SOPHIA **\Scilon** RARE BOOKS

Shortlist – LA 2010

Booth #304

D'ALEMBERT, Jean. *Traité de Dynamique*. 1743. Fine copy in original boards of this landmark in the history of mechanics. <u>PMM 195</u>. \$12,000

BABBAGE, Charles. Observations on the analogy which subsists between the calculus of functions and other branches of analysis. 1817. Rare <u>pre-publication offprint</u> of one of the papers in which he founded the calculus of functions. <u>Inscribed</u> by Babbage. \$4,400

BABBAGE, Charles. On a method of expressing by signs the action of machinery. 1826. First appearance in journal form of his description of his mechanical notation system. Fine, in original boards. \$4,600

BERTRAND, Joseph. *Calcul des Probabilités*. 1888. First edition of his text book on probability theory in which he stated the famous problem later known as 'Bertrand's paradox'. Original cloth-backed boards. \$1,000

BOHR, Niels. On the Quantum Theory of Line-Spectra, I-III. 1918-22. Bohr's major work in which he first formulated his principle of 'correspondence'. A fine set in wrappers. \$5,000

BOHR, Niels. On the Quantum Theory of Line-Spectra, I-III. 1918-22. Scarce set of author's presentation-offprints, first two parts inscribed by Bohr. \$18,500

BOHR, Niels. On the Theory of the Decrease of Velocity of Moving Electrified Particles on Passing Through Matter. 1913. Offprint, <u>inscribed</u> to Henry Moseley, of his first paper on absorption phenomena; a crucial work in the development of his atomic model. \$13,000

BOHR, Niels. *On the Determination of the Tension of a recently formed Water-Surface.* 1910. Offprint, <u>presentation-copy</u> of his second published paper. Inscribed to P.K. Prytz who refereed Bohr's prize winning essay from 1906, to which this paper is a sequel. \$3,000

BOOLE, George. On a General Method in Analysis. 1844. The forerunner of his 'Mathematical Analysis of Logic'. This paper earned Boole the Royal Society's first gold medal in mathematics. Fine, in wrappers. \$1,800

BOUGAINVILLE, Louis Antoine de. *Traité du calcul integral.* 2 vols. 1754-1756. His major treatise on the integral calculus written as a supplement to l'Hôpital's first text on differential calculus. Beautiful copy in contemporary full calf. \$6,500

BOX, George & Gwilym Jenkins. Some statistical aspects of adaptive optimization and control. 1962. Their breakthrough paper on time series analysis, in which they presented the Box-Jenkins methodology - one of the most important statistics papers in modern times. Fine, in wrappers. \$800

CARMICHAEL, Robert. A Treatise on the Calculus of Operations. 1855. The first text devoted exclusively to the calculus of operations, <u>inscribed</u> to one of the main contributors of the field - Sir John Herschel. Original decorated cloth. \$1,000

CARNOT, Lazare. *Géométrie de Position.* 1803. First edition of this important work on synthetic geometry; his main work in mathematics. A fine copy in contemporary calf. \$1,500

CAUCHY, Augustin. *Résumés Analytiques*. 1833. His final résumé of the 'Cours d'analyse'. Contemporary half calf. \$1,100

CAUCHY, Augustin. *Mémoire sur les intégrales définies.* 1827. First edition of this landmark paper, in which he laid the foundations of the general theory of integration in complex analysis. Fine, in contemporary boards. \$3,500

CARRÉ, Louis. *Methode pour la mesure des surfaces, la dimension des solides, leurs centres de pesanteur, de percussion et d'oscillation, par l'application du calcul intégral.* 1700. First edition of the <u>first text on the integral calculus</u>. A fine and large copy in contemporary full calf. \$7,800

CERF, Vinton. & Robert Kahn. A Protocol for Packet Network Intercommunication. 1974. First edition of the most important article in the history of the Internet: Cerf and Kahn's creation of the Transmission Control Program (TCP), the blueprint for the Internet. Wrappers. \$8,500

CESÀRO, Ernesto. *Lezioni di Geometria Intrinseca.* 1896. The work in which he founded the field of intrinsic geometry. A very good copy in contemporary half calf. Scarce. \$1,750

