# Biographical Sketches of the Co-authors of Paul Erdős Gerzson Kéri

### Introduction

Paul Erdős (1913–1996) was a highly influential Hungarian mathematician who, particularly in the latter part of his life, dedicated much of his time to co-authoring papers with a vast number of colleagues—more than 500—on unsolved mathematical problems. He published more papers during his lifetime (at least 1,525) than any other mathematician in history. (By comparison, Leonhard Euler produced more total pages of mathematics, but fewer individual papers—around 800.) Erdős lived an unconventional lifestyle, often without a permanent home or job. He traveled with everything he owned in two suitcases, visiting collaborators—often unannounced—and staying with them while working together.

To say that someone is a co-author of Pál Erdős is equivalent to stating that his or her **Erdős number** is one. In general, the **Erdős number** represents the 'collaborative distance' between the mathematician Pál Erdős and another individual, measured by co-authorship of mathematical papers. Over time, it gained recognition as a means of analyzing how mathematicians collaborate to solve complex problems. Several research projects use the Erdős number as a tool to study connectivity among researchers. For instance, **Erdős collaboration graphs** can reveal how authors form clusters, how the number of co-authors per paper changes over time, and how new theories spread through academic networks.

Several studies have shown that leading mathematicians tend to have particularly low Erdős numbers. Among Fields Medalists, the median Erdős number is 3. More than 13,000 individuals have an Erdős number of 2 or lower. Over time, the lowest Erdős number that can still be attained will inevitably increase, as mathematicians with low Erdős numbers eventually pass away and are no longer available for collaboration. Nevertheless, some historical figures still have surprisingly low Erdős numbers. For example, according to the "Collaboration Distance" tool provided by MathSciNet, the renowned Indian mathematician Srinivasa Ramanujan has an Erdős number of 3—even though Paul Erdős was only seven years old when Ramanujan died.

Importantly, Erdős numbers are not limited to professional mathematicians. For instance, **Mark Zuckerberg**, founder of Facebook (now Meta), and the world-famous Hungarian inventor **Ernő Rubik** both have an Erdős number of 3. **Bill Gates**, the principal founder of Microsoft, has an Erdős number of 4. The American actress and mathematician **Danica McKellar** (born in 1975) also has an Erdős number of 4, thanks to a joint paper she coauthored with Princeton University professor Lincoln Chayes, who has an Erdős number of 3.

According to the aforementioned MathSciNet tool, an individual's Erdős number can be determined. However, the main limitation of this tool is that it only considers publications indexed in the MathSciNet database. As a result, the computed Erdős number may be inaccurate. For example, MathSciNet does not include joint publications between Paul Erdős and the following authors: Imre Csiszár, Ervin Feldheim, Joseph Gillis, Vojtěch Jarník, Donald Norton, Richárd Obláth, and Andrew Vázsonyi. Nevertheless, these collaborations—seven in total—are indexed in the Zentralblatt MATH database. Therefore, although the

MathSciNet tool does not reflect it, each of these seven individuals does, in fact, have an Erdős number of 1.

There is some debate among mathematicians regarding the exact number of Erdős's co-authors. While 512 is the generally accepted number, as established in [2], some argue that this count should exclude publications that appeared after Erdős's death. However, determining which papers were actually written before his passing in 1996 is not straightforward, as the time between writing and publication can vary considerably. For practical purposes, one might consider as posthumous those papers that were published in 2002 or later. Based on this criterion, the number of Erdős's direct co-authors (i.e., those with Erdős number 1) would be five fewer than 512. The individuals excluded under this interpretation would be Steve Butler, Persi Diaconis, Florian Luca, Michael Molloy, and Geert Prins. (Recently, two additional co-authors, Dave Galvin and Michael Krieger, were identified, bringing the total to 514, due to a paper published in 2022.) Additionally, according to some mathematics professors, in multi-authored papers involving Erdős and two or more collaborators, certain contributors may have played such a minor role that they should not be regarded as genuine co-authors of Erdős.

The biographical sketches in this booklet are not necessarily proportional to the professional activity or prominence of the individuals featured. There are several possible reasons for this. In some cases, limited information is available about a particular author. Conversely, when extensive information is readily accessible in English, I have often chosen to provide a hyperlink to an existing biography and include only a brief excerpt. When no English-language biography is available—or is difficult to find, even if one exists in another language—I have generally included a more detailed summary of the person's life and work, based on information obtained through personal contact with the individual or one of their relatives.

### Preliminaries and acknowledgement

Through an extensive multi-stage search and numerous personal inquiries, I was able to gather biographical data on the vast majority of Erdős's collaborators. Out of 514 co-authors, I identified the year of birth for 418 individuals (including the full birth date for 375 of them), and the place of birth for 373 individuals.

The author would like to express his gratitude to Béla Bollobás, who helped a lot in collecting the data, first by having the data of some of Erdős' co-authors that were not available online, and by requesting and receiving data from others by letter. Unfortunately, our combined efforts were not enough to obtain the birth data of at least 420 of the 514 co-authors, although I had originally hoped for greater success.

Thanks are due also to Jerrold W. Grossman, the initiator and leader of the Erdős Number Project, for providing extensive additional information and for carefully reviewing this work.

## **Brief summary of a little statistics**

Using the collected data, a light statistical analysis was performed. The results – including Erdős himself, for a total of 515 individuals – are summarized below, **1.** by place of birth (state or country/federation), **2.** by year of birth, **3.** by month of birth,

For the sake of simplicity, column 1 lists the place of birth according to the current country in which the city is located at present (in 2025). Since Paul Erdős was Hungarian by birth and spoke Hungarian as his mother tongue, it is not surprising that, after the United States, the highest number of his co-authors were born in Hungary. It is also worth noting that several of Erdős's other co-authors of Hungarian nationality were born in regions that belonged to Hungary before the 1920 Treaty of Trianon but are now part of Slovakia, Ukraine, Romania, Serbia, or Croatia. The statistics on years of birth shown in column 2 — grouped by half-decades — indicate that most of Erdős's co-authors were born in the 1930s, 1940s, and 1950s. Column 3 reveals an interesting pattern: based on the distribution of birth dates by month, significantly fewer of Erdős's co-authors were born in November, December, and January than average, while significantly more were born in March, May, and August.

1		2		3	3	
Australia	3	1882-1887	2	January	24	
Austria	6	1888-1892	0	February	33	
Belarus	1	1893-1897	2	March	41	
Belgium	2	1898-1902	6	April	32	
Brazil	1	1903-1907	12	May	42	
Canada	12	1908-1912	27	June	19	
China	3	1913-1917	21	July	33	
Croatia	3	1918-1922	26	August	42	
Czach Republic	8	1923-1927	26	September	31	
Denmark	2	1928-1932	37	October	37	
Egypt	1	1933-1937	32	November	20	
France	6	1938-1942	48	December	25	
Germany	20	1943-1947	57	unknown	136	
Hungary	80	1948-1952	43			
India	13	1953-1957	43			
Indonesia	1	1958-1962	16			
Iran	2	1963-1967	13			
Israel	9	1968-1972	2			
Italy	1	1973-1977	6			
Mexico	1	unknown	96			
Netherlands	4					
Pakistan	1					
Poland	11					
Romania	4					
Russia	8					
Serbia	3					
Slovakia	7					
South Africa	1					
Sweden	2					
Switzerland	3					
Taiwan	3					
Turkey	1					
Ukraine	10					
United Kingdom	28					
United States	111					
unknown	141					

### Biographies of Paul Erdős and his co-authors

First, we present a brief biography of Paul Erdős, written in the same style intended later for his coauthors. An asterisk before a name indicates that the following is a biography of a person who is known to be deceased.

\*Paul Erdős (Budapest, Hungary, 26 March 1913 – Warsaw, Poland, 20 September 1996) was a Hungarian mathematician renowned for his prolific output and influential contributions across multiple fields of mathematics. He earned his Ph.D. from Eötvös Loránd University (Budapest) in 1934 under the supervision of Leopold (Lipót) Fejér. Erdős was one of the most productive mathematicians of the 20th century and a prolific originator of mathematical problems and conjectures. His research spanned a wide range of areas, including discrete mathematics, graph theory, number theory, mathematical analysis, approximation theory, set theory, and probability theory. Much of his work focused on solving concrete, previously unsolved problems, particularly in discrete mathematics. He made significant contributions to Ramsey theory, which investigates the conditions under which order must emerge in large structures. Rather than developing entirely new branches of mathematics, Erdős was primarily driven by the pursuit of elegant solutions to existing open problems.

External Link(s):

Paul Erdős (Wikipedia)

Erdős Pál (hu-Wikipedia)

Paul Erdős (MacTutor)

Paul (Pál) Erdős (MathGenealogy)

Erdős Pál (História – Tudósnaptár)

Finding the exact or near-exact birth years of all of Erdős' co-authors would be a virtually impossible data-mining task. Through considerable effort and the assistance of artificial intelligence, the number of missing birth years was reduced to fewer than 100, albeit at the cost of a substantial amount of time. I want to emphasize that I only accepted information from artificial intelligence (specifically ChatGPT) if it came from sources that were verifiable—and that I personally verified.

Of Paul Erdős's 514 co-authors, the date—or at least the year—of birth has been identified for a little more than 400 of them. The brief biographies below are arranged primarily in order of birth date. Accordingly, we begin with the biographies of the 400+ co-authors whose exact or approximate years of birth are known.

For the remaining co-authors, the only available common information is the year of their first joint publication with Pál Erdős. These individuals are listed separately at the end, in chronological order based on that publication year—which, presumably, correlates at least to some extent with their birth years.

Let us begin with Erdős's oldest (and now deceased) co-authors.

\*Richárd Obláth (Versec, Austria-Hungary, now Vršac, Serbia, 11 June 1882 – Budapest, Hungary, 18 June 1959) was a Hungarian mathematician. He worked as a secondary school teacher and held the title of Candidate of Mathematical Sciences. He received his Ph.D. (Candidate of Science degree) from the Hungarian Academy of Sciences in 1955. His joint publication with Erdős appeared in 1937.

Richárd Oblath (Wikimedia)

**Oblath Richárd (hu-Wikipedia)** 

Oblath Richárd (História – Tudósnaptár)

\*Norman Herbert Anning (28 August 1883 – Sunnydale, California, US, 1 May 1963) was a Canadian-American mathematician who served as an assistant professor, professor emeritus, and mathematics instructor. He is recognized for co-authoring a proof that characterizes infinite sets of points in the plane with pairwise integer distances—a result now known as the Erdős–Anning Theorem. His joint publication with Paul Erdős was published in 1945. The theorem states that an infinite set of points in the plane can have all pairwise distances as integers only if all the points lie on a straight line.

External Link(s):

Norman H. Anning (Wikipedia)

\*Gábor Szegő (Kunhegyes, Hungary, 20 January 1895 – Palo Alto, California, US, 7 August, 1985) was a Hungarian-American mathematician and one of the foremost mathematical analysts of his generation. He made fundamental contributions to the theory of orthogonal polynomials and Toeplitz matrices, building on the work of his contemporary Otto Toeplitz. He received his Ph.D. from the University of Vienna in 1918 under the supervision of Wilhelm Wirtinger and Philipp Furtwängler. He co-authored two papers with Erdős, published in 1942 and 1961. He is also one of the namesakes of the Pólya–Szegő inequality, which states that the Sobolev energy of a function in a Sobolev space does not increase under symmetric decreasing rearrangement.

External Link(s):

Gábor Szegő (Wikipedia)

Szegő Gábor (hu-Wikipedia)

Gábor Szegő (MacTutor)

Gábor Szegő (MathGenealogy)

Szegő Gábor (História – Tudósnaptár)

\*Vojtěch Jarník (Prague, Austria-Hungary, now Czech Republic, 22 December 1897 – Prague, Czechoslovakia, now Czech Republic, 22 September 1970) was a Czech mathematician. He earned his Ph.D. from Charles University in Prague in 1921, under the supervision of Edmund Landau. Jarník spent much of his career as a professor and administrator at Charles University and played a key role in establishing the Czechoslovak Academy of Sciences. He is the namesake of Jarník's algorithm for constructing minimum spanning trees. This algorithm starts from a single vertex and repeatedly adds the cheapest available edge connecting the growing tree to a new vertex, until all vertices are connected. His joint publication with Erdős was published in 1937.

External Link(s):

Vojtěch Jarník (Wikipedia)

Vojtěch Jarník (cz-Wikipedia)

Vojtěch Jarník (MacTutor)

Vojtěch Jarník (MathGenealogy)

\*Arthur Herbert Copeland (Rochester, New York, US, 22 June 1898 – 6 July 1970) was an American mathematician known for his work on the foundations of probability. He earned his Ph.D. from Harvard University in 1926, where his advisor was Oliver Dimon Kellogg. He later taught at Rice University and the University of Michigan. Copeland co-authored a paper with Erdős in 1946. Together, they introduced the Copeland–Erdős constant, formed by concatenating the base-10 representations of the prime numbers after "0.", yielding 0.235711131719... They proved this number to be both irrational and normal. Their results were published in the paper "Note on Normal Numbers" in the Bulletin of the American Mathematical Society.

External Link(s):

**Arthur Herbert Copeland (Wikipedia)** 

Arthur Herbert Copeland (MathGenealogy)

\*Albert Edward Ingham (Northampton, England, UK, 3 April 1900 – Switzerland, 6 September 1967) was a British mathematician. He received his Ph.D. from the University of Cambridge in 1925, under the supervision of John Edensor Littlewood. His joint publication with Erdős appeared in 1964.

External Link(s):

**Albert Ingham (Wikipedia)** 

**Albert Edward Ingham (MacTutor)** 

**Albert Edward Ingham (MathGenealogy)** 

\*Alfred Tarski (Warsaw, Congress Poland, Russian Empire, 14 January 1901 – Berkeley, California, US, 26 October 1983) was a Polish-American logician and mathematician. A prolific scholar, he is best known for his foundational work in model theory, metamathematics, and algebraic logic. He also made important contributions to abstract algebra, topology, geometry, measure theory, mathematical logic, set theory, and analytic philosophy. He earned his Ph.D. from the University of Warsaw in 1924, under the supervision of Stanisław Leśniewski. He co-authored two papers with Erdős, published in 1943 and 1961.

External Link(s):

Alfred Tarski (Wikipedia)

Alfred Tarski (pl-Wikipedia)

Alfred Tarski (MacTutor)

Alfred Tarski (MathGenealogy)

\*Jovan Karamata (Zagreb, Croatia-Slavonia, 1 February 1902 – Geneva, Switzerland, 14 August 1967) was a Serbian mathematician and university professor. He is best known for his contributions to mathematical analysis, particularly in Tauberian theory and the theory of slowly varying functions. Considered one of the most influential Serbian mathematicians of the 20th century, he was among the founders of the Mathematical Institute of the Serbian Academy of Sciences and Arts in 1946. He received his Ph.D. from the University of Belgrade in 1926 under the supervision of Mihailo Petrović. His joint publication with Erdős was published in 1956.

Jovan Karamata (Wikipedia)

Jован Карамата (sr-Wikipedia)

Jovan Karamata (MacTutor)

Jovan Karamata (MathGenealogy)

\*Hansraj Gupta (Rawalpindi, British India, now Pakistan, 9 October 1902 – 23 November 1988) was an Indian mathematician specializing in number theory, particularly the study of the partition function. He earned his Ph.D. from Panjab University, Chandigarh in 1936. His joint publication with Erdős appeared in 1976.

External Link(s):

Hansraj Gupta (Wikipedia)

Hansraj Gupta (MathGenealogy)

\*Fritz Herzog (Germany, 6 December 1902 – East Lansing, Michigan, US, 21 November 2001) was an American mathematician known for his work in complex analysis and power series. He received his Ph.D. from Columbia University (New York City) in 1935, where his advisor was Joseph Fels Ritt. He co-authored six papers with Erdős between 1950 and 1958.

External Link(s):

Fritz Herzog (Wikipedia)

Fritz Herzog (MathGenealogy)

\*Aurel Friedrich Wintner (Wintner Aurél, Budapest, Hungary, 8 April 1903 – Baltimore, Maryland, US, 15 January 1958) was a Hungarian-born American mathematician recognized for his work in mathematical analysis, number theory, differential equations, and probability theory. He was one of the pioneers of probabilistic number theory. Wintner earned his *Dr. rer. nat.* degree from the University of Leipzig in 1928, under the supervision of Leon Lichtenstein and Julius Bauschinger. He co-authored three publications with Erdős, which appeared in 1939 and 1940.

External Link(s):

**Aurel Wintner (Wikipedia)** 

Wintner Aurél (hu-Wikipedia)

**Aurel Friedrich Wintner (MacTutor)** 

**Aurel Friedrich Wintner (MathGenealogy)** 

<u> Wintner Aurél (Aurel Friedrich) (História – Tudósnaptár)</u>

\*Kurt Mahler (Krefeld, Germany, 26 July 1903 – Canberra, Capital Territory, Australia, 25 February 1988) was a German mathematician known for his significant contributions to transcendental number theory, Diophantine approximation, *p*-adic analysis, and the geometry of numbers. He earned his Ph.D. from Johann Wolfgang Goethe University (Frankfurt am Main) in 1927, under the supervision of Otto Szász and Carl Ludwig Siegel. Mahler co-authored two papers with Erdős, published in 1938 and 1939.

**Kurt Mahler (Wikipedia)** 

**Kurt Mahler (de-Wikipedia)** 

**Kurt Mahler (MacTutor)** 

**Kurt Mahler (MathGenealogy)** 

\*Stanisław Krystyn Zaremba (Cracow, Congress Poland, Russian Empire, 15 August 1903 – Aberystwyth, Wales, UK, 14 January 1990) was a Polish mathematician best known for his contributions to low-discrepancy sequences and their applications in Quasi-Monte Carlo methods for numerical integration. He is one of the namesakes of the Hlawka–Zaremba formula in discrepancy theory. His joint publication with Erdős appeared in 1973. Zaremba was also an avid climber and mountaineer; in his honor, one of Wrocław's dwarfs (from the "Alpinki" group) is named Zarembek.

External Link(s):

Stanisław Krystyn Zaremba (Wikipedia)

Stanisław Krystyn Zaremba (pl-Wikipedia)

\*Jurjen Ferdinand Koksma (Schoterland, Netherlands, 21 April 1904 – Amsterdam, Netherlands, 17 December 1964) was a Dutch mathematician specializing in analytic number theory. He earned his Ph.D. from the University of Groningen in 1930, with Johannes Gaultherus van der Corput as his advisor. Koksma co-authored two papers with Erdős, both published in 1949. He is one of the namesakes of the Erdős–Turán–Koksma inequality, which concerns the discrepancy of large point sets.

External Link(s):

Jurjen Ferdinand Koksma (Wikipedia)

Jurjen Koksma (nl-Wikipedia)

Jurjen Ferdinand Koksma (MacTutor)

Jurjen Ferdinand Koksma (MathGenealogy)

\*Hans Fried (Vienna, Austria, 12 November 1905 – New York City, New York, US, 1990) was an Austrian-American mathematician. His joint publication with Erdős was published in 1947.

External Link(s):

Hans Fried (Geni)

**Mathematicians Fleeing from Nazi Germany** 

\*James Andrew Clarkson (Newburyport, Massachusetts, US, 7 February 1906 – 6 June 1970) was an American mathematician and professor of mathematics, best known for his work in number theory. He is especially recognized for proving inequalities in Hölder spaces, which led to the demonstration of the uniform convexity of L<sup>p</sup> spaces. These results are known collectively as Clarkson's inequalities. During World War II, he served as an operations analyst and was awarded the Medal of Freedom for his contributions. In 1932, he was an invited speaker at the International Congress of Mathematicians (ICM) in Zürich. He received his Ph.D. from Brown University (Providence) in 1934, under the supervision of Clarence Raymond Adams. His joint publication with Erdős was published in 1943.

James A. Clarkson (Wikipedia)

James Andrew Clarkson (MathGenealogy)

James Andrew Clarkson (Prabook)

\*Richard Rado (Berlin, Germany, 28 April 1906 – Reading, England, UK, 23 December 1989) was a German-born British mathematician whose research focused on combinatorics and graph theory. Of Jewish heritage, he fled Germany in 1933 to escape Nazi persecution. Rado earned two doctorates: the first from the University of Berlin in 1933 under Issai Schur, and the second from the University of Cambridge in 1935 under G. H. Hardy. After receiving a scholarship, he and his wife emigrated to the UK. In 1954, he was appointed Professor of Mathematics at the University of Reading, where he served until his retirement in 1971. He is a namesake of the Milner–Rado paradox in set theory. Rado collaborated with Erdős on 18 publications between 1950 and 1984.

External Link(s):

Richard Rado (Wikipedia)

Richard Rado (MacTutor)

Richard Rado (MathGenealogy)

Rado, Richard (História – Tudósnaptár)

\*Albert Cyril Offord (London, England, UK, 9 June 1906 – Oxford, England, UK, 4 June 2000) was a British mathematician and the first Professor of Mathematics at the London School of Economics. He received his first Ph.D. from the University of London in 1932, under Lancelot Stephen Bosanquet, and a second Ph.D. from the University of Cambridge in 1936, under G. H. Hardy. His joint paper with Erdős was published in 1956.

External Link(s):

**Cyril Offord (Wikipedia)** 

Cyril Offord (MacTutor)

A. Cyril Offord (MathGenealogy)

\*William Feller (Vilibald Srećko Feller, Zagreb, Austria-Hungary, now Croatia, 7 July 1906 – New York City, New York, US, 14 January 1970) was a Croatian-American mathematician who made major contributions to probability theory. He earned his Ph.D. from the University of Göttingen in 1926 under Richard Courant. Feller is the namesake of several concepts in probability, including Feller processes, Feller's explosion test, Feller-Brownian motion, and the Lindeberg-Feller central limit theorem. His joint publication with Erdős appeared in 1949.

External Link(s):

William Feller (Wikipedia)

Vilim Srećko Feller (hr-Wikipedia)

William Srecko Feller (MacTutor)

William Feller (MathGenealogy)

\*Sarvadaman D. S. Chowla (Hindi: सर्वदमन चावला; London, England, UK, 22 October 1907 – Laramie, Wyoming, US, 10 December 1995) was an Indian-American mathematician specializing in number theory. He received his Ph.D. from the University of Cambridge in 1931, where his advisor was J. E. Littlewood. He co-authored three papers with Erdős between 1950 and 1960. Several mathematical results bear his name, including the Bruck-Ryser-Chowla theorem, the Ankeny-Artin-Chowla congruence, the Chowla-Mordell theorem, the Chowla-Selberg formula, and the Mian-Chowla sequence.

External Link(s):

Sarvadaman Chowla (Wikipedia)

सर्वदमन चावला (hi-Wikipedia)

Sarvadaman Chowla (MacTutor)

Sarvadaman D. S. Chowla (MathGenealogy)

\*Harold Davenport (Huncoat, England, UK, 30 October 1907 – Cambridge, England, UK, 9 June 1969) was a British mathematician renowned for his extensive contributions to number theory. He received his D.Sc. from the University of Cambridge in 1937, where he studied under John Edensor Littlewood. Davenport co-authored seven papers with Erdős between 1936 and 1963. He is one of the namesakes of the Hasse–Davenport relations, which include two identities involving Gauss sums: the Hasse–Davenport product relation, a related formula concerning the product of Gauss sums.

External Link(s):

**Harold Davenport (Wikipedia)** 

**Harold Davenport (MacTutor)** 

**Harold Davenport (MathGenealogy)** 

\*Wladimir P. Seidel (Ukrainian: Володимир П. Зайдель; Odessa, Russian Empire, 21 December 1907 – Detroit, Michigan, US, 12 January 1981) was a Russian-born German-American mathematician. He held the position of Benjamin Peirce Fellow at Harvard University and participated in the Montreal Theory Group during World War II, working with the National Research Council of Canada. Seidel earned his Ph.D. from the Ludwig Maximilian University of Munich in 1930, under the supervision of Constantin Carathéodory. His joint paper with Erdős was published in 1953.

External Link(s):

**Wladimir Seidel (Wikipedia)** 

Володимир Зайдель (uk-Wikipedia)

Wladimir Seidel (MathGenealogy)

\*Hyman Kestelman (London, England, UK, 18 March 1908 – 20 January 1983) was a British mathematician. In 1949, he was appointed Reader in Mathematics, and in 1951, became Tutor, a role he held and enjoyed for 19 years. His joint publication with Erdős appeared in 1963.

External Link(s):

**Hyman Kestelman Obituary** 

\*Egbert Rudolf van Kampen (Berchem, Belgium, 28 May 1908 – Baltimore, Maryland, US, 11 February 1942) was a Dutch mathematician best known for his influential work in topology, particularly on fundamental groups. He earned his Ph.D. from Leiden University in 1929 under Willem van der Woude. He co-authored a paper with Erdős in 1940. Van Kampen is one of the namesakes of the Seifert–Van Kampen theorem, a fundamental result in algebraic topology that describes how to compute the fundamental group of a topological space using the groups of two overlapping subspaces.

External Link(s):

Egbert van Kampen (Wikipedia)

Egbert van Kampen (nl-Wikipedia)

**Egbert Rudolf van Kampen (MacTutor)** 

**Egbert Rudolf van Kampen (MathGenealogy)** 

\*Archibald James Macintyre (Sheffield, England, UK, 3 July 1908 – Cincinnati, Ohio, US, 4 August 1967) was a British-born mathematician. He received his Ph.D. from the University of Cambridge in 1934, under the supervision of Sir Edward F. Collingwood. His joint publication with Erdős was published in 1954.

External Link(s):

**Archibald James Macintyre (Wikipedia)** 

**Archibald James Macintyre (MathGenealogy)** 

\*Hans Arnold Heilbronn (Berlin, Germany, 8 October 1908 – Toronto, Ontario, Canada, 28 April 1975) was a German mathematician. He received his Ph.D. from the Georg-August-Universität Göttingen in 1931, where his advisor was Edmund Landau. His joint publication with Erdős was published in 1964.

External Link(s):

**Hans Heilbronn (Wikipedia)** 

Hans Arnold Heilbronn (de-Wikipedia)

Hans Arnold Heilbronn (MacTutor)

Hans Arnold Heilbronn (MathGenealogy)

\*Leon Bankoff (New York City, New York, US, 13 December 1908 – 16 February 1997) was an American dentist with diverse interests. In addition to his dental career, he was an accomplished pianist and guitarist, a fluent speaker of Esperanto, a sculptor, and a technology enthusiast. However, he was best known for his expertise in flat geometry and was highly respected in the mathematical community. Since the 1940s, he had lectured and published many co-authored articles. His joint publication with Erdős was published in 1973.

External Link(s):

**Leon Bankoff (Wikipedia)** 

\*Stanisław Marcin Ulam (Lemberg, Austria-Hungary, now Lviv, Ukraine, 13 April 1909 – Santa Fe, New Mexico, US, 13 May 1984) was a Polish mathematician, nuclear physicist, and computer scientist. He played a key role in the Manhattan Project, co-developed the Teller–Ulam design for thermonuclear weapons, introduced the concept of the cellular automaton, and invented the Monte Carlo method of computation. In both pure and applied mathematics, he proved numerous theorems and proposed several influential conjectures. He received his Ph.D. from the Politechnika Lwowska in 1933, under the supervision of Kazimierz Kuratowski and Włodzimierz Stożek. His three joint publications with Erdős appeared between 1968 and 1979. Ulam is credited with inventing the Monte Carlo method, a computational technique based on random sampling, widely used in optimization, numerical integration, and probabilistic modeling.

#### External Link(s):

Stanisław Ulam (Wikipedia)

Stanisław Ulam (pl-Wikipedia)

Stanisław Marcin Ulam (MacTutor)

Stanisław Marcin Ulam (MathGenealogy)

\*Michael Golomb (Munich, Germany, 3 May 1909 – Indiana, US, 9 April 2008) was a German-born American mathematician and educator, affiliated with Purdue University for over fifty years. As a Jew, he fled Germany to escape Nazi persecution, spending time in Zagreb (Yugoslavia) before emigrating to the United States in 1939. There, he shifted his focus to applied mathematics and was among the first to use normed vector spaces in numerical analysis. He received his Ph.D. from the Universität Berlin in 1933, under the supervision of Erhard Schmidt and Adolf Hammerstein. His joint publication with Erdős was published in 1955.

External Link(s):

Michael Golomb (Wikipedia)

Michael Golomb (de-Wikipedia)

**Professional Biography: Michael Golomb** 

Official obituary of Michael Golomb

Michael Golomb (MathGenealogy)

\*Esther Szekeres also known as Esther Klein (Budapest, Hungary, 20 February 1910 – Adelaide, South Australia, Australia, 28 August 2005) was a Hungarian–Australian mathematician. She is best known for proposing the so-called "happy ending problem," which became foundational in the development of Ramsey theory. According to legend, the problem not only influenced mathematics but also led to her marriage with George Szekeres. Her joint publication with Erdős was published in 1999.

External Link(s):

**Esther Szekeres (Wikipedia)** 

**Szekeres Eszter (hu-Wikipedia)** 

\*George Gunter Lorentz (St. Petersburg, Russia, 25 February 1910 – Chico, California, US, 1 January 2006) was a Russian-American mathematician. He received his *Dr. rer. nat.* degree from the

Eberhard Karls Universität Tübingen in 1944, where his advisor was Konrad Hermann Theodor Knopp. His joint publication with Erdős was published in 1959.

External Link(s):

George G. Lorentz (Wikipedia)

**George G Lorentz (MacTutor)** 

**George Gunter Lorentz (MathGenealogy)** 

\*Chao Ko (Chinese: 柯召 /Ke Zhao/; Wenling, Zhejiang, China, 12 April 1910 – 8 November 2002) was a Chinese mathematician whose primary research areas included algebra, number theory, and combinatorics. He received his Ph.D. from the Victoria University of Manchester in 1937, under the supervision of Louis Joel Mordell. His four joint publications with Erdős appeared between 1938 and 1961. In their 1961 paper with Richard Rado, titled "Intersection theorems for systems of finite sets" and published in the Quarterly Journal of Mathematics, Oxford Series (2), the authors established an upper bound for the size of a family of finite sets in which every pair of sets shares at least one common element. This result is now known as the Erdős–Ko–Rado theorem.

External Link(s):

Ke Zhao (Wikipedia)

柯召 (zh-Wikipedia)

Chao Ko (柯召) (MathGenealogy)

\*Pál Turán (Budapest, Hungary, 18 August 1910 – Budapest, Hungary, 26 September 1976) also known as Paul Turán, was a renowned Hungarian mathematician. He received his Ph.D. from Eötvös Loránd University (Budapest) in 1935, under the supervision of Lipót Fejér. He collaborated extensively with Erdős, resulting in 30 joint publications between 1934 and 1977. Turán is known for numerous fundamental results and concepts in mathematics, many of which bear his name, including Turán graph, Turán number, Turán's brick factory problem, Turán sieve, Turán's inequalities, Turán's lemma, Turán's theorem, Turán–Kubilius inequality, Erdős–Turán conjecture, Erdős–Turán inequality, Erdős–Turán–Koksma inequality, Kővári–Sós–Turán theorem. Turán's theorem is a foundational result in extremal graph theory. It states that a graph with *n* vertices that does not contain a complete subgraph of *r* + 1 vertices has at most as many edges as the corresponding Turán graph—constructed by partitioning the vertex set into *r* subsets of nearly equal size and connecting every pair of vertices from different subsets.

External Link(s):

Pál Turán (Wikipedia)

Turán Pál (hu-Wikipedia)

Paul Turán (MacTutor)

Pál Turán (MathGenealogy)

Turán Pál (História – Tudósnaptár)

\*Peter Scherk (Berlin, Germany, 2 September 1910 – 6 June 1985) was a German-born Canadian mathematician whose work focused on geometry and number theory. He earned his *Dr. rer. nat.* degree

from the Georg-August-Universität Göttingen in 1935, under the supervision of Gustav Herglotz and Werner Fenchel. His joint publication with Erdős was published in 1959.

External Link(s):

Peter Scherk (de-Wikipedia)

Peter Scherk (MathGenealogy)

\*John C. Oxtoby (Saginaw, Michigan, US, 14 September 1910 – 2 January 1991) was an American mathematician. He received a Master of Science in Mathematics from Harvard University in 1936. Oxtoby served as Professor of Mathematics at Bryn Mawr College in Pennsylvania from 1939 until his retirement in 1979. His joint publication with Erdős appeared in 1955.

External Link(s):

John C. Oxtoby (Wikipedia)

John C. Oxtoby (de-Wikipedia)

John C. Oxtoby (MathGenealogy)

\*Adalbert Béla Lengyel (Budapest, Hungary, 5 October 1910 – Irvine, California, US, 31 October 2002) was a Hungarian mathematician and theoretical physicist. He received his Ph.D. from Pázmány Péter University (Budapest) in 1935. His joint publication with Erdős appeared in 1938.

External Link(s):

Adalbert Béla Lengyel (eo-Wikipedia)

**Bela Adalbert Lengyel (Ancestry)** 

Lengyel Adalbert Béla (História – Tudósnaptár)

\*Géza Grünwald (Budapest, Hungary, 18 October 1910 – Ukraine, Soviet Union, 1942 or 1943) was a Hungarian mathematician. He began his university studies in Italy and continued from 1931 at the University of Szeged, where he won several academic awards. He received his Ph.D. from the University of Szeged in 1935 under the supervision of Frigyes (Frédéric) Riesz. In 1937, he began working as a research mathematician at General Electric. During World War II, Grünwald was sent to a penal colony, from which he never returned. His early death was a great loss to the mathematical community, as he had shown outstanding promise. His contributions continue to be recognized, and in his memory, the János Bolyai Mathematical Society established the Géza Grünwald Memorial Prize in 1953, awarded annually to early-career mathematicians. He co-authored three papers with Erdős, all published in 1938.

External Link(s):

**Géza Grünwald (Wikipedia)** 

Grünwald Géza (matematikus) (hu-Wikipedia)

Géza Grünwald (MacTutor)

Géza Grünwald (MathGenealogy)

Grünwald Géza (História – Tudósnaptár)

**\*Eri Jabotinsky** (Hebrew: "ערי ז'בוטינסקי"; Russian: Эри Жаботин-ский; Odessa, Russian Empire, 26 December 1910 – Haifa, Israel, 6 June 1969) was an Israeli mathematician. He received his Ph.D. from

the Hebrew University of Jerusalem in 1957. He co-authored three publications with Erdős, which appeared between 1958 and 1960.

External Link(s):

<u>Eri Jabotinsky (Wikipedia)</u>
<u>Жаботинский, Эри (ru-Wikipedia)</u>
ערי ז'בוטינסקי (he-Wikipedia)

\*George Szekeres (Budapest, Hungary, 29 May 1911 – Adelaide, South Australia, Australia, 28 August 2005) was a Hungarian–Australian mathematician. He earned his Ph.D. from the University of New South Wales (Sydney). He collaborated with Erdős on five publications between 1934 and 1978. Together, they gave their names to the Erdős–Szekeres theorem, which states that for any integers r and s, every sequence of at least (r-1)(s-1)+1 distinct real numbers contains either a monotonically increasing subsequence of length r or a monotonically decreasing subsequence of length s.

External Link(s):

**George Szekeres (Wikipedia)** 

Szekeres György (matematikus) (hu-Wikipedia)

**George Szekeres (MacTutor)** 

**George Szekeres (MathGenealogy)** 

Szekeres György (George) (História – Tudósnaptár)

\*Joseph Gillis (Hebrew: "יוֹסף גיליס,"; Sunderland, England, UK, 3 August 1911 – Rehovot, Israel, 18 November 1993) was a British–Israeli mathematician and a founding member of the Faculty of Mathematics at the Weizmann Institute of Science, where he served as a professor of applied mathematics. He earned his Ph.D. from the University of Cambridge in 1935, under the supervision of Abram Samoilovitch Besicovitch. Gillis made significant contributions to fractal geometry, fluid dynamics, random walks, and the combinatorial theory of special functions in mathematical physics. In 1948, he immigrated to Israel and joined the Weizmann Institute (then the Ziv Institute), becoming one of the founders of its Department of Applied Mathematics. His joint publication with Erdős appeared in 1937.

External Link(s):

Joseph Gillis (Wikipedia)

יוסף גיליס (he-Wikipedia)

Joseph E. Gillis (MathGenealogy)

\*Shizuo Kakutani (Japanese: 角谷静夫; Osaka, Japan, 28 August 1911 – New Haven, Connecticut, US, 17 August 2004) was a Japanese-American mathematician best known for the Kakutani fixed-point theorem, a generalization of Brouwer's fixed-point theorem that applies to correspondences rather than functions. He received his Ph.D. from Osaka University in 1941, where his advisor was Tatsujiro Shimizu. Kakutani co-authored seven papers with Erdős, published between 1943 and 1961. He is also one of the namesakes of the Markov–Kakutani fixed-point theorem, which states that a commuting family of continuous affine self-maps on a compact convex subset of a locally convex topological vector space has a common fixed point. This result is instrumental in one of the most elegant proofs of the

amenability of abelian groups. Kakutani also made significant contributions to stochastic processes, including his "Kakutani skyscraper" construction and a probabilistic solution to the Poisson equation.

External Link(s):

**Shizuo Kakutani (Wikipedia)** 

<u>角谷 静夫 (ja-Wikipedia)</u>

Shizuo Kakutani (MacTutor)

Shizuo Kakutani (MathGenealogy)

\*István Vincze (Szeged, Hungary, 26 February 1912 – Budapest, Hungary, 18 April 1999) was a Hungarian mathematician noted for his work in number theory, non-parametric statistics, empirical distribution, the Cramér–Rao inequality, and information theory. Widely regarded as an expert in both theoretical and applied statistics, he founded the Mathematical Institute of the Hungarian Academy of Sciences and served as Head of its Department of Statistics. He earned both the Candidate and D.Sc. degrees from the Hungarian Academy of Sciences. His three joint publications with Erdős were published in 1941 and 1997.

External Link(s):

István Vincze (mathematician) (Wikipedia)

Vincze István (matematikus) (hu-Wikipedia)

István Vincze (MathGenealogy)

Vincze István (História – Tudósnaptár)

\*Tibor Gallai (born Tibor Grünwald, Budapest, Hungary, 15 July 1912 – Budapest, Hungary, 2 January 1992) was a Hungarian mathematician specializing in combinatorics, particularly graph theory. He was a lifelong friend and close collaborator of Paul Erdős. Gallai earned his Ph.D. from the Technical University of Budapest in 1939 under the supervision of Dénes Kőnig. He co-authored nine papers with Erdős between 1936 and 1996. Among their results is the Erdős–Gallai theorem, which provides necessary and sufficient conditions for a sequence of natural numbers to be the degree sequence of a simple graph.

External Link(s):

Tibor Gallai (Wikipedia)

Gallai Tibor (hu-Wikipedia)

**Tibor Gallai (MacTutor)** 

**Tibor Gallai (MathGenealogy)** 

Gallai Tibor (História – Tudósnaptár)

\*Joel Lee Brenner (Boston, Massachusets, US, 2 August 1912 – Palo Alto, California, US, 14 November 1997) was an American mathematician whose research focused on matrix theory, linear algebra, and group theory. He was also known for translating several influential Russian mathematical texts. Brenner taught at over a dozen colleges and universities and served as a Senior Mathematician at the Stanford Research Institute from 1956 to 1968. He earned his Ph.D. from Harvard University in 1936, under the supervision of Garrett Birkhoff and Marshall Harvey Stone. His joint publication with Erdős appeared in 1987.

Joel Lee Brenner (Wikipedia)

Joel Lee Brenner (MathGenealogy)

\*Ralph Philip Boas Jr. (Walla Walla, Washington, US, 8 August 1912 – Seattle, Washington, US, 25 July 1992) was an American mathematician, educator, and journal editor. He published over 200 papers, primarily in real and complex analysis. Boas earned his Ph.D. from Harvard University in 1937, where his advisor was David Vernon Widder. His collaboration with Erdős was published in 1948. In addition to his serious mathematical contributions, Boas was known for incorporating humor into his writing—for instance, describing how to "hunt lions" using the Bolzano–Weierstrass theorem.

External Link(s):

Ralph P. Boas Jr. (Wikipedia)

Ralph Philip Boas Jr (MacTutor)

Ralph Philip Boas, Jr (MathGenealogy)

\*Haim Hanani (Hebrew: "היים הננית"; Słupca, Congress Poland, Russian Empire, 11 September 1912 as Chaim Chojnacki – 8 April 1991) was a Polish-born Israeli mathematician renowned for his contributions to combinatorial design theory, particularly the theory of pairwise balanced designs and the proof of an existence theorem for Steiner quadruple systems. He is also recognized for the Hanani–Tutte theorem, which concerns odd crossings in non-planar graphs. Hanani earned his Ph.D. from the Hebrew University of Jerusalem in 1938 under the supervision of Adolf Abraham Fraenkel. He co-authored two papers with Paul Erdős, published in 1962 and 1963.

External Link(s):

**Haim Hanani (Wikipedia)** 

היים חנני (he-Wikipedia)

Haim Hanani (MathGenealogy)

\*Ervin Feldheim (Kassa, Hungary, now Košice, Slovakia, 21 September 1912 – Bor, Serbia, 12 March 1944) was a Hungarian mathematician. He received his D.Sc. from the Université de Paris in 1937, under the supervision of Georges Darmois and Paul Pierre Lévy. Feldheim was murdered by the Nazis in 1944. His joint publication with Erdős appeared in 1936.

External Link(s):

Ervin Feldheim (Wikipedia)

Feldheim Ervin (hu-Wikipedia)

**Ervin Feldheim (MathGenealogy)** 

\*Joseph Lehner (New York City, New York, US, 29 October 1912 – Haverford, Pennsylvania, US, 5 August 2013) was an American mathematician known for his work on automorphic functions and for co-developing **Atkin–Lehner theory**. This theory, part of the study of modular forms, constructs bases for spaces of modular forms of a given level that are eigenfunctions of Hecke operators and retain similar properties to those of level 1. Lehner held academic positions at Michigan State University (1957–

1963), the University of Maryland (1963–1972), and the University of Pittsburgh (1972–1980). He received his Ph.D. from the University of Pennsylvania in 1941, under the supervision of Hans Adolph Rademacher. His collaboration with Erdős was published in 1941.

External Link(s):

Joseph Lehner (Wikipedia)
Joseph Lehner (MathGenealogy)

\*Elisha Netanyahu (Hebrew: אלישע נתניהו, Warsaw, Congress Poland, Russian Empire, 21 December 1912 – Jerusalem, Israel, 3 April 1986) was an Israeli mathematician specializing in complex analysis. At the Technion, he served as Dean of the Faculty of Sciences and founded its separate Department of Mathematics. He was the brother of historian Benzion Netanyahu and the uncle of Israeli Prime Minister Benjamin Netanyahu. He earned his Ph.D. from the Hebrew University of Jerusalem in 1942, under the guidance of Michael (Mihály) Fekete and Binyamin Amirà. His joint publication with Erdős was published in 1973.

External Link(s):

<u>Elisha Netanyahu (Wikipedia)</u> אלישע נתניהו (he-Wikipedia) Elisha Netanyahu (MathGenealogy)

\*Leonidas Alaoglu (Greek: Λεωνίδας Αλάογλου; Red Deer, Alberta, Canada, 19 March 1914 – August 1981) was a Canadian-American mathematician of Greek descent, best known for the **Banach–Alaoglu theorem**, which asserts the *weak-compactness* of the closed unit ball in the dual of a normed space. He earned his Ph.D. from the University of Chicago in 1938, where his advisor was Lawrence Murray Graves. Alaoglu co-authored two papers with Erdős, both published in 1944.

External Link(s):

<u>Leonidas Alaoglu (Wikipedia)</u> <u>Λεωνίδας Αλάογλου (el-Wikipedia)</u> <u>Leonidas Alaoglu (MathGenealogy)</u>

\*George Piranian (Armenian: Չևորգ Φիρωῦτωῦ; Thalwil, Switzerland, 2 May 1914 – Ann Arbor, Michigan, US, 31 August 2009) was a Swiss-American mathematician of Armenian descent. He was internationally known for his work in complex analysis, his collaboration with Paul Erdős, and his editorial role at the *Michigan Mathematical Journal*. He received his Ph.D. from Rice University (Houston, Texas) in 1943 under the supervision of Szolem Mandelbrojt. He co-authored 14 papers with Erdős, published between 1947 and 1967.

External Link(s):

**George Piranian (Wikipedia)** 

George Piranian (es-Wikipedia)

**George Piranian (MathGenealogy)** 

\*Stanisław Hartman (Warsaw, Congress Poland, Russian Empire, 2 August 1914 – Wrocław, Poland, 11 November 1992) was a Polish mathematician who made significant contributions to harmonic analysis. He earned his Ph.D. from the University of Wrocław in 1947, under the supervision of Edward (Szpilrajn) Marczewski. His collaboration with Erdős was published in 1967.

#### External Link(s):

**Stanisław Hartman (de-Wikipedia)** 

Stanisław Hartman (pl-Wikipedia)

Stanisław Hartman (MathGenealogy)

\*Mark Kac (Krzemieniec, Russian Empire, now Kremenec, Ukraine, 3 August 1914 – California, US, 26 October 1984) was a Polish-American mathematician primarily known for his work in probability theory. He received his Ph.D. from the University of Lwów in 1937, where he studied under Hugo Dyonizy Steinhaus. Kac famously posed the question, "Can one hear the shape of a drum?"—which launched a line of research in spectral theory about the extent to which the spectrum of an object determines its geometry. The general answer turned out to be "no." While Kac was already living in the United States during World War II, his parents and brother, who had remained in Kremenets, were murdered by the Nazis in mass executions in August 1942. He published five joint papers with Erdős between 1939 and 1947.

#### External Link(s):

Mark Kac (Wikipedia)

Mark Kac (pl-Wikipedia)

Mark Kac (MacTutor)

Mark Kac (MathGenealogy)

\*Albert Edrei (Alexandria, Egypt, 26 November 1914 - Princeton, New Jersey, US, 29 April, 1998) was an American mathematician best known for his contributions to the theory of entire and meromorphic functions. He received his Ph.D. from ETH Zürich in 1939, where he studied under George (György) Pólya and Michel Plancherel. During World War II, he served in the French Army. From 1945 to 1949, he lectured at Farouk University in Egypt, and later held academic positions at the University of Saskatchewan and the University of Colorado. In 1952, he joined Syracuse University in New York, where he became a professor in 1956 and a distinguished professor in 1971. He retired in 1985. His joint publication with Erdős appeared in the same year.

#### External Link(s):

Albert Edrei (de-Wikipedia)

Albert Edrei (pt-Wikipedia)

**Albert Edrei (Syracuse University)** 

Albert Edrei (MathGenealogy)

\*László Fejes Tóth (Szeged, Hungary, 12 March 1915 – Budapest, Hungary, 17 March 2005) was a Hungarian mathematician who specialized in geometry. He proved that a lattice pattern is the most efficient way to pack centrally symmetric convex sets in the Euclidean plane—an extension of Thue's

theorem, the two-dimensional analog of the Kepler conjecture. Fejes Tóth also investigated sphere packing problems and was the first, in 1953, to demonstrate that proving the Kepler conjecture could be reduced to a finite case analysis. He later suggested that the problem might be solvable using computers. He received his Ph.D. from Eötvös Loránd University (Budapest) in 1938, under the supervision of Leopold (Lipót) Fejér. His joint publication with Erdős was published in 1956.

#### External Link(s):

László Fejes Tóth (Wikipedia)

Fejes Tóth László (hu-Wikipedia)

László Fejes Tóth (MathGenealogy)

Fejes Tóth László (História – Tudósnaptár)

\*Donald Allan Darling (Los Angeles, California, US, 4 May 1915 – 24 June 2014) was an American statistician best known for the Anderson–Darling test, a statistical test used to determine whether a sample comes from a specific probability distribution. He earned his Ph.D. from the California Institute of Technology (Pasadena) in 1947, under the supervision of Morgan Ward. He co-authored two papers with Erdős, published in 1956 and 1968.

External Link(s):

**Donald Allan Darling (Wikipedia)** 

**Donald A. Darling (MathGenealogy)** 

\*Wolfgang Heinrich Johannes Fuchs (Munich, Germany, 19 May 1915 – Ithaka, New York, US, 24 February 1997) was a German–British–American mathematician who specialized in complex analysis. He received his Ph.D. from the University of Cambridge in 1941, where he studied under Albert Edward Ingham. His joint publication with Erdős appeared in 1956.

External Link(s):

**Wolfgang Heinrich Johannes Fuchs (Wikipedia)** 

Wolfgang Fuchs (Mathematiker) (de-Wikipedia)

**Wolfgang Heinrich Johannes Fuchs (MathGenealogy)** 

\*Paul Joseph Kelly (Riverside, California, US, 26 June 1915 – Santa Barbara, California, US, 15 July 1995) was an American mathematician whose work focused on geometry and graph theory. He received his Ph.D. from the University of Wisconsin–Madison in 1942, under the supervision of Stanisław Marcin Ulam. He co-authored two papers with Erdős, published in 1963 and 1967.

External Link(s):

Paul Kelly (mathematician) (Wikipedia)

Paul Joseph Kelly (MacTutor)

Paul Joseph Kelly (MathGenealogy)

\*Adolph Winkler Goodman (20 July 1915 – 30 July 2004) was an American mathematician known for his work in number theory, graph theory, and the theory of univalent functions. The **Goodman conjecture** on the coefficients of multivalent functions is regarded as one of the most intriguing open

problems in the field after the **Bieberbach conjecture**, which was solved by Louis de Branges in 1985. Goodman received his Ph.D. from Columbia University (New York City) in 1947, where his advisors were Otto Szász and Edgar Raymond Lorch. His joint paper with Erdős was published in 1966.

External Link(s):

Adolph Winkler Goodman (Wikipedia)
Al Winkler (Adolph) Goodman (MathGenealogy)

\*Ivan Morton Niven (Vancouver, British Columbia, Canada, 25 October 1915 – Eugene, Oregon, US, 9 May 1999) was a Canadian-American mathematician best known for his contributions to number theory, particularly his work on Waring's problem. He served for many years as a professor at the University of Oregon and was a past president of the Mathematical Association of America. Niven was also the author of several influential mathematics books. He received his Ph.D. from the University of Chicago in 1938, under the supervision of Leonard Eugene Dickson. He co-authored six papers with Erdős, published between 1945 and 1975.

External Link(s):

Ivan M. Niven (Wikipedia)

Ivan Morton Niven (MathGenealogy)

\*Gilbert Agnew Hunt (Washinton, D.C., US, 4 March 1916 – Princeton, New Jersey, US, 30 May 2008) was an American mathematician and amateur tennis player active during the 1930s and 1940s. He earned his Ph.D. from Princeton University in 1948, where his advisor was Salomon Bochner. His joint publication with Erdős was published in 1953.

External Link(s):

**Gilbert Hunt (Wikipedia)** 

**Gilbert Agnew Hunt (MacTutor)** 

**Gilbert Agnew Hunt (MathGenealogy)** 

\*Aryeh Dvoretzky (Hebrew: "אריה\_דבורצקי"; Khorol, Imperial Russia, now Ukraine, 3 May 1916 – Jerusalem, Israel, 8 May 2008) was a Ukrainian-born Israeli mathematician and recipient of the 1973 Israel Prize in Mathematics. He is best known for his contributions to functional analysis, statistics, and probability theory. Dvoretzky served as the eighth president of the Weizmann Institute of Science. He received his Ph.D. from the Hebrew University of Jerusalem in 1941, under the supervision of Michael (Mihály) Fekete. He co-authored eight papers with Erdős, published between 1950 and 1961. He is one of the namesakes of the **Dvoretzky–Rogers theorem**, which asserts that every infinite-dimensional Banach space contains an unconditionally convergent series that is not absolutely convergent.

External Link(s):

Aryeh Dvoretzky (Wikipedia)

אריה דבורצקי (he-Wikipedia)

**Aryeh Dvoretzky (MacTutor)** 

**Aryeh Dvoretzky (MathGenealogy)** 

\*Richard Kenneth Guy (Nuneaton, England, UK, 30 September 1916 – Calgary, Alberta, Canada, 9 March 2020) was a British mathematician known for his contributions to number theory, geometry, recreational mathematics, combinatorics, and graph theory. He was a professor in the Department of Mathematics at the University of Calgary. Guy was best known for co-authoring *Winning Ways for Your Mathematical Plays* with John Conway and Elwyn Berlekamp, and for writing *Unsolved Problems in Number Theory*. He also proposed the partly tongue-in-cheek "strong law of small numbers", which humorously observes that there are not enough small integers to meet the many demands placed on them, often leading to unexpected coincidences. For this work, he received the MAA Lester R. Ford Award. He co-authored four papers with Erdős, published between 1970 and 1982.

External Link(s):

Richard K. Guy (Wikipedia)

Richard Kenneth Guy (MathGenealogy)

\*Arthur Harold Stone (London, England, UK, 30 September 1916 – 6 August 2000) was a British mathematician who worked primarily in topology, with academic appointments at the Universities of Manchester and Rochester. He received his Ph.D. from Princeton University in 1941, under the supervision of Solomon Lefschetz. He co-authored three papers with Erdős, published between 1945 and 1970.

External Link(s):

**Arthur Harold Stone (Wikipedia)** 

**Arthur Harold Stone (MathGenealogy)** 

\*Andrew Vázsonyi (Endre Vázsonyi, born Endre Weiszfeld, Budapest, Hungary, 4 November 1916 – Santa Rosa, California, US, 13 November 2003) was a Hungarian-American mathematician and management scientist. At the age of 16, he published a seminal paper introducing Weiszfeld's method for solving the Fermat–Weber location problem, a foundational result in optimization and location theory that continues to be studied and applied today. He earned his Ph.D. from Eötvös Loránd University (Budapest) in 1938, where his advisor was Leopold (Lipót) Fejér. Vazsonyi's father, Miksa Weiszfeld, a shoe store owner, was a cousin of Jenő Vázsonyi, president of the Hungarian Railways, and of Vilmos Vázsonyi, who briefly served as Hungarian Minister of Justice in 1917 and 1918. He was also a second cousin of the writer Endre Vázsonyi (1906–1986). He co-authored two papers with Erdős, published in 1936 and 1938.

External Link(s):

Andrew Vázsonyi (Wikipedia)

Vázsonyi Endre (matematikus) (hu-Wikipedia)

**Andrew Vazsonyi (Informs)** 

Vázsonyi Endre (Weiszfeld, Andrew) (História – Tudósnaptár)

The Weiszfeld/Vázsonyi family tree (in Hungarian)

\*Leonard E. Gillman (Cleveland, Ohio, US, 8 January 1917 – Austin, Texas, US, 7 April 2009) was an American mathematician and Professor Emeritus at the University of Texas at Austin. He was also an accomplished classical pianist. He earned his Ph.D. from Columbia University (New York City)

in 1953, where his advisors were Edgar Raymond Lorch and Alfred Tarski. His joint publication with Erdős was published in 1955.

External Link(s):

Leonard Gillman (Wikipedia)

**Leonard Gillman (MacTutor)** 

Leonard Gillman (MathGenealogy)

\*Irving Kaplansky (Toronto, Ontario, Canada, 22 March 1917 – Los Angeles, California, US, 25 June 2006) was a Canadian-American mathematician, professor, author, and amateur musician. He received his Ph.D. from Harvard University (Cambridge, Massachusetts) in 1941, under the supervision of Saunders Mac Lane. He co-authored two publications with Erdős, both published in 1946. Kaplansky is the namesake of the **Kaplansky Density Theorem** and **Kaplansky's Game**, a mathematical board game in which two players alternately place stones of their color on an infinite grid. The winner is the first to align *k* of their stones in a row without any interruptions by stones of the opposing color.

External Link(s):

Irving Kaplansky (Wikipedia)

**Irving Kaplansky (fr-Wikipedia)** 

**Irving Kaplansky (MacTutor)** 

Irving Kaplansky (MathGenealogy)

\*William Thomas Tutte (Newmarket, England, UK, 14 May 1917 – Waterloo, Ontario, Canada, 2 May 2002) was a British-Canadian mathematician and cryptanalyst. During World War II, he made a brilliant and foundational breakthrough in deciphering the Lorenz cipher, a major Nazi German system used for top-secret military communications. His work in decrypting Lorenz-encrypted messages provided strategic intelligence that significantly—perhaps decisively—contributed to the Allied victory. In mathematics, Tutte made fundamental contributions to graph theory and matroid theory, and is the namesake of the Tutte polynomial in both areas. He earned his Ph.D. from the University of Cambridge in 1948, where his advisor was Shaun Wylie. His joint publication with Erdős was published in 1965.

External Link(s):

W. T. Tutte (Wikipedia)

William Tutte (fr-Wikipedia)

**William Thomas Tutte (MacTutor)** 

William Thomas Tutte (MathGenealogy)

\*Kai Lai Chung (Chinese: 鍾開萊: Hangzhou, Zhejiang, China, 19 September 1917 – Philippines, 2 June 2009) was a Chinese-American mathematician renowned for his significant contributions to modern probability theory. He earned his Ph.D. from Princeton University in 1947, under the guidance of Harald Cramér. He co-authored four papers with Erdős, published between 1947 and 1959.

External Link(s):

Chung Kai-lai (Wikipedia)

鍾開萊 (zh-Wikipedia)

#### Kai Lai Chung (MathGenealogy)

\*János Surányi (Budapest, Hungary, 29 May 1918 – Budapest, Hungary, 8 December 2006) was a Hungarian mathematician whose work spanned mathematical logic, number theory, and combinatorics. He made notable contributions to the decision problem, geometric number theory, and the fundamental theorem of number theory. He earned his Candidate degree in 1953 and his D.Sc. in 1957, both from the Hungarian Academy of Sciences. He co-authored four papers with Erdős, published between 1959 and 2003.

External Link(s):

<u>Surányi János (matematikus) (hu-Wikipedia)</u> Surányi János (História – Tudósnaptár)

\*Nicolaas Govert de Bruijn (The Hague, Netherlands, 9 July 1918 – Nuenen, Netherlands, 17 February 2012) was a Dutch mathematician renowned for his contributions to analysis, number theory, combinatorics, and logic. He earned his Ph.D. from Vrije Universiteit Amsterdam in 1943 under the supervision of Jurjen Ferdinand Koksma. He co-authored six papers with Erdős, published between 1948 and 1953. He is one of the namesakes of the **de Bruijn–Erdős theorem**, which states that if every finite subgraph of an infinite graph can be colored with c colors, then the entire graph can also be colored with c colors.

External Link(s):

Nicolaas Govert de Bruijn (Wikipedia)

Nicolaas Govert de Bruijn (nl-Wikipedia)

Nicolaas Govert de Bruijn (MacTutor)

Nicolaas Govert de Bruijn (MathGenealogy)

\*Leon Mirsky (Russian: Леон Мирский; Russia, 19 December 1918 – Sheffield, England, UK, 1 December 1983) was a Russian-British mathematician whose work spanned number theory, linear algebra, and combinatorics. Mirsky's theorem, which characterizes the height of a finite partially ordered set in terms of a minimal partition into antichains, is named after him. He received his Ph.D. from the University of Sheffield in 1949. His joint publication with Erdős was published in 1952.

External Link(s):

**Leon Mirsky (Wikipedia)** 

**Leon Mirsky (MacTutor)** 

Leon Mirsky (MathGenealogy)

\*Harry Pollard (Boston, Massachusetts, US, 28 February 1919 – 20 November 1985) was an American mathematician. He earned his Ph.D. from Harvard University (Cambridge, Massachusetts) in 1942, under the supervision of David Vernon Widder. He later taught at Cornell University and served as Professor of Mathematics at Purdue University from 1961 until his death in 1985. Pollard was known for his work on celestial mechanics, orthogonal polynomials, and the *n*-body problem, as well as for authoring and co-authoring several influential textbooks. His joint publication with Erdős appeared in 1949.

Harry Pollard (mathematician) (Wikipedia)

Harry Pollard (MathGenealogy)

Harry Pollard (Prabook)

\*Paul Trevier Bateman (Philadelphia, Pennsylvania, US, 6 June 1919 – Urbana, Illinois, US, 26 December 2012) was an American number theorist best known for formulating the Bateman–Horn conjecture, which concerns the density of prime numbers generated by systems of polynomials, and for the New Mersenne conjecture, which relates Mersenne and Wagstaff primes. He received his Ph.D. from the University of Pennsylvania in 1946, where his advisor was Hans Adolph Rademacher. He coauthored five papers with Erdős between 1950 and 1981.

External Link(s):

Paul T. Bateman (Wikipedia)

Paul Trevier Bateman (MathGenealogy)

\*Yael Naim Dowker (Hebrew: "יעל דאוקר,"); born Yael Naim, Tel Aviv, Occupied Enemy Territory Administration, now Israel, 30 October 1919 – Oxford, England, UK, 28 January 2016) was an Israeliborn English mathematician noted for her contributions to measure theory, ergodic theory, and topological dynamics. She earned her Ph.D. from Radcliffe College (Cambridge, Massachusetts) in 1948, under the supervision of Witold Hurewicz. Her joint publication with Erdős was published in 1959.

External Link(s):

Yael Dowker (Wikipedia)

יעל דאוקר (he-Wikipedia)

Yael Naim Dowker (MathGenealogy)

\*Henryk Minc (Łódź, Congress Poland, Russian Empire, 12 November 1919 – 15 July 2013) was a Polish-born, British-educated American mathematician. He is best known for the **Bregman–Minc inequality** (also known as **Bregman's theorem**), which provides a bound on the permanent of a binary matrix in terms of its row or column sums. Minc conjectured the inequality in 1963, and it was proven a decade later by Lev M. Bregman in 1973. Minc earned his Ph.D. from the University of Edinburgh in 1959, under the supervision of Ivor Malcolm Haddon Etherington. His joint publication with Erdős appeared in 1973.

External Link(s):

Henryk Minc (Wikipedia)

Henryk Minc (MathGenealogy)

\*Ernst Paul Specker (Zürich, Switzerland, 11 February 1920 – Zürich, Switzerland, 10 December 2011) was a Swiss mathematician best known for the Kochen–Specker theorem in quantum mechanics, which demonstrates the impossibility of certain types of hidden-variable theories. He also made contributions to set theory, particularly Quine's New Foundations, a non-well-founded and finitely axi-

omatizable set theory proposed as a simplification of the theory of types in *Principia Mathematica*. Specker received his Ph.D. from ETH Zürich in 1949, where his advisors were Heinz Hopf and Beno Eckmann. His joint publication with Erdős was published in 1961.

External Link(s):

**Ernst Specker (Wikipedia)** 

**Ernst Specker (de-Wikipedia)** 

**Ernst Paul Specker (MacTutor)** 

**Ernst P. Specker (MathGenealogy)** 

\*Donald Alan Norton (Mount Kisco, New York, US, 15 March 1920 – 1 January 1992) was an American mathematician. He graduated from Harvard University and earned his Ph.D. from the University of Wisconsin–Madison in 1949, where his advisor was Richard Hubert Bruck. His joint publication with Erdős was published in 1988.

External Link(s):

**Harvard University Red Book 1941** 

**Donald Alan Norton (Prabook)** 

**Donald Alan Norton (MathGenealogy)** 

\*Paul Charles Rosenbloom (Portsmouth, Virginia, US, 31 March 1920 – 2005) was an American mathematician. He received his Ph.D. from Stanford University in 1944, under the supervision of Gábor Szegő. His joint publication with Erdős was published in 1946.

External Link(s):

Paul C. Rosenbloom (Wikipedia)

Paul C. Rosenbloom (Wikidata)

**Paul Charles Rosenbloom (MathGenealogy)** 

\*Frederick Bagemihl (Bronx, New York, US, 25 June 1920 – 12 April 2002) was an American mathematician affiliated with the University of Wisconsin–Milwaukee. He was also a visiting scholar at the Institute for Advanced Study from 1953 to 1955. He co-authored four papers with Erdős, published between 1953 and 1964.

External Link(s):

Frederick Bagemihl (Wikipedia)

Frederick Bagemihl (MathGenealogy)

Frederick Bagemihl (Astrology)

\*Ambikeshwar Sharma (Hindi: अम्बिकेश्वर शर्मा; Rajasthan, India, 2 July 1920 – Edmonton, Alberta, Canada, 22 December 2003) was an Indian-American mathematician. He received his Ph.D. from the University of Lucknow (Uttar Pradesh, India) in 1951. His joint publication with Erdős appeared in 1965.

External Link(s):

In Memoriam Ambikeshwar Sharma
Ambikeshwar Sharma (MathGenealogy)
Dr. Ambikeshwar Sharma (Univ Alberta)

\*Johanan Schönheim (Hebrew: "יוהנן שונהיים,"; Timişoara, Romania, 28 July 1920 – 2013) was a Romanian-Israeli mathematician renowned for his contributions to combinatorics and number theory. He received his Ph.D. from the Technion – Israel Institute of Technology (Haifa) in 1949. His academic career included positions as a lecturer at Bolyai University in Cluj, Romania (1947–1949), and as a researcher at the Romanian Academy (1950–1954). In 1960, he joined Tel Aviv University, where he served as a lecturer until 1978, an associate professor until 1982, and a full professor until his retirement in 1988, after which he became professor emeritus. His research focused on combinatorial designs and covering systems. Notably, his 1964 paper "On Coverings," published in the Pacific Journal of Mathematics, investigated the existence of coverings in combinatorial structures. He was a fellow of the Institute of Combinatorics and its Applications and a member of both the Israel Mathematical Union and the New York Academy of Sciences. He also had a deep appreciation for music, travel, and photography. His four joint publications with Erdős appeared between 1970 and 1996.

External Link(s):

Jochanan Shanan Schönheim (Prabook) Johanan Schonheim (MathGenealogy)

\*Robert Creighton Buck (Cincinnati, Ohio, US, 30 August 1920 – Wisconsin, US, 1 February 1998), usually cited as R. Creighton Buck, was an American mathematician who, together with Ralph Boas, introduced the Boas–Buck polynomials. He received his Ph.D. from Harvard University (Cambridge, Massachusetts) in 1948, under the supervision of David Vernon Widder and Ralph Philip Boas, Jr. He taught at the University of Wisconsin–Madison for 40 years and was also active as a writer. His joint publication with Erdős was published in 1948.

External Link(s):

**Robert Creighton Buck (Wikipedia)** 

R. Creighton (Robert) Buck (MathGenealogy)

\*Claude Ambrose Rogers (Cambridge, England, UK, 1 November 1920 – London, England, UK, 5 December 2005) was a British mathematician known for his work in analysis and geometry. He received his Ph.D. from the University of London in 1949, where he was advised by Lancelot Stephen Bosanquet. He coauthored seven publications with Erdős between 1953 and 1964. Rogers is one of the namesakes of the **Dvoretzky–Rogers theorem**, which states that every infinite-dimensional Banach space contains an unconditionally convergent series that is not absolutely convergent.

External Link(s):

Claude Ambrose Rogers (Wikipedia)

**Claude Ambrose Rogers (MacTutor)** 

Claude Ambrose Rogers (MathGenealogy)

\*Murray Seymour Klamkin (Brooklyn, New York, US, 5 March 1921 – 6 August 2004) was an American mathematician known for his prolific contributions as a proposer and editor of challenging mathematical problems. He coauthored two joint publications with Erdős in 1973.

External Link(s):

Murray S. Klamkin (Wikipedia)

\*Frank Harary (New York City, New York, US, 11 March 1921 – Las Cruces, New Mexico, US, 4 January 2005) was an American mathematician who specialized in graph theory and is widely recognized as one of the founders of the modern field. Harary was renowned for his clear exposition and, along-side his many doctoral students, helped standardize graph-theoretical terminology. He expanded the applications of graph theory to fields such as physics, psychology, sociology, and anthropology. He received his Ph.D. from the University of California, Berkeley, in 1948, where his advisor was Alfred Leon Foster. His two joint publications with Erdős appeared in 1965 and 1980. Harary was an expert in graph enumeration—the counting of graphs with specific properties. He coauthored a foundational book on the subject (Harary and Palmer, 1973), which addressed the challenge of avoiding overcounting isomorphic graphs by applying Pólya's enumeration theorem.

External Link(s):

Frank Harary (Wikipedia)

Frank Harary (MacTutor)

Frank Harary (MathGenealogy)

\*Alfréd Rényi (Budapest, Hungary, 20 March 1921 – Budapest, Hungary, 1 February 1970) was a Hungarian mathematician best known for his pioneering work in probability theory, although he also made significant contributions to combinatorics, graph theory, and number theory. He received his Ph.D. from the University of Szeged in 1945 under the supervision of Frigyes Riesz. Two years later, in 1947, he earned his Candidate of Science degree from Leningrad State University, where his advisor was Yuri Vladimirovich Linnik. Rényi coauthored 32 publications with Erdős between 1950 and 1970. Among his many achievements, one notable contribution in information theory is the generalization of Shannon entropy, now known as **Rényi entropy**. Rényi entropies of various orders offer a rich family of diversity indices and form the basis for a spectrum of fractal dimensions.

External Link(s):

Alfréd Rényi (Wikipedia)

Rényi Alfréd (hu-Wikipedia)

Alfréd Rényi (MacTutor)

Alfréd Rényi (MathGenealogy)

Rényi Alfréd (História – Tudósnaptár)

\*Leo Moser (Vienna, Austria, 11 April 1921 – Edmonton, Alberta, Canada, 9 February 1970) was an Austrian-Canadian mathematician, best known for his contributions to geometry and for introducing polygon notation. He received his Ph.D. from the University of North Carolina at Chapel Hill in 1951, where his advisor was Alfred T. Brauer. His three joint publications with Erdős appeared between 1964

and 1970. Moser is also known for posing the famous **Moser's worm problem**, which asks for the smallest area of a region that can accommodate every plane curve of length 1. This problem remains unsolved.

#### External Link(s):

**Leo Moser (Wikipedia)** 

Leo Moser (Mathematiker) (de-Wikipedia)

Leo Moser (fr-Wikipedia)

Leo Moser (MacTutor)

**Leo Moser (MathGenealogy)** 

\*Matukumalli Venkata Subbarao (Yazali, Andhra Pradesh, India, 4 May 1921 – Edmonton, Alberta, Canada, 15 February 2006) was an Indo-Canadian mathematician specializing in number theory. He received his Ph.D. from the University of Madras (now Chennai, Tamil Nadu, India) in 1951 under the supervision of Ramaswamy S. Vaidyanathaswamy. He coauthored two papers with Erdős, published in 1972 and 1978.

#### External Link(s):

Mathukumalli V. Subbarao (Wikipedia)

Matukumalli Venkata Subbarao (MathGenealogy)

\*Verner Emil Hoggatt Jr. (26 June 1921 – 11 August 1980) was an American mathematician known primarily for his work on Fibonacci numbers and number theory. He received his Ph.D. from Oregon State University (Corvallis) in 1955, where his advisor was Charles Lester Clark. His joint publication with Erdős appeared in 1978.

External Link(s):

Verner Emil Hoggatt Jr. (Wikipedia)

Verner Emil Hoggatt Jr. (MathGenealogy)

\*Mordechai Lewin (1921–1998) was an Israeli mathematician affiliated with the Israel Institute of Technology. In 1995, he coauthored the paper "d-complete sequences of integers" with Paul Erdős, which was published in *Mathematics of Computation*.

External Link(s):

Mordechai Lewin (Technion)

\***Géza Freud** (Budapest, Hungary, 4 January 1922 – Ohio, USA, 27 September 1979) was a mathematician who earned the title Doctor of Mathematical Sciences in 1957. He received his Ph.D. from Eötvös Loránd University (Budapest) in 1956, under the supervision of Lipót (Leopold) Fejér. His joint publication with Erdős was published in 1974.

External Link(s):

Freud Géza (hu-Wikipedia)

**Géza Freud (MathGenealogy)** 

Freud Géza (História – Tudósnaptár)

\*Ernst Gabor Straus (Munich, Germany, 25 February 1922 – Los Angeles, California, US, 12 July 1983) was a German-American mathematician of Jewish origin. He was instrumental in founding Euclidean Ramsey theory and in studying the arithmetic properties of analytic functions. He received his Ph.D. from Columbia University (New York City) in 1950, under the supervision of Francis Joseph Murray. Between 1953 and 1983, he coauthored 20 papers with Paul Erdős. Straus is also one of the namesakes of the Erdős–Straus conjecture, which proposes that every rational number of the form 4/n can be expressed as the sum of three unit fractions (an Egyptian fraction).

External Link(s):

Ernst G. Straus (Wikipedia)

**Ernst Gabor Straus (de-Wikipedia)** 

**Ernst Gabor Straus (MacTutor)** 

**Ernst Gabor Straus (MathGenealogy)** 

\*John Henry Holloway Chalk (London, England. UK, 13 September 1922 – West Vancouver, British Columbia, Canada, 28 June, 2004) was a British-Canadian mathematician. He earned his Ph.D. from the University of Cambridge in 1952, where his advisors were Harold Davenport and Louis Joel Mordell. His joint publication with Erdős was published in 1987.

External Link(s):

**Mathematics (UnivToronto)** 

John H. H. Chalk (The London Mathematical Society: September 2004)

John H. H. Chalk (MathGenealogy)

\*Harold Nathaniel Shapiro (Bronx, New York, US, 2 October 1922 – Teaneck, New Jersey, US, 12 December 2013) was an American mathematician and professor emeritus at New York University's Courant Institute of Mathematical Sciences, where he taught for over 50 years. A distinguished number theorist, he was deeply interested in both pure mathematics and its applications. In the early 1960s, he founded Systems Research Group, a consultancy that applied mathematical modeling to problems in areas such as space rocketry, computer science, oil production, ship scheduling, and financial markets. Shapiro was also an accomplished painter, poet, music lover, art collector, and a quiet philanthropist. He received his Ph.D. from Princeton University in 1947 under the supervision of Emil Artin. His three joint publications with Erdős appeared between 1951 and 1957.

External Link(s):

**Harold N. Shapiro (Obituary)** 

Harold Nathaniel Shapiro (MathGenealogy)

\*Joseph Arkin (Brooklyn, New York, US, 25 May 1923 – 5 August 2002) was an American mathematician and a professor at the United States Military Academy at West Point. Most of his academic work focused on number theory, and he coauthored research papers with prominent mathematicians including Paul Erdős, Ronald Graham, Ernst G. Straus, Richard Pollack, Vern Hoggatt, Paul Smith, V.E. Smith, Gerald Bergum, and Stefan Burr. His joint publication with Erdős was published in 1996.

Joseph Arkin (Wikipedia)

\*William Judson LeVeque (Boulder, Colorado, US, 9 August 1923 – 1 December 2007) was an American mathematician whose work centered on number theory. He served as executive director of the American Mathematical Society (AMS) during the 1970s and 1980s, a period marked by significant growth and increased use of computers in academic publishing. He received his Ph.D. from Cornell University (Ithaca, New York) in 1947, under the supervision of J. Burton Wadsworth Jones and Mark Kac. His joint publication with Erdős was published in 1963.

External Link(s):

William J. LeVeque (Wikipedia)

William Judson LeVeque (MathGenealogy)

\*Steven Alexander Gaal (also known as István Sándor Gál, Budapest, Hungary, 22 February 1924 – Nevada, US, 17 March 2016) was a Hungarian-American mathematician and professor at the University of Minnesota, Minneapolis. He earned his Ph.D. from the Budapest University of Technology in 1947 under the supervision of Lipót Fejér and Frigyes Riesz. He coauthored three papers with Erdős between 1948 and 1955.

External Link(s):

**Steven Gaal (Wikipedia)** 

Gál István (matematikus) (hu-Wikipedia)

**Steven Alexander Gaal (MathGenealogy)** 

Gál István Sándor (Gaal, Steven Alexander) (História – Tudósnaptár)

**Jacques Dixmier** (born in Saint-Étienne, France, 1924) is a French mathematician known for his work in operator algebras, particularly C\*-algebras. He authored several standard reference books in the field and introduced key concepts such as the **Dixmier trace** and the **Dixmier mapping**. He received his Ph.D. from the Université de Paris in 1949 under the supervision of Gaston Julia. His joint publication with Erdős appeared in 1987.

External Link(s):

**Jacques Dixmier (Wikipedia)** 

**Jacques Dixmier (fr-Wikipedia)** 

**Jacques Dixmier (MacTutor)** 

100 years of Jacques Dixmier

Jacques Dixmier (MathGenealogy)

\*Alan Jerome Hoffman (New York City, New York, US, 30 May 1924 – 18 January 2021) was an American mathematician and IBM Fellow Emeritus at the T. J. Watson Research Center in Yorktown Heights, New York. He was the founding editor of the journal *Linear Algebra and Its Applications* and held several patents. He made significant contributions to combinatorial optimization and the eigenvalue theory of graphs. Together with Robert Singleton, he constructed the **Hoffman–Singleton graph**, the

unique Moore graph of degree 7 and diameter 2. He earned his Ph.D. from Columbia University (New York City) in 1950, under the supervision of Edgar Raymond Lorch. His joint publication with Erdős appeared in 1980.

External Link(s):

Alan J. Hoffman (Wikipedia)

**Alan Jerome Hoffman (MathGenealogy)** 

\*Péter Szüsz (Novi Sad, Yugoslavia, 11 November 1924 – Boston, Massachusetts, US, 16 February 2008) was a Serbian-Hungarian-American mathematician. He is best known for his 1961 proof of the Gauss–Kuzmin theorem, his work in probabilistic number theory, and his book on continued fractions coauthored with Andrew M. Rockett. He received his Ph.D. (Candidate of Science degree) from the Hungarian Academy of Sciences in 1955. He coauthored two papers with Erdős, both published in 1958.

External Link(s):

Peter Szüsz (Wikipedia)

\*Mary Ellen Rudin (Hillsboro, Texas, US, 7 December 1924 – Madison, Wisconsin, US, 18 March 2013) was an American mathematician renowned for her work in set-theoretic topology. In 2013, Elsevier established the Mary Ellen Rudin Young Researcher Award, presented annually to a young researcher in areas adjacent to general topology. She received her Ph.D. from the University of Texas at Austin in 1949, where she studied under R. L. (Robert Lee) Moore. Her joint publication with Erdős was published in 1975.

External Link(s):

Mary Ellen Rudin (Wikipedia)

**Mary Ellen Rudin (McTutor)** 

Mary Ellen Estill Rudin (MathGenealogy)

\*János Dezső Aczél (Budapest, Hungary, 26 December 1924 – Ottawa, Ontario, Canada, 1 January 2020) also known as John Aczel, was a Hungarian-Canadian mathematician specializing in functional equations and information theory. He earned his Ph.D. from Eötvös Loránd University (Budapest) in 1947, where his advisors were Lipót Fejér and Frigyes Riesz. His joint publication with Erdős appeared in 1965.

External Link(s):

János Aczél (mathematician) (Wikipedia)

Aczél János (matematikus) (hu-Wikipedia)

János Dezső Aczél (MacTutor)

János Aczél (MathGenealogy)

Aczél János (Aczél, János Dezső) (História – Tudósnaptár)

\*Tunekiti Sirao (1924 – 21 February 2017) was a Japanese mathematician and a prominent figure in combinatorics and graph theory. He earned his Ph.D. from the University of Tokyo in 1950 under the

supervision of Shokichi Iyanaga. He held professorships at the College of Liberal Arts at Nagoya University, the Faculty of Science at Tokyo Metropolitan University, and the Faculty of Science and Technology at Aoyama Gakuin University. In 1990, he became President of Tsuru University, where he served until his retirement in 1996 and was later named professor emeritus. In 2001, he was awarded the Order of the Rising Sun, Third Class. His joint publication with Erdős was published in 1959.

External Link(s):

Tunekiti Sirao (jp-Wikipedia)

\*Geert Caleb Ernst Prins (Amsterdam, Netherlands, 26 February 1925 – Detroit, Michigan, United States, February 1985) was an American mathematician. He received his Ph.D. from the University of Michigan (Ann Arbor) in 1957 under the supervision of Frank Harary. In an unpublished letter dated 2 August 1963, Erdős and Prins proved that if a graph G has a complete coloring of order r, and a Grundy coloring of order t, r < t, then it has a Grundy coloring of every order s, for all s,  $r \le s \le t$ . This result was cited in a joint paper by four authors in 2003, which is why Prins is considered a co-author with Erdős on a paper published 18 years after his death.

External Link(s):

**Geert Caleb Ernst Prins (MathGenealogy)** 

**Geert Caleb Ernst Prins (Geni)** 

On the equality of the partial Grundy ...

\*Solomon Marcus (Bacău, Romania, 1 March 1925 – Bucharest, Romania, 17 March 2016) was a Romanian mathematician and a full member of the Mathematical Section of the Romanian Academy (since 2001). He was also an emeritus professor at the Faculty of Mathematics of the University of Bucharest. He earned his Ph.D. from the University of Bucharest in 1956, with Miron Nicolescu (Nicolesco) as his advisor. His joint publication with Erdős was published in 1957.

External Link(s):

**Solomon Marcus (Wikipedia)** 

Solomon Marcus (ro-Wikipedia)

**Solomon Marcus (MathGenealogy)** 

\*Gabriel Andrew Dirac (Budapest, Hungary, 13 March 1925 as Gábor Endre Balázs – Arlesheim, Switzerland, 20 July 1984) was a Hungarian-British mathematician who worked primarily in graph theory. He held the position of Erasmus Smith's Professor of Mathematics at Trinity College Dublin from 1964 to 1966. He received his Ph.D. from the University of London in 1952, under the supervision of Richard Rado. His joint publication with Erdős appeared in 1963.

External Link(s):

**Gabriel Andrew Dirac (Wikipedia)** 

**Gabriel Andrew Dirac (hu-Wikipedia)** 

**Gabriel Andrew Dirac (MathGenealogy)** 

Dirac, Gabriel Andrew (Balázs Gábor Endre) (História – Tudósnaptár)

\*Karl Prachar (Vienna, Austria, 29 October 1925 – Vienna, Austria, 27 November 1994) was an Austrian mathematician renowned for his work in analytic number theory. He is particularly noted for his influential book *Primzahlverteilung* (*The Distribution of Prime Numbers*, Springer Verlag, 1957). He received his Ph.D. from the University of Vienna in 1947, where his advisor was Edmund Hlawka. His joint publication with Erdős was published in 1961.

External Link(s):

Karl Prachar (Wikipedia)

Karl Prachar (de-Wikipedia)

**Karl Prachar (MathGenealogy)** 

\***Tibor Šalát** (Vajka nad Žitavou, Czechoslovakia, 13 May 1926 – Bratislava, Slovakia, 14 May 2005) was a Slovak mathematician and professor who specialized in number theory and real analysis. He authored and co-authored numerous undergraduate and graduate mathematics textbooks, primarily in Slovak, and published most of his scholarly articles in various scientific journals. He earned his Ph.D. from Charles University in Prague in 1958, under the supervision of Vojtěch Jarník. His joint publication with Erdős appeared in 1997.

External Link(s):

Tibor Šalát (Wikipedia)

Tibor Šalát (sk-Wikipedia)

Tibor Šalát (MathGenealogy)

\*Gregory Abelevich Freiman (Russian: Григорий Абелевич Фрейман; Kazan, Russia, Soviet Union, 3 July 1926 – Tel Aviv, Israel, 19 September 2024) was a Russian mathematician best known for his contributions to additive number theory, particularly Freiman's theorem. He received his Doctor of Sciences degree from the Moscow State Pedagogical Institute in 1965 and later became Professor Emeritus at Tel Aviv University. His joint publication with Erdős was published in 1990.

External Link(s):

**Gregory Freiman (Wikipedia)** 

Фрейман, Григорий Абелевич (ru-Wikipedia)

**Gregory A. Freiman (MathGenealogy)** 

\*Seymour Schuster (Bronx, New York, US, 31 July 1926 – Northfield, Minnesota, US, 31 October 2020) was an American mathematician. He received his Ph.D. from Pennsylvania State University in 1953, where his advisor was H. S. M. (Harold Scott MacDonald) Coxeter. He co-authored two papers with Erdős, published in 1981 and 1991.

External Link(s):

Sevmour Schuster (Prabook)

**Seymour Schuster (MathGenealogy)** 

Sy Schuster - a victim of Covid-19

\*Abraham Ginzburg (Hebrew: אברהם גינזבורג,"; Navahrudak, Soviet Union, 1 August 1926 – Tel Aviv, Israel, 30 December 2020) was an Israeli mathematician and professor of computer science. He served as Vice President of the Technion – Israel Institute of Technology and later as President of the Open University of Israel. He received his Ph.D. from the Technion in 1959, where his advisor was Dov Tamari. Ginzburg co-authored two publications with Erdős, published in 1961 and 1964. He is one of the discoverers of the Erdős–Ginzburg–Ziv theorem, which asserts that any multiset of 2n-1 integers contains a subset of size n whose sum is divisible by n; the result does not hold for multisets of size 2n-2.

External Link(s):

<u>Abraham Ginzburg (Wikipedia)</u> אברהם גינזבורג (he-Wikipedia) Abraham Ginzburg (MathGenealogy)

**Sherman Kopald Stein** (born in Minneapolis, Minnesota, US, 1926) is an American mathematician and author of several mathematics textbooks. He is Professor Emeritus at the University of California, Davis. His writings have earned the Lester R. Ford Award and the Beckenbach Book Prize. He received his Ph.D. from Columbia University (New York City) in 1953, under the supervision of Paul Althaus Smith. He co-authored two papers with Erdős, published in 1963 and 1988.

External Link(s):

Sherman K. Stein (Wikipedia)

**Sherman Kopald Stein (MathGenealogy)** 

\*James Gourlay Clunie (St Andrews, Scotland, UK, 26 October 1926 – York, England, UK, 5 March 2013) was a Scottish mathematician who worked in complex analysis. He earned his Ph.D. from the University of Aberdeen in 1952, under the supervision of Archibald James MacIntyre. His joint publication with Erdős was published in 1967.

External Link(s):

James Gourlay Clunie (MacTutor)
James G. Clunie (MathGenealogy)

\*John Lewis Selfridge (Ketchikan, Alaska, US, 17 February 1927 – DeKalb, Illinois, US, 31 October 2010), was an American mathematician who made significant contributions to analytic number theory, computational number theory, and combinatorics. He received his Ph.D. from the University of California, Los Angeles in 1958, with Theodore Samuel Motzkin as his advisor. He co-authored 14 papers with Erdős, published between 1967 and 1999. Selfridge, along with John Conway, lends his name to the Selfridge–Conway procedure, a discrete method for achieving envy-free cake-cutting among three parties. Although Selfridge discovered the procedure in 1960 and shared it with Richard Guy, it was never formally published. Conway later discovered it independently, and it gained popularity in the 1990s through the work of Steven Brams and Alan Taylor.

External Link(s):

John Selfridge (Wikipedia)

#### John L. Selfridge (MathGenealogy)

\*Melvin Henriksen (New York City, New York, US, 23 February 1927 – 14 October, 2009) was an American mathematician based at Harvey Mudd College in Claremont, California. He received his Ph.D. from the University of Wisconsin–Madison in 1951, under the supervision of Richard Hubert Bruck and William Frederick Eberlein. His joint publication with Erdős was published in 1955.

External Link(s):

Melvin Henriksen (Prabook)

**Melvin Henriksen dies** 

Melvin Henriksen (MathGenealogy)

\*Horst Sachs (Magdeburg, Germany, 27 March 1927 – Ilmenau, Germany, 25 April 2016) was a German mathematician and a leading expert in graph theory. He was awarded the Euler Medal in 2000. Sachs earned his Dr. rer. nat. from Martin Luther University of Halle-Wittenberg in 1958, under the guidance of Herbert (Camillo) Grötzsch. His joint publication with Erdős was published in 1963.

External Link(s):

**Horst Sachs (Wikipedia)** 

**Horst Sachs (de-Wikipedia)** 

**Horst Sachs (MacTutor)** 

**Horst Sachs (MathGenealogy)** 

\***Géza Fodor** (Szeged, Hungary, 6 May 1927 – Szeged, Hungary, 28 September 1977) was a Hungarian mathematician and a corresponding member of the Hungarian Academy of Sciences. He received the Candidate degree in 1954 and the Doctor of Science (D.Sc.) degree in 1967, both from the Hungarian Academy of Sciences. He co-authored three papers with Erdős, published between 1956 and 1959.

External Link(s):

Géza Fodor (mathematician) (Wikipedia)

Fodor Géza (matematikus) (hu-Wikipedia)

Géza Fodor (MathGenealogy)

Fodor Géza (História – Tudósnaptár)

\*Allen Lowell Shields (New York City, New York, US, 7 May 1927 – Ann Arbor, Michigan, US, 16 September 1989) was an American mathematician whose work spanned measure theory, complex analysis, functional analysis, and operator theory. He was regarded as one of the world's leading authorities on spaces of analytic functions. Shields earned his Ph.D. from the Massachusetts Institute of Technology (MIT) in 1952, where his advisor was Witold Hurewicz. His joint publication with Erdős appeared in 1965.

External Link(s):

**Allen Shields (Wikipedia)** 

**Allen Lowell Shields (MacTutor)** 

Allen Lowell Shields (MathGenealogy)

\*Nesmith Cornett Ankeny (Walla Walla, Washington, US, 1927 – Seattle, Washington, US, 4 August 1993) was an American mathematician specializing in number theory, particularly analytic number theory and the consequences of the generalized Riemann hypothesis. He received his Ph.D. from Princeton University in 1951, where his advisor was Emil Artin. His joint paper with Erdős was published in 1954. Ankeny is also known for the **Ankeny–Artin–Chowla congruence**, which concerns the class number h of a real quadratic field with discriminant d > 0.

External Link(s):

**Nesmith Ankeny (Wikipedia)** 

**Nesmith Cornett Ankeny (MathGenealogy)** 

\*Roy O. Davies (Uttoxeter, England, UK, 1927 – 12 June 2023) was a British mathematician. He earned his Ph.D. from the University of Cambridge in 1954 under the supervision of Abram Samoilovitch Besicovitch. In the early 1970s, he became a professor of pure mathematics at the University of Leicester. His joint publication with Erdős was published in 1975.

External Link(s):

**Roy O Davies (UnivLeicester)** 

**Roy Osborne Davies (MathGenealogy)** 

\*Yousef Alavi (Persian: "پوسف علوی,"; Ahvaz, Iran, 19 March 1928 – 21 May 2013) was an Iranian-born American mathematician who specialized in combinatorics and graph theory. He received his Ph.D. from Michigan State University in 1958, where his advisor was Witold Hurewicz. Alavi was a professor of mathematics at Western Michigan University from 1958 until his retirement in 1996, serving as department chair from 1989 to 1992. He co-authored eight publications with Erdős between 1987 and 1997.

External Link(s):

Yousef Alavi (Wikipedia)

Yousef Alavi (MathGenealogy)

\*Harold Seymour Shapiro (Brooklyn, New York, US, 2 April 1928 – Stockholm, Sweden, 5 March 2021) was a Swedish mathematician and a professor at the Royal Institute of Technology in Stockholm. He is best known for introducing the Shapiro polynomials (also known as Golay–Shapiro or Rudin–Shapiro polