

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NEW YORK, N. Y.

28. **RIEMANN, Bernhard** (1826-1866). *Gesammelte mathematische werke. The Collected Works of Bernhard Riemann. Edited by Heinrich Weber*. [WITH:] *Supplement*. New York: Dover, 1978. ¶ Reprint of 1892, 1902. Two volumes in one. 8vo. [12], [III]-IX, [1], 558; [2], VIII, 116 pp. 9 figs. Original gilt-stamped full green cloth. Near fine.

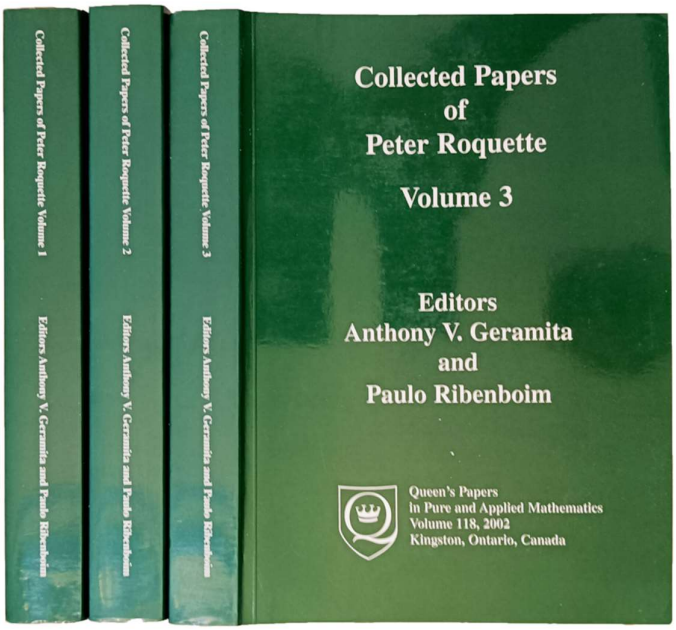
$ 150

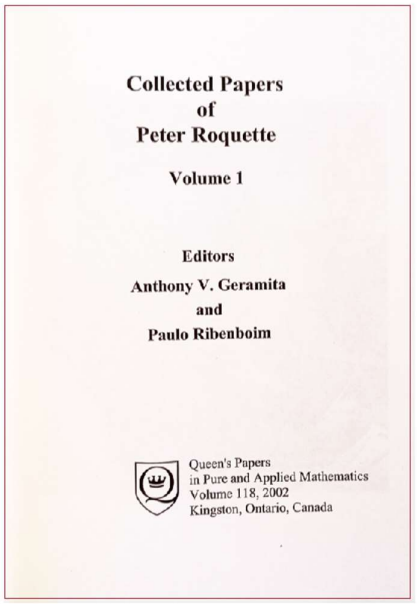
This is a deluxe form of the Dover issue as most copies were bound in simple wrappers. This copy is one of the few bound in cloth.

Georg Friedrich Bernhard Riemann, German mathematician, made contributions to analysis, number theory, and differential geometry. In the field of real analysis, he is mostly known for the first rigorous formulation of the integral, the Riemann integral, and his work on Fourier series. His contributions to complex analysis include most notably the introduction of Riemann surfaces, breaking new ground in a natural, geometric treatment of complex analysis. His 1859 paper on the prime-counting function, containing the original statement of the Riemann hypothesis, is regarded as a foundational paper of analytic number theory. Through his pioneering contributions to differential geometry, Riemann laid the foundations of

the mathematics of general relativity. He is considered by many to be one of the greatest mathematicians of all time. – [Wikip.].

Edited by Heinrich Weber; the supplement edited by German mathematician Max Noether (1844-1921) and Austrian mathematician Wilhelm Wirtinger (1865-1945). An added introduction is supplied by Professor Hans Lewy (1904-1988).

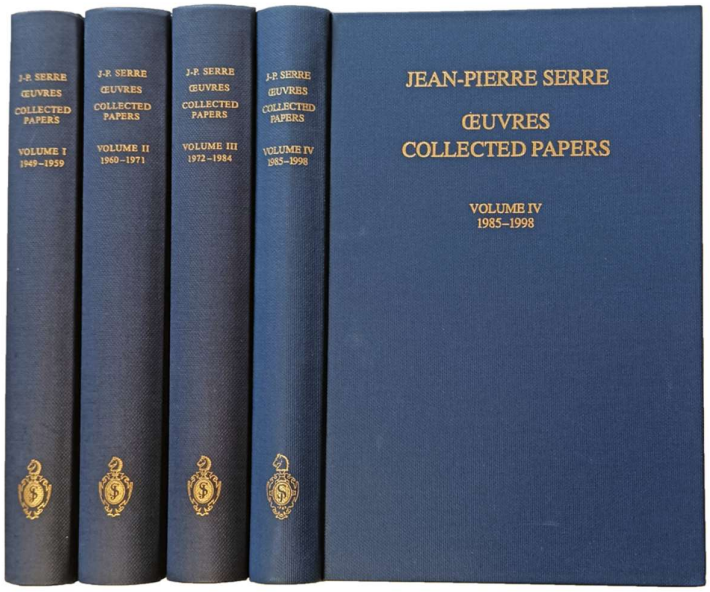



29. **ROQUETTE, Peter J.** (1927-). *Collected papers*. Editors: Anthony V. Geramita & Paulo Ribenboim. Ontario: Kingston University, 2002/3. ¶ 3 volumes. Series: Queen's Papers in Pure and Applied Mathematics, vol. 118, 2002. Large 8vo. [2], XXXVI, 642; [2], II, 518; [2], II, 490 pp. Green printed wrappers. Very good copy. RARE.

$ 200

Collected edition. Peter Roquette is a German mathematician working in algebraic geometry, algebra, and number theory. Roquette studied in Erlangen, Berlin, and Hamburg. Roquette studied in Erlangen, Berlin, and Hamburg. In 1951 he defended a dissertation at the University of Hamburg under Helmut Hasse, providing a new proof of the Riemann hypothesis for algebraic function fields over a finite field (the first proof was given by André Weil in 1940). In 1951/1952 he was an assistant at the Mathematical Research Institute at Oberwolfach and from 1952 to 1954 at the University of Munich. From 1954 to 1956 he worked at the Institute for Advanced Study in Princeton. In 1954 he was Privatdozent at Munich, and from 1956 to 1959 he worked in the same position at Hamburg. In 1959 he became an associate professor at the University of Saarbrucken and in the same year at the University of Tübingen. From 1967 he was professor at the Ruprecht-Karls-University of Heidelberg, where he retired in 1996.



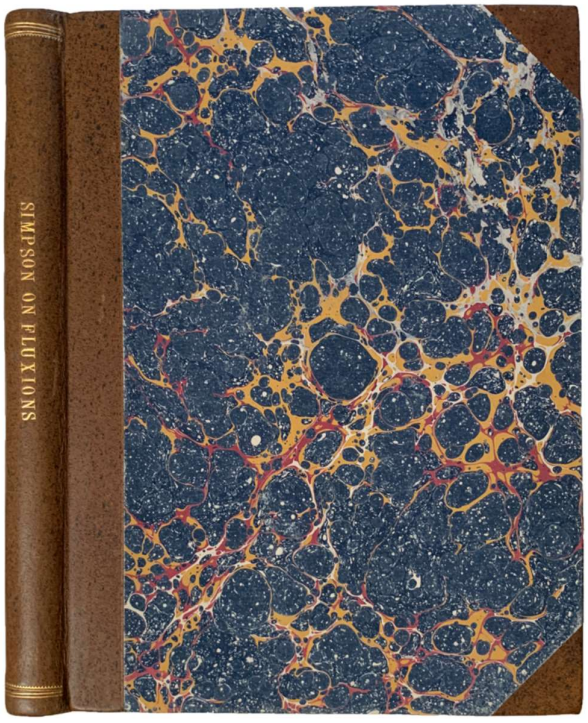


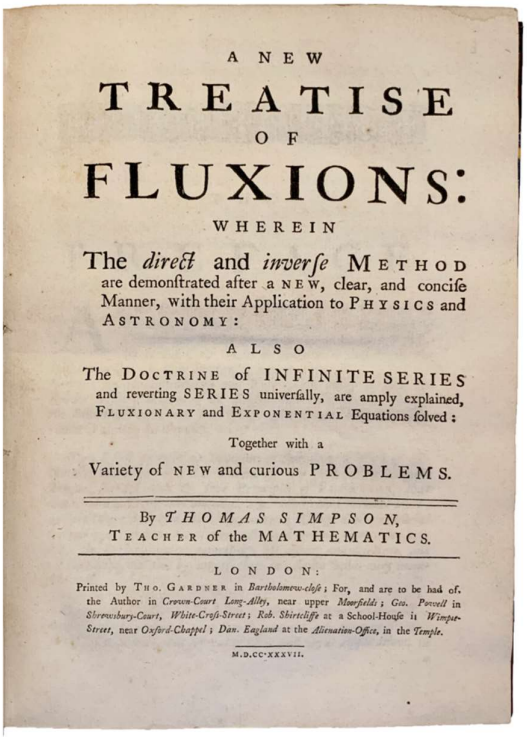
30. **SERRE, Jean-Pierre** (1926-). *Oeuvres; Collected Papers [1949-1998].* Berlin: Springer, 1986. ¶ 4 volumes. 8vo. xviii, 596; iv,740; iv, 728; viii, 657 pp. Original blue gilt-stamped cloth. Rubber-stamp of Jürgen Ritter. Fine.

$ 350

Collected works, with 173 papers.

French mathematician Jean-Pierre Serre made contributions to algebraic topology, algebraic geometry, and algebraic number theory. He was awarded the Fields Medal in 1954 (the youngest ever to receive it), the Wolf Prize in 2000 and the inaugural Abel Prize in 2003.



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FLUXIONS:
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The *direct* and *inverse* METHOD are demonstrated after a NEW, clear, and concise Manner, with their Application to PHYSICS and ASTRONOMY:
ALSO
The DOCTRINE of INFINITE SERIES and reverting SERIES universally, are amply explained, FLUXIONARY and EXPONENTIAL Equations solved:
Together with a
Variety of NEW and curious PROBLEMS.
By *THOMAS SIMPSON*,
TEACHER of the MATHEMATICS.
LONDON:
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M.D.CC.XXXVII.

31. **SIMPSON, Thomas** (1710-1761). *A New Treatise of Fluxions: wherein the direct and inverse method are demonstrated after a new, clear, and concise manner, with their application to physics and astronomy: also the doctrine of infinite series and reverting series universally, are amply explained, fluxionary and exponential equations solved: together with a variety of new and curious problems*. London: Printed by Tho. Gardner ..., 1737. ¶ Small 4to. [2], 216 pp. Signatures: A-3A$^4$ 3B$^2$ Modern antique-style half speckled calf, marbled boards, gilt-stamped spine title. Bookplates of Rev. Thomas Salwey, James Whitbread Lee Glaisher, Sc.D., Francis Galton Laboratory, and formerly owned by Florence Nightingale David, with her initials on the foot of the Galton Labs bookplate. Very rare.

$ 1,750

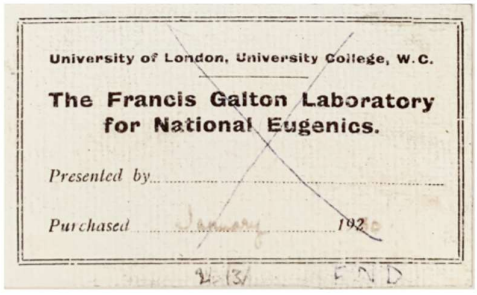
First edition. An important, expanded, second edition, issued with a different title: *The Doctrine and Application of Fluxions*, was published in 1750. This first edition is far more difficult to locate than the second edition. Frank J. Swetz, Pennsylvania State University, wrote, "… in 1750, he released his more comprehensive *The Doctrine and Application of*

*Fluxions*. Better appreciated than its predecessor, the book was considered the best reference on Newton's calculus of the 18th century." "This was a high-quality textbook devoted to the calculus of fluxions, the Newtonian version of the infinitesimal calculus. The topic was advanced -- it was no trivial exercise to write such a book in the 1730s, when the calculus was mastered by only a few mathematicians in Europe." – Niccolò Guicciardini, in *Dictionary of National Biography* (Oxford, 2004).

Thomas SIMPSON (1710-1761), son of a weaver, was an autodidact British mathematician and inventor, became a Fellow of the Royal Society. He is most famous for promulgating "Simpson's rule" which is a method of numerical approximation for a definite integral. He observed the solar eclipse of 1724 and began thus studying mathematics and maintained an interest in astrology and horoscopes. From 1725-1733 he taught at Nuneaton. He married his landlady (much older himself). An odd episode occurred with either he (or an assistant) was clad as the devil – this was not well received and subsequently forced both he and his wife to flee to Derby. His first book, *A New Treatise of Fluxions*, (1737), was an entrée to employment. Later he relocated to London and from 1743 taught mathematics, engineering and fortification at the Royal Military Academy, Woolwich. He was a member of the Spitalfields Mathematical Society, the membership being largely made-up of weavers as per his own original profession. Abraham de Moivre and Simpson both belonged to a group of itinerant lecturers who at night taught at the London coffee houses. Suzuki states that Simpson was "perhaps the most distinguished of the coffee-house teachers." Thus he became aware of de Moivre's work in statistical theory and games of chance. In 1754 he was made editor of the *Ladies Diary*, later editing the *Gentleman's Magazine*, *Miscellanea Curiosa Mathematica* as well as the *Gentleman's Diary*. In 1758 he became a Fellow of the Royal Swedish Academy of Sciences.

PROVENANCE: Rev. Thomas Salwey (ca.1705- after or on 1759), of Ludlow, L.L.D. * Salwey was Rector of Richard's Castle. He married Constance (only daughter of Francis Biddulph) in 1742.
[Note this is not the famous Shropshire Botanist Rev. Thomas Salwey (1791-1877) of the same name].


James Whitbread Lee Glaisher, Sc.D. (1848-1928), Fellow of Trinity College, was a prolific English mathematician and astronomer. He studied at Trinity where he was second wrangler in 1871. "He was also the 'tutor' of the philosopher Ludwig Wittgenstein (tutor being a non-academic role in Cambridge University). He was president of the Royal Astronomical Society 1886-1888 and 1901-1903." See: Hockey, Thomas (2009). *The Biographical Encyclopedia of Astronomers*.



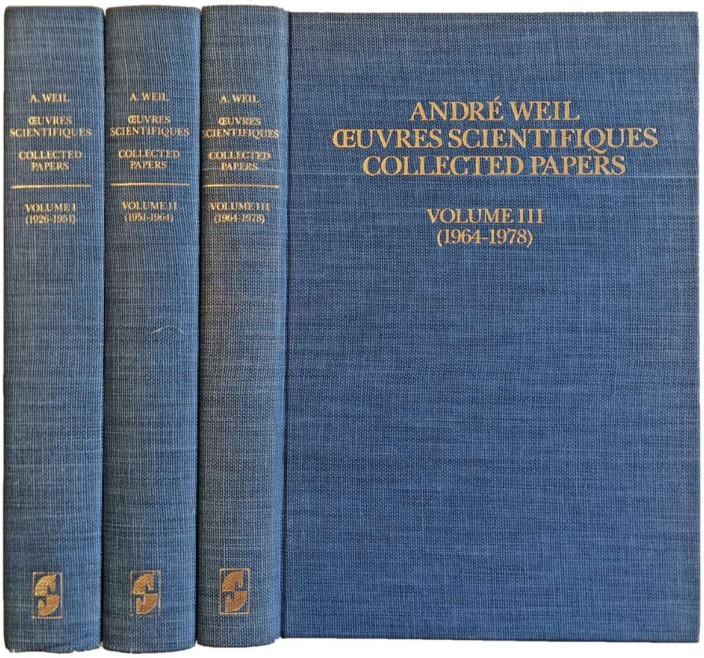

Francis Galton Laboratory. Karl Pearson In the twentieth century Francis Galton and Karl Pearson led the way in developing statistics into a mathematical discipline. This is mentioned partly because the provenance of this copy of Simpson comes from the Francis Galton Laboratory and was likely in the possession of Pearson himself. Indeed he inscribed his name to some of the books in his collection, though not with this volume. The Galton Lab bookplate is present however and the book is further signed with the initials of one of its known researchers, that of Florence Nightingale David (see below).

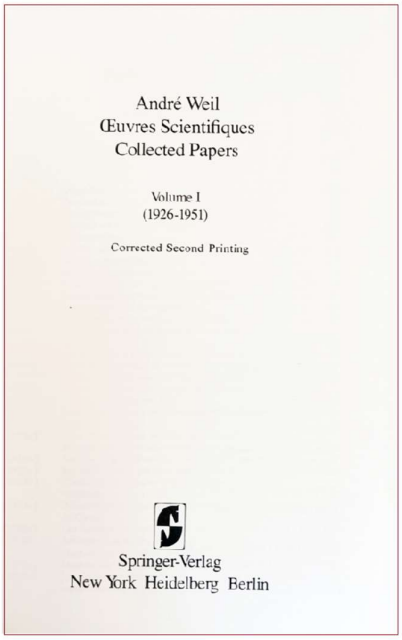
F.N.D. Florence Nightingale David (1909-1993), also known as F. N. David was an English statistician, born in Ivington, Herefordshire, England. She was named after Florence Nightingale, who was a friend of her parents. David did not like her forenames and thus always referred to herself as "F. N. David". She attended Bedford College for Women in London, earning her degree in mathematics in 1931. She then joined University College, London to work with Karl Pearson who obtained a scholarship for her, working as his research assistant, resulting in a

doctorate received in 1938 (Pearson died in 1934). In 1938 her first book was published, *Tables of the Correlation Coefficient*. During that period she was working with Jerzy Neyman. "During World War II she served as Experimental Officer in the Ordnance Board for the Ministry of Supply, Senior Statistician for the Research and Experiments Department for the Ministry of Home Security, Member of the Land Mines Committee of the Scientific Advisory Council, and as Scientific Advisor on Mines to the Military Experimental Establishment. Her work during this time ranged from the study of bombing patterns and damage to the problem of discovering the placement of enemy land mines and a methodology for randomly placing land mines so as to avoid the semblance of any pattern in their placement." [Garber et.al.] After WWII she came back to University College, London, and was appointed professor in 1962. Five or six years later she took a position at the University of California, Riverside, becoming head of the Department of Statistics in 1970. Retiring in 1977 she came to Berkeley and continued her research. This copy of Simpson bears her initials on the Francis Galton Laboratory bookplate; she gave her books to Margaret Stein of Stanford University. See: M. J. Garber D. V. Gokhale J. M. Utts R. J. Beaver, Chair, "Florence Nightingale David, Statistics: Riverside." [Obituary]; "A conversation with F.N. David," Statistical Science, Vol. 4, No. 3,235-246 by Nan Laird; J. Utts, "Florence Nightingale David 1909-1993: Obituary," *Biometrics*, (1993) 49, 1289-1291; Norman L. Johnson & Samuel Kotz (eds.), *Leading Personalities in Statistical Sciences from the Seventeenth Century to the Present*, Wiley, 1997 (pp. 91-92).

See: Blanco, Mónica. "Thomas Simpson: Weaving fluxions in 18th-century London." *Historia Mathematica*, vol. 41 (1) (2014), pp. 38—81. "The main part of this historical paper deals with a comparison of Thomas Simpson's 1737 and 1750 treatises on fluxions, and with their place in the exposition and development of Newtonian calculus in the 18th century. The author highlights some of the differences in emphasis and content between the two works, explaining several of those differences in helpful detail." – Douglas Bridges, Christchurch, New Zealand)

See: Jeff Suzuki, *Mathematics in Historical Context*, 2009, page 242; Frances M. Clarke, *Thomas Simpson and His Times*, (1929); Charles Hutton, "Memoirs of the Life and Writings of the Author," preface within: Simpson's *Select Exercises*, London, 1792. See: Nicholas Hans, *New Trends in Education in the Eighteenth Century,* (1966), p. 190; Florian Cajori, *A History of the Conceptions of Limits and Fluxions in Great Britain, from Newton to Woodhouse*, (1919), pp. 210-11.

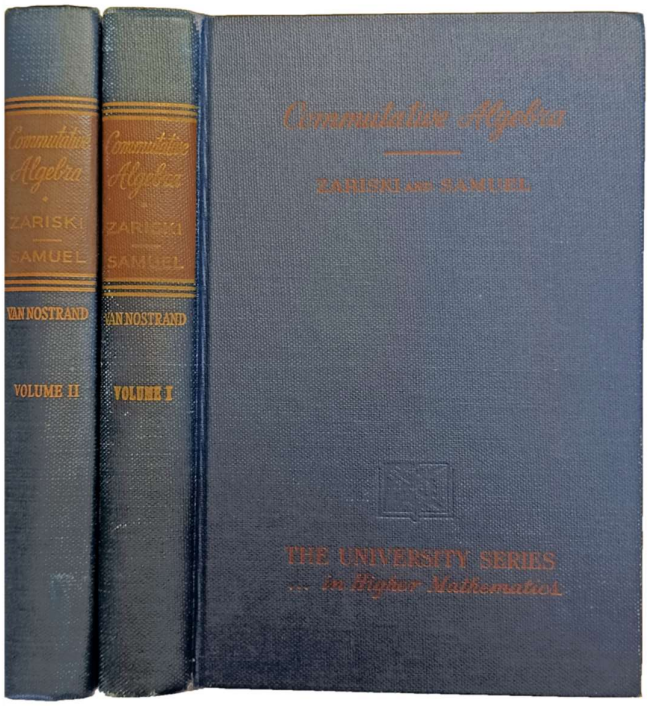


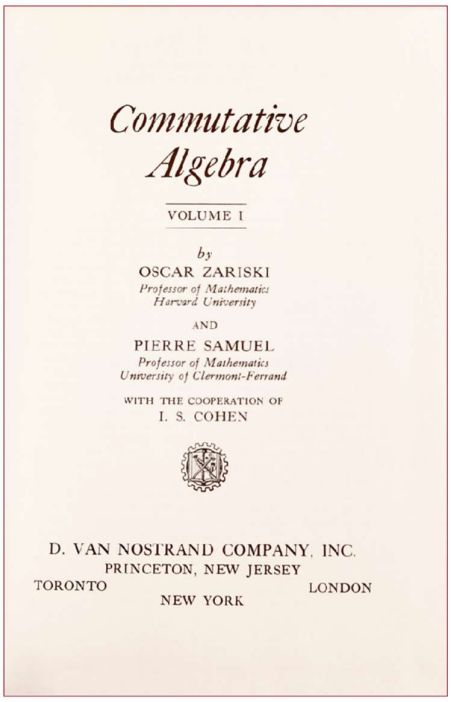




32. **WEIL, André** (1906-1998). *Oeuvres Scientifiques; Collected Papers*. New York: Springer, 1980. ¶ 3 volumes. Second printing, corrected. 8vo. XX, 578; XII, 561; XII, 465 pp. Original blue gilt-stamped cloth. Rubber-stamp of Jürgen Ritter. Fine.

$ 200

André Weil was a French mathematician, known for his foundational work in number theory and algebraic geometry. He was a founding member and the de facto early leader of the mathematical Bourbaki group. Among his numerous accomplishments, and leading an extraordinary life, Weil made substantial contributions in a number of areas, the most important being his discovery of profound connections between algebraic geometry and number theory. Indian (Hindu) thought had great influence on Weil, having lived and studied there for couple of years. He shared the second Wolf [Foundation] Prize in Mathematics with Jean Leray in 1979.





Commutative Algebra

VOLUME I

by
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Professor of Mathematics
Harvard University
AND
PIERRE SAMUEL
Professor of Mathematics
University of Clermont-Ferrand
WITH THE COOPERATION OF
I. S. COHEN

D. VAN NOSTRAND COMPANY, INC.
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TORONTO LONDON
NEW YORK

33. **ZARISKI, Oscar** (1899-1986); **Pierre SAMUEL** (1921-2009). *Commutative Algebra*. Two volumes. Princeton, NJ: D. Van Nostrand, 1963, 1960. ¶ Series: *The University Series in Higher Mathematics*. 2 volumes. 8vo. xi, 329; x, 414 pp. Original navy blue cloth, stamped in brown & gilt. Rubber-stamp of Jürgen Ritter. Very good set.

$ 40

First issued in 1958. Reprinted. The two-volume work *Commutative Algebra* that Pierre Samuel wrote with Oscar Zariski is a classic mathematical work.

Oscar Zariski was a Russian-born American mathematician and one of the most influential algebraic geometers of the 20th century. Zariski emigrated to the United States in 1927 supported by Solomon Lefschetz. He had a position at Johns Hopkins University where he became professor in 1937.

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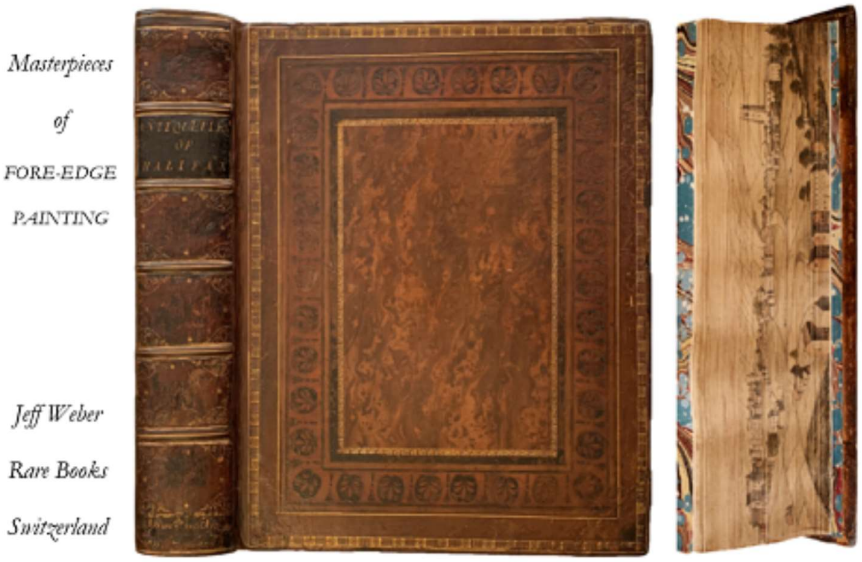


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