CHASLES, Michel. *Traité de Géométrie Supérieure*. 1852. An interesting copy of his seminal treatise with more than two hundred contemporary manuscript leaves inserted throughout the text. \$1,700

CHASLES, Michel. Traité des Sections Coniques, faisant suite au Traité de Géométrie Supérieure. 1865. The sequel to his 'Géométrie Superiéure'. Contemporary half calf. \$580

CLAUSIUS, Rudolph. Ueber die bewegende Kraft der Wärme und die Gesetze, welche sich daraus für die Wärme selbst ableiten lassen. 1850. First edition of his landmark paper on the mechanical nature of heat; the identification and first statement of the second law of thermodynamics. Fine, in contemporary boards. \$4,600

CORIOLIS, Gaspard-Gustave. Mémoire Sur les principe des Forces vives dans les Mouvemens relatifs de Machines. 1832. His important memoir on acceleration in composite motions. \$1,100

CURIE, Irène. & Frédéric Joliot. *Un Nouveau Type de Radioactivité.* 1934. The paper in which they announced their discovery of artificial radioactivity; the work for which they received the Nobel Prize. \$4,200

DALTON, John. *On the Absorption of Gases by Water and other Liquids.* 1805. Scarce first printing in <u>original boards</u> of the first appearance of Dalton's atomic theory of matter, including the first table of atomic weights and Dalton's law of partial pressures. \$12,000

DANTZIG, George. Linear Programming. 1948. Rare <u>pre-publication</u> copy of this highly important paper in which he founded the field of linear programming and presented his simplex algorithm. Mimeographed typescript. \$5,500

DESCARTES, René. Principia Philosophiae [with] Dissertatio de Methodo. 1644. First edition of this landmark work in the history of physics, bound with the first Latin edition of the 'Discours de la Méthode'. Contemporary vellum. \$14,500

DIRAC, Paul Adrien Maurice. The Quantum Theory of Dispersion. 1927. The third part of his trilogy on quantum electrodynamics. Fine, in wrappers. \$650

DUPIN, Pierre Charles François. Développements de géométrie, avec des applications à la stabilité des vaisseaux, aux déblais et remblais, au défilement, à l'optique, etc. 1813. An important treatise on differential geometry by one of Monge's most distinguished students. A fine copy in contemporary half morocco. \$6,000 **EHRENFEST, Paul.** Bemerkung betreffs der spezifischen Wärme zweiatomiger Gase. 1958. The paper in which he first formulated the 'Adiabatic Hypothesis', which became one of the most important research tools of quantum theory. Fine, in wrappers. \$850

EINSTEIN, Albert. *Die Grundlage der allgemeinen Relativitätstheorie.* 1916. The separate printing of his celebrated exposition of the general theory of relativity. <u>PMM 408</u>. Very good, in wrappers. \$5,000

EINSTEIN, Albert. & Otto Stern. *Einige Argumente für die Annahme einer molekularen Agitation beim absoluten Nullpunkt.* 1913. Scarce author's <u>presentation-offprint</u> of this paper, on the energy of a Planck oscillator, coauthored with Nobel laureate Otto Stern. \$3,250

EINSTEIN, Albert. *Eine Beziehung zwischen dem elastischen Verhalten und der spezifischen Wärme bei festen Körpen mit einatomigen Molekül.* 1911. Scarce author's <u>presentation-offprint</u> of this principal paper on the relation between the elasticity of solids and their specific heat. \$4,000

EINSTEIN, Albert. *Ist die Trägheit eines Körpers von seinem Energieinhalt abhängig?* 1905. His famous paper which led him to the discovery of the equation $E=mc^2$. Contemporary cloth. \$4,500

EINSTEIN, Albert. Theorie der Opaleszenz von homogenen Flüssigkeiten und Flüssigkeitsgemischen in der Nähe des kritischen Zustandes. 1910. Scarce author's <u>presentation-offprint</u> of this major paper in which he explained the phenomenon of critical opalescence. \$5,000

EULER, Leonhard. [Collection of three papers from the St. Petersburg Academy]. 1766-69. Eneström 298, 300, 370. \$900

EULER, Leonhard. Introduction à l'analyse des infiniment petits. 1786. Scarce first translation of his great work, which is the first to contain Condorcet's eulogy of Euler. Fine, contemporary calf. \$1,700

EULER, Leonhard. Scientia Navalis seu Tractatus de Construendis ac Dirigendis Navibus. 2 vols. 1749. His first large work on fluid mechanics. A very good copy in contemporary full calf. \$11,500

EULER, Leonhard. Vol. 7 of 'Miscellanea Berolinensia' which contains five of Euler's rarest papers. 1743. Including his major work on sums of series of reciprocals. Eneström 58-62. Contemporary boards. \$8,800

FARADAY, Michael. Experimental Researches in Electricity: 1. On the induction of electric currents; 2. On the evolution of electricity from magnetism; 3. On a new electrical condition of matter; 4. On Arago's magnetic phenomena. 1832. Faraday's greatest paper, reporting his discovery of the means for generating electricity by electro-magnetic induction. Original wrappers, fine. \$8,800

FERMI; D'Agostino; Rasetti; Segrè. Artificial Radioactivity produced by Neutron Bombardment. 1934. The first detailed account of the ground breaking experiments made by Fermi and his team on neutron bombardment of Uranium. Fine, in wrappers. \$900

FERNEL, Jean. *De Proportionibus Libri Duo.* 1528. First edition of one of the best sixteenth-century treatises on the mediaeval proportion. Nineteenth century half calf. Bookplate of the Macclesfield library. \$8,000

FEYNMAN, Richard. Space-Time Approach to Quantum Electrodynamics. 1949. First announcement of the author's famous graphical formalism, i.e. Feynman Diagrams. Fine, in wrappers. \$3,800

FOWLER, Hoyle; E. & G. Burbidge. Synthesis of the Elements in Stars.1957. The seminal B^2FH review paper on the origin of the elements; a
milestone in modern astrophysics. Wrappers.\$1,100

FRESNEL, Augustin-Jean. *Mémoire Sur la Diffraction de la lumière.* 1819. His famous prize winning essay on the wave nature of light. Contemporary half calf. \$1,200

FRISCHAUF, Johann. *Elemente der Absoluten Geometrie.* 1876. The first exposition of non-Euclidean geometry to include the work of Beltrami, Riemann, and Helmholtz. \$700

GAUSS, Carl Friedrich. Untersuchungen über Gegenstände der höhern Geodaesie, I-II. 1844-46. Offprint of his classic work on surface geometry. Fine, in wrappers. \$2,500

GODDARD, Robert. *A Method of Reaching Extreme Altitudes.* 1919. First edition of his seminal work on the mathematics of rocket propulsion; the first separate publication on rocketry by the Father of Modern Rocketry. From the collection of <u>Harrison D. Horblit</u>. Wrappers. \$9,000

HEISENBERG, Werner. Über Stabilität und Turbulenz von Flüssigkeitsströmen. 1924. <u>Offprint</u> of his dissertation, on fluid dynamics, inscribed to one of the main contributors of the field - Hilding Faxén. \$5,000

HEISENBERG, W. & H.A. Kramers. Über die Streuung von Strahlen durch Atome. 1925. Offprint of their important paper on dispersion theory. Wrappers. \$1,350

HILBERT, **David**. *Grundzüge einer Allgemeinen Theorie der Linearen Integralgleichungen*. 1912. First book form edition of his ground breaking work on integral equations which lead to the development of Hilbert Spaces. <u>Inscribed</u> by Hilbert to the great number theorist Edmund Landau. \$3,250

HIRE, Philippe de la. Sectiones conicae, in novem libros distributae. 1685. First edition of this major treatise in which he proved all 364 theorems of Apollonius on conic sections using the projective methods of Desargues. Folio. Uncut in old boards. \$9,500

HODGKIN, Dorothy. *The structure of vitamin* B_{12} . *Part I-VI.* 1957-64. The papers in which she gave the first detailed description of the structure of vitamin B_{12} . Hodgkin was awarded the 1964 Nobel Prize in Chemistry for this work. A fine set in wrappers. \$1,400

L'HÔSPITAL, Marquis de. *Traité analytique des sections coniques*. 1707. First edition of the most important text-book in analytical geometry at the end of the 17th century. Fine copy in contemporary full calf. \$2,500

HUBBLE, Edwin. A Relation between Distance and Radial Velocity among Extra-Galactic Nebulae. 1929. The celebrated paper in which Hubble first formulated his law on the expansion of the universe. Contemporary cloth. \$5,500

JANSKY, Karl. 1. Directional Studies of Atmospherics at High Frequencies; 2. Electrical Disturbances Apparently of Extraterrestrial Origin; 3. Minimum Noise Levels Obtained on Short-Wave Radio Receiving Systems. 1932-1937. The three founding papers of radio astronomy. A fine set in wrappers. \$3,800

LAMBERT, Johann. *Die freye Perspektive*. 1759. His second book; a masterpiece in descriptive geometry. Contemporary half vellum. \$3,000

LANDAU, Edmund. Neuer Beweis der Gleichung $\sum \mu(k)/k=0.$ 1899. His dissertation inscribed to renowned engineer Hans Jocob Reissner. \$900

LACROIX, Silvestre-François. Traité élémentaire du calcul des probabilités. 1816. His influential text book on probability - being the first exposition of Laplace's 'Théorie analytique des probabilités'. \$1,000

LEGENDRE, **Adrien Marie**. *Essai sur la théorie des nombres*. 1798. The first book entirely dedicated to number theory. Contemporary calf. \$5,200

LEBESGUE; Borel, Baire, Boutroux. [A fine 'sammelband' of first editions from "Collection de Monographies sur la Théorie des Fonctions"]. 1904-1910. Seven works on the theory of functions. Several stamped 'Homage de l'Auteur et de l'Editeur'. In two fine half calfs. \$900

MEITNER, Frisch, Von Halban, Joliot & Kowarski.

1. Disintegration of Uranium by Neutrons; 2. Physical Evidence for the
Division of Heavy Nuclei;3. Liberation of Neutrons in the Nuclear
Explosion of Uranium. 1939. PMM 422 (b,c,d). The three seminal papers on
nuclear fission. Publisher's cloth.\$1,700

MITTAG-LEFFLER, Gösta. Sur la représentation analytique des fonctions monogènes uniformes d'une variable indépendante. 1884. Presentation-copy of his masterpiece; the Mittag-Leffler theorem. \$900

MONGE, Gaspar. *Géometrie descriptive.* 1798. First separate printing of his great treatise, through which he founded the modern theory of descriptive geometry. Contemporary vellum, uncut. \$6,500

MORGENSTERN, Oscar. Prolegomena to a Theory of Organization. Project RAND. 1951. Scarce original printing of this pioneering work on social organization, which was based on the author's earlier work together with von Neumann on the theory of games. Mimeographed typescript. \$5,000

NEWTON, Isaac. Opticks: or, a Treatise of the Reflections, Refractions, Inflections and Colours of Light. 1718. Second edition (second issue), to which Newton added fifteen additional queries - including the celebrated Query 28 on the nature of light. Contemporary calf. \$5,800

PAULI, Wolfgang. Über den Zusammenhang des Abschlusses der Elektronengruppen im Atom mit der Komplexstruktur der Spektren. 1925. The paper in which he formulated his 'exclusion' principle' – the work for which he received the Nobel Prize. Contemporary Half cloth. \$2,800

PAULING, Linus. The Crystal Structure of Molybdenite. [and seven other papers]. 1923-1954. Eight offprints, including his first published paper. \$1,100

POINCARÉ, **Jules Henri**. *La Science et l'Hypothèse*. 1902. First edition of this classic in the philosophy of science. Half cloth. \$1,700

POISSON, Siméon-Denis. Suite du mémoire sur les intégrales définies. 1820. First edition of his important paper on the foundation of complex function theory. Contemporary half calf. \$850

PONCELET, Jean-Victor. *Traité des propriétés projectives des figures.* 1822. The beginning of the modern study of projective geometry. A very good copy in contemporary half calf. \$2,500

PRIESTLEY, Joseph. Observations on Different Kinds of Air. 1772. First printing of his major paper which includes the first description of photosynthesis. <u>PMM 217</u>. Contemporary calf. \$4,000

ROSENBLATT, Frank. *The Perceptron: A Perceiving and Recognizing Automaton. (Project PARA).* 1957. Scarce first printing of the first report on his pioneering work on neural networks and artificial intelligence. \$7,500

ROSENBLATT, Frank. 1. The Perceptron: A Probabilistic Model for Information Storage and Organization in the Brain; 2. The Design of an Intelligent Automaton; 3. Two Theorems of Statistical Separability on the Perceptron. 1958. Three exceptional and rare offprints of his first journalpapers on the perceptron. \$7,500

SCHWARTZ, Laurent. *Théorie des Distributions.* 1950-51. Wrappers. His classic text on distribution theory. Schwartz received the Fields Medal for having founded the field of distributions. Fine, in wrappers. \$850 SHANNON, Claude Elwood. A Mathematical Theory of Communication. I-II. 1948. The founding paper of information theory. A fine set in wrappers. \$3,200

STURM, Rudolph. Synthetische Untersuchungen über Flächen dritter Ordnung. 1867. First edition of his first work on synthetic geometry. Contemporary half cloth. \$950

TURING, Alan. *Computing Machinery and Intelligence*. 1950. His paper on artificial intelligence in which he first described his famous "Turing test" for whether a machine can think. Wrappers. \$2,900

TURING, Alan. On Computable Numbers, with an Application to the Entscheidungsproblem. 1936-7. First edition of arguably the single most important theoretical work in the history of computing. Vol. 42 and 43 of the *Proceedings* bound in two later cloth. \$14,500

ULAM, Stanislaw. & Nicholas Metropolis. *The Monte Carlo Method.* 1949. Rare <u>pre-publication</u> copy of the first public account of the Monte Carlo method; one of the most important techniques in modern day numerical methods. Mimeographed typescript. \$3,600

VALLÉE, Louis Léger. Traité de la géométrie descriptive. 1819. First edition of this treatise on descriptive geometry, in which Vallée presented the results of his teacher Monge in a form useful to artists. Fine copy in two contemporary half calf. \$6,250

VON NEUMANN, John. *Mathematische Grundlagen der Quantenmechanik.* 1932. First edition of his classic text on quantum mechanics. A very good copy in publisher's cloth. \$2,000

WALD, Abraham. & Harold Freeman. Sequential Analysis of Statistical Data: Theory [with] Applications [with] Sequential Tests of Statistical Significance. 1943-44. An exceptional set of the three classified reports in which Wald's groundbreaking work was first announced; one of the most important developments in the history of statistics. \$10,000

WALD, Abraham. 1. Sequential Tests of Statistical Hypotheses; 2. On Cumulative Sums of Random Variables. 1945. The journal papers, in which he for the first time described sequential analysis publicly. Wrappers, mint. \$1,250

WEBER, Heinrich Martin. *Lehrbuch der Algebra.* 1895-96. First edition of his famous algebra text – the standard work for several decades. A fine set in contemporary half calf. \$1,300

WATSON, James. & Francis Crick. *Molecular Structure of Nucleic Acids*. 1953. Offprint of the three papers announcing the discovery of the structure of DNA. \$15,500

WEIERSTRASS, Karl. Zur Theorie der eindeutigen analytischen Functionen. 1876. His important paper on complex analysis, in which he gave his representation theorem – the 'Weierstrass theorem'. \$650

WEYL, Hermann. *Raum, Zeit, Materie.* 1918. His highly influential text on the theory of general relativity. Original cloth backed boards. \$1,100

WILES, Andrew. & Richard Taylor. Modular elliptic curves and Fermat's Last Theorem. [with] Ring-theoretic properties of certain Hecke algebras. 1995. First printing of their celebrated proof of Fermat's Last Theorem, <u>signed by Wiles</u> on the title-page. Wrappers, mint. \$2,850

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