Academic Genealogy

of Alysson M. Costa

309 scholars across 58 generations of advisors and students.
Names in **red** are described in the margins.

Data: Mathematics Genealogy Project, a service of North Dakota State University and the American Mathematical Society · mathgenealogy.org · retrieved November 2026

THE ISLAMIC WORLD

Ibn Sina (Avicenna) *c. 980–1037*
The Canon of Medicine, a standard medical text for centuries; the leading philosopher of the Islamic world.

Omar Khayyam *1048–1131*
Geometric solutions of cubic equations; reform of the Persian calendar; poet of the *Rubaiyat*.

Nasir al-Dīn al-Ṭūsī *1201–1274*
Founded the Maragheh observatory; the Tusi couple; trigonometry as a field in its own right.

MEDIEVAL AND RENAISSANCE EUROPE

Nicole Oresme *c. 1320–1382*
Graphed varying quantities centuries before Descartes; proved that the harmonic series diverges.

Luca Pacioli *c. 1445–1517*
Summa de arithmetica (1494), the first published account of double-entry bookkeeping.

Desiderius Erasmus *c. 1466–1536*
Leading humanist of the Renaissance; first published edition of the Greek New Testament (1516).

Nicolaus Copernicus *1473–1543*
De revolutionibus (1543): the Sun, not the Earth, at the centre of the planetary system.

Andreas Vesalius *1514–1564*
De humani corporis fabrica (1543), the founding work of modern anatomy.

THE SCIENTIFIC REVOLUTION

Marin Mersenne *1588–1648*
Mersenne primes; the laws of vibrating strings; the letter exchange at the centre of European science.

Christiaan Huygens *1629–1695*
Wave theory of light; the pendulum clock; discovered Titan; the first printed book on probability.

Gottfried Wilhelm Leibniz *1646–1716*
Co-invented the calculus and gave it the notation still in use; binary arithmetic.

Pierre Varignon *1654–1722*
Varignon's theorem on moments of forces; an early champion of the calculus in France.

Jacob Bernoulli *1655–1705*
Ars Conjectandi and the law of large numbers; discovered the constant *e*.

Johann Bernoulli *1667–1748*
Posed the brachistochrone problem, which launched the calculus of variations; teacher of Euler.

THE ENLIGHTENMENT

Leonhard Euler *1707–1783*
The most prolific mathematician in history; the Königsberg bridges and the birth of graph theory.

Mikhail Lomonosov *1711–1765*
Russian polymath; observed the atmosphere of Venus; helped found Moscow University.

Jean le Rond d'Alembert *1717–1783*
The wave equation; d'Alembert's principle in mechanics; co-editor of the *Encyclopédie*.

Joseph-Louis Lagrange *1736–1813*
Analytical mechanics; Lagrange multipliers; the calculus of variations.

Pierre-Simon Laplace *1749–1827*
Celestial mechanics; Laplace's equation and transform; the analytic theory of probability.

THE NINETEENTH CENTURY

Joseph Fourier *1768–1830*
The heat equation and Fourier series; an early elimination method for linear inequalities.

Carl Friedrich Gauss *1777–1855*
Disquisitiones Arithmeticae; least squares; Gaussian elimination; the normal distribution.

Siméon Denis Poisson *1781–1840*
The Poisson distribution; Poisson's equation in potential theory.

Augustin-Louis Cauchy *1789–1857*
Rigorous foundations for analysis through limits and continuity; complex function theory.

Nikolai Lobachevsky *1792–1856*
Hyperbolic geometry, the first published non-Euclidean geometry.

Carl Gustav Jacob Jacobi *1804–1851*
Elliptic functions; the Jacobian; a method for the assignment problem a century before the Hungarian algorithm.

Peter Gustav Lejeune Dirichlet *1805–1859*
Primes in arithmetic progressions; the modern idea of a function; the pigeonhole principle.

Robert Bunsen *1811–1899*
Spectroscopy with Kirchhoff; discovered caesium and rubidium; the Bunsen burner.

Pafnuty Chebyshev *1821–1894*
Chebyshev's inequality and polynomials; founder of the St Petersburg school of mathematics.

Gustav Kirchhoff *1824–1887*
Circuit laws; the matrix-tree theorem for counting spanning trees; laws of spectroscopy.

Rudolf Lipschitz *1832–1903*
Lipschitz continuity, the condition behind existence and uniqueness of ODE solutions.

Felix Klein *1849–1925*
The Erlangen programme, unifying geometries through their symmetry groups; the Klein bottle.

Andrei Markov *1856–1922*
Markov chains, the foundation of modern stochastic processes.

David Hilbert *1862–1943*
The 23 problems of 1900; the axioms of geometry; Hilbert spaces.

THE TWENTIETH CENTURY

Sergei Bernstein *1880–1968*
Bernstein polynomials; solved Hilbert's nineteenth problem; an early axiomatisation of probability.

Wacław Sierpiński *1882–1969*
The Sierpiński triangle and carpet; deep work in set theory and number theory.

Richard Courant *1888–1972*
The CFL condition; early ideas behind finite elements; founded the Courant Institute.

Jerzy Neyman *1894–1981*
The Neyman–Pearson lemma; confidence intervals; the theory of survey sampling.

Wassily Leontief *1905–1999*
Input-output analysis of national economies; Nobel Prize in Economics, 1973.

George B. Dantzig *1914–2005*
The simplex method and linear programming; Dantzig–Wolfe decomposition; the 49-cty TSP (1954).

Robert Solow *1924–2023*
The neoclassical growth model; Nobel Prize in Economics, 1987; *Linear Programming and Economic Analysis*.

Ailsa Land *1927–2021*
Branch and bound, with Alison Doig (1960); Britain's first female professor of operational research.

Doctoral students, with year of completion

Claudia Fink *2012*
Mayron Moreira *2015*
Felipe Araújo *2016*
Landir Saviniec *2017*
Cheng Cheng *2018*
Simon Bowly *2019*
Pedro Castellucci *2019*
Ashwani Kumar *2019*
Chaojie Guo *2020*
Sebastian Puschel *2021*
Pamela Cortez *2024*
Daniel Bustos-Coral *2024*
Adalberto Michels *2024*
Kelvin Liu *2025*

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