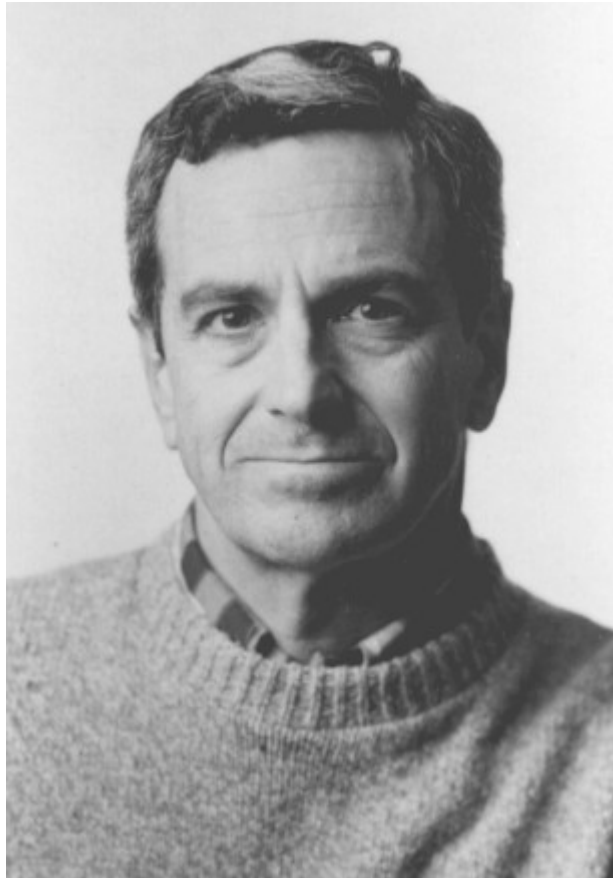


Self-Similar Processes: Names and Faces



John W Lamperti (1932 – 2024), American mathematician

Ph.D. *On the Asymptotic Behavior of Recurrent and "Almost Recurrent" Events* (CalTech 1957, advisor Frank Ludvig Spitzer)

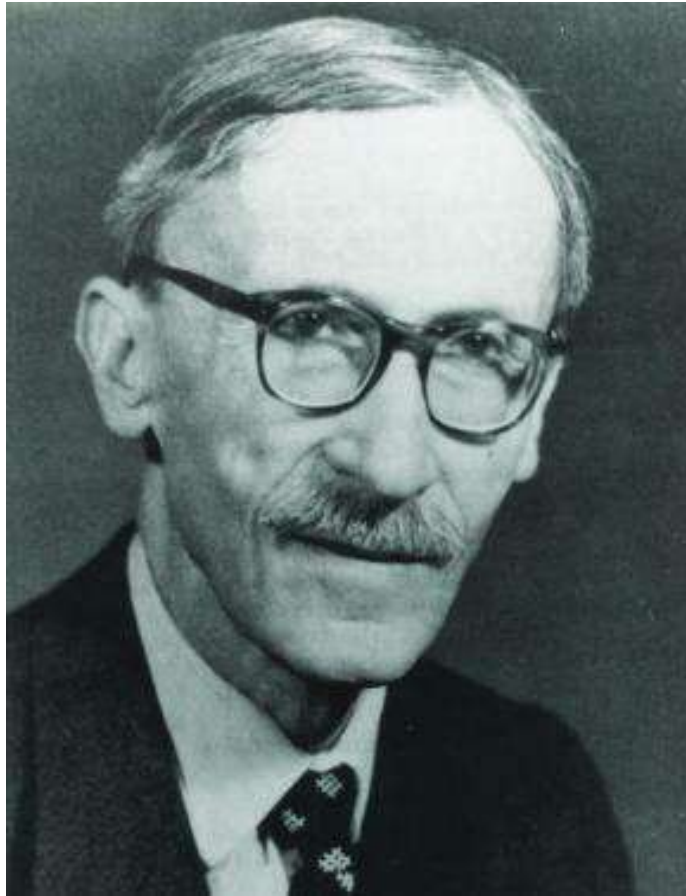
Math Career: CalTech → Stanford → Rockefeller U → Dartmouth (1963 on)

Academic Output: 48 publications/1260 citations [MathSciNet],

5 students and 48 descendants [<https://www.mathgenealogy.org>]

The paper Semi-stable stochastic processes. *Trans. Amer. Math. Soc.* 104 (1962), 62–78 introduced what we now call self-similar processes; the term *self-similar* was introduced by Mandelbrot later (in the 1970-s).

Other activities: politics and social justice.



Paul Pierre Lévy (1886 – 1971)

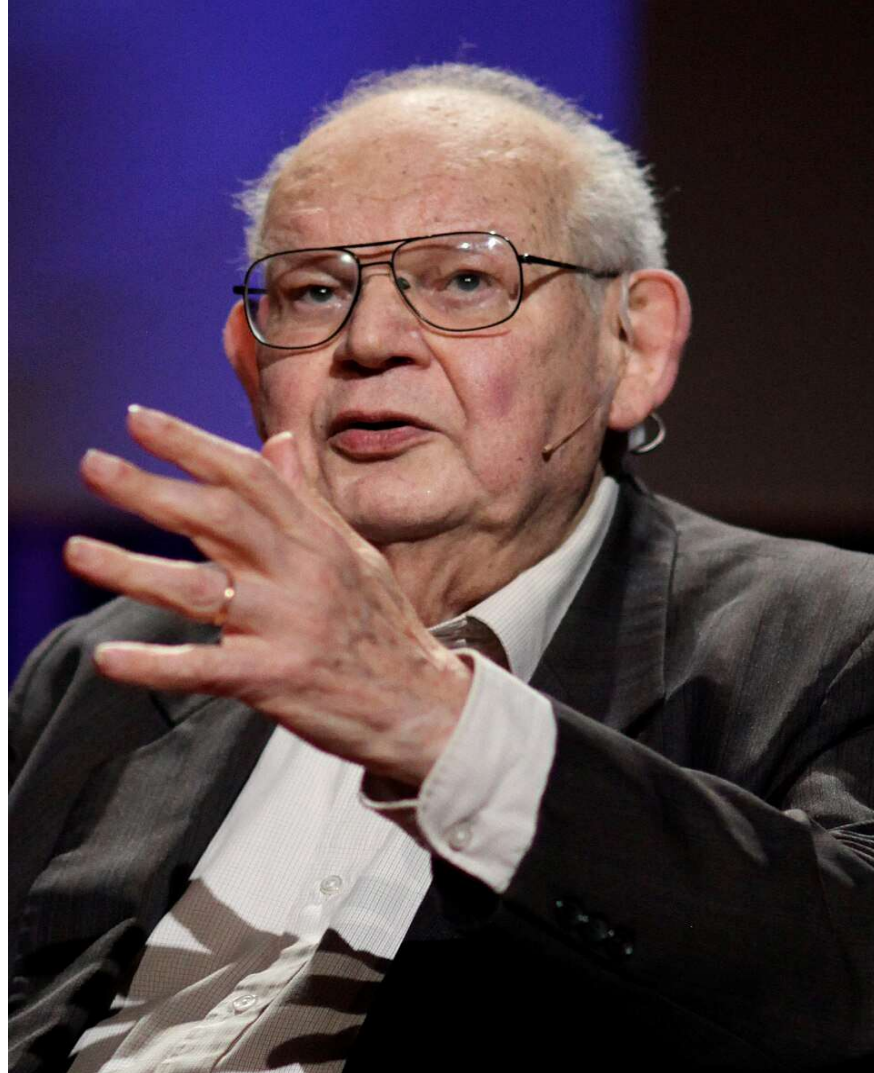
Docteur ès Sciences: 1912

Dissertation: *Sur les equations intégrro-differentielles définissant des fonctions de lignes*

The Committee: Émile Picard, Henri Poincaré and Jacques Hadamard

Notable Ph.D. Students: Wolfgang Doeblin, Michel Loève, Benoît Mandelbrot (of fractal fame)

According to Michel Loève, Paul Lévy was a painter in the probabilistic world. Like the very great painting geniuses, his palette was his own and his paintings transmuted forever our vision of reality. ... His three main, somewhat overlapping, periods were: the limit laws period, the great period of additive processes and of martingales painted in pathtime colours, and the Brownian pathfinder period.



Benoit B. Mandelbrot (November 20, 1924 – October 14, 2010) was a Polish-born French-American mathematician and polymath

Ph.D. Université de Paris, 1952, advisor Paul Lévy

Dissertation: *Contribution à la théorie mathématique des communications*

Career: IBM Watson Research Center (1958 – 1993), Yale (1987 – 2005)

Fractal: 1975

Mandelbrot set: 1979 – 1980.

Other details: master's degree in aeronautics from CalTech (1947 – 1949)

Also: mathematician Szolem Mandelbrojt (student of Hadamard and advisor of Agmon, Malliavin, Kahane, and Katznelson), was his uncle.



Mark (Marek) Kac (August 3, 1914 – October 26, 1984) was a Polish-American mathematician.

Ph.D. Polish University of Lwów, 1937, advisor Hugo Steinhaus

Math Career: Cornell (1939-1961) → Rockefeller U (1961-1981) → **USC**

Known for (among many other things): Feynman–Kac formula, ‘Can you hear the shape of the drum?’

Ph.D Students: Harry Kesten, Murray Rosenblatt, Daniel Stroock.



Murray Rosenblatt (September 7, 1926 – October 9, 2019)

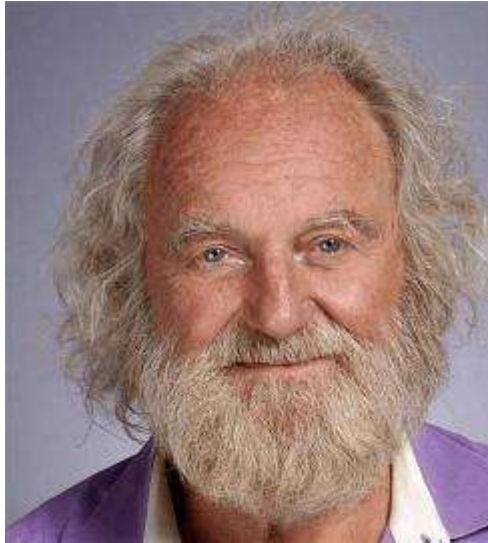
Ph.D. Cornell University, 1949, advisor Mark Kac.

Dissertation: *On Distributions of Certain Wiener Functionals*

Math Career: U Chicago → Indiana → Brown → UCSD (from 1964 on)

Academic Output: 178 publications/2517 citations [MathSciNet],
22 students and 139 descendants [<https://www.mathgenealogy.org>]

Rosenblatt process: "Independence and Dependence" (*Berkeley Symposium*, 1961)



Adriano Mario Garsia (August 20, 1928 – October 6 2024)

Ph.D. Stanford, 1957, advisor Charles Loewner.

Dissertation: *On Surfaces with a Rectilinear Geodesic Circle*

Math Career: MIT → Minnesota → CalTech → UCSD (from 1966 on)

Academic Output: 129 publications/2957 citations [MathSciNet],
36 students, over 57 years, and 223 descendants
[<https://www.mathgenealogy.org>]

Also: born in Tunis; most recent Ph.D. student and most recent book in 2021



Gennady Samorodnitsky (born September 12, 1957)

Ph.D. Technion, 1986, advisor Robert Adler.

Dissertation: *Bounds on the Supremum Distribution of Gaussian Processes - Metric Entropy Approach*

Math Career: UNC Chapel Hill → BU → Cornell

Academic Output: 180 publications/3066 citations [MathSciNet],
7 students (9 on CV) and 12 descendants [<https://www.mathgenealogy.org>]

Also Graduated from Moscow Steel and Alloys Institute, 1978; currently Charles W. Lake, Jr. **Professor in Productivity** AND Associate Director, Undergraduate Studies at the School of Operations Research and Information Engineering



Charles Hermite (French pronunciation: [ʃaʁl ɛʁ'mit])

(December 24, 1822 – January 14, 1901) worked in analysis, number theory, and algebra. One of his most remarkable achievements was the proof of the transcendence of the number e (1873)

Ph.D. Advisor: Eugène Charles Catalan (1848?)

Notable Students: Padé, Poincaré, Stieltjes

Hermite Polynomials: 1864



Murad Salman Taqqu (b. 1942)

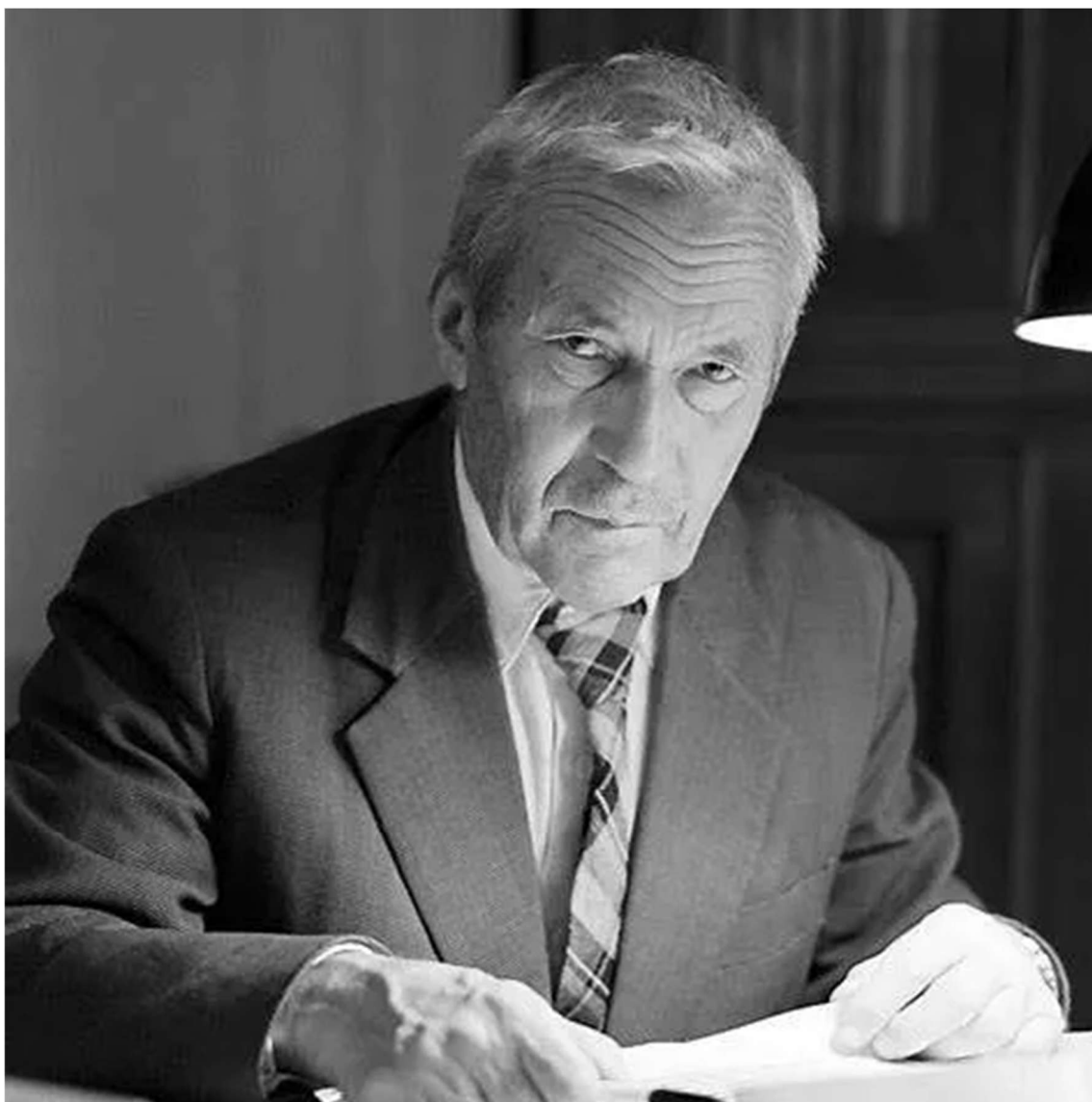
Ph.D. Columbia University, 1972. Advisor Benoit Mandelbrot

Dissertation: *Limit Theorems for Sums of Strongly Dependent Random Variables*

Math Career: Hebrew U/Wiezmänn → Cornell (1974-1986) → Boston U (from 1985 on)

Academic Output: 236 publications/5162 citations and counting [MathSciNet],
15 students and 47 descendants [<https://www.mathgenealogy.org>]

Other details: born in Baghdad, grew up in Switzerland, studied in EPFL (1961-1966);
fluent in French, German, Hebrew, Italian, Arabic [from his CV].



Andrey Nikolaevich Kolmogorov (April 25 1903 – October 20, 1987)

Ph.D. Moscow State University, 1935, advisor N. N. Luzin.

Math Career: Moscow State University

Academic Output: 244+218 publications/7020 citations [MathSciNet],

82 students and 4657 descendants [<https://www.mathgenealogy.org>]

fBM: Wiener'sche Spiralen und einige andere interessante Kurven im Hilbertschen Raum.

(German) *C. R. (Doklady) Acad. Sci. URSS (N.S.)* [26](#) (1940), 115–118

Some of the students: Arnold, Barenblatt, Dobrushin, Dunkin, Gelfand, Gnedenko, Minlos, Nikolsky, Prokhorov, Sinai, Shiryaev, Zolotarev.



Yakov Grigorevich Sinai (b. September 21, 1935)

Ph.D. Moscow State University, 1960, advisor A. N. Kolomogorov.

Math Career: Moscow State University → Landau Institute → Princeton

Academic Output: 278+45 publications/6950 citations [MathSciNet],
40 students and 453 descendants [<https://www.mathgenealogy.org>]

Some of the students: Jitomirskaya, Kifer, Margulis, Mattingly, Oseledets, Soshnikov.

Also: Abel Prize (2014)



Harry Kesten (November 19, 1931 – March 29, 2019)

Ph.D. Cornell University, 1958, advisor Mark Kac.

Dissertation: *Symmetric Random Walks on Groups*

Math Career: Princeton U → Hebrew U → Cornell (from 1961 on)

Academic Output: 193+16 publications/5782 citations [MathSciNet],
18 students and 160 descendants [<https://www.mathgenealogy.org>]

Other details: born in Germany, grew up in the Netherlands, studied chemistry and theoretical physics; did Ph.D. in two years (?)

Most recent publication: Kesten, Harry; Sidoravicius, Vladas; Vares, Maria Eulália Oriented percolation in a random environment. *Electron. J. Probab.* 27 (2022), Paper No. 82, 49 pp.



Frank Ludvig Spitzer (July 24, 1926 – February 1, 1992)

Ph.D. University of Michigan, 1953, Donald A. Darling [Caltech Ph.D. 1947].

Dissertation: *On the Theory of the Stochastic Processes Which Appear in the Description of Two Dimensional Brownian Motion By Polar Coordinates*

Math Career: CalTech → Minnesota → Cornell (from 1961 on)

Academic Output: 51+8 publications/2358 citations [MathSciNet],

15 students and 113 descendants [most through Lamperti]
[<https://www.mathgenealogy.org>]

Other details: born in Austria, spent WWII in Sweeden, served in the US Army; did ``progressive Ph.D.” (?)

Most recent publication: Durrett, Rick; Liggett, Thomas M.; Spitzer, Frank; Sznitman, Alain-Sol *Interacting particle systems at Saint-Flour. Probability at Saint-Flour. Springer, Heidelberg, 2012. viii+331 pp.*

Also: academic grandfather of Richard Arratia [through **David Scott Griffeth**]



Harold Edwin Hurst (January 1, 1880 – December 7, 1978)

(the picture is from 1953)

British hydrologist from Leicester. Worked in Egypt for 62 years, starting in 1906. Hurst parameter (1951) is one of the results of this work.



Paul Embrechts (b. 1953)

D. Sc. Catholic University of Leuven, Belgium, 1979, advisor Jozef Lodewijk Teugels

Dissertation: *Characterization Theorems and Subexponential Distributions. Applications in Probability Theory*

Math Career: Leuven → ICL → Limburg → ETH (1989 on; ret. 2018)

Academic Output: 111+7 publications/4284 citations [MathSciNet],
38 students and 176 descendants [<https://www.mathgenealogy.org>]

Notable students: Patric Cheredito, Claudia Klüppelberg

Other details: 216 publications on CV (not including those in Dutch), but only 28 students; CV last updated Dec. 1, 2025 and includes home address.

Makoto Maejima

120 publications/1151 citations [MathSciNet], starting **1971**.

no information on [<https://www.mathgenealogy.org>]

Current position: Professor Emeritus at Keio University (a private research university in Tokyo)

Ciprian A. Tudor

176 publications/1877 citations [MathSciNet], starting **1999**.

3 students and no other information on [<https://www.mathgenealogy.org>]

Current position: Professor at University of Lille



William Ted Martin (June 4, 1911 – May 30, 2004)

Ph.D. University of Illinois at Urbana-Champaign, 1934

Dissertation: *On Expansions in Terms of a Certain General Class of Functions*

Math Career: Princeton → MIT (from 1936 on)

Academic Output: 34+4 publications/840 citations [MathSciNet],
4 students and 5 descendants [<https://www.mathgenealogy.org>]

Other details: Department chair at MIT 1947-1968; chair of the Steering Committee of the Education Development Center's African Mathematics Program [and some other Steering Committees as well]

Also: after retiring to Block Island, he spearheaded an effort to have affordable housing built for year-round residents; the resulting group of four houses were designated the "William Ted Martin Housing"

Robert Horton Cameron (May 17, 1908 – July 17, 1989)

Ph.D. Cornell, 1932

Dissertation: *Almost Periodic Transformations*

Math Career: Princeton → MIT → Minnesota (from 1945 on)

Academic Output: 64 publications/1188 citations [MathSciNet],
35 students and 119 descendants [<https://www.mathgenealogy.org>]

Notable students: Donsker (1949), Kuelbs (1965)

Most recent publication: Cameron, R. H.; Storvick, D. A. Feynman integral of variations of functionals. *Gaussian random fields (Nagoya, 1990)*, 144–157, Ser. Probab. Statist., 1, *World Sci. Publ., River Edge, NJ*, 1991.

Also: Chauvenet Prize from the MAA (1944), for the paper *Introductory Exercises in the Manipulation of Fourier Transforms*, which appeared in *National Mathematics Magazine*, 1941, vol. 15, pages 331–356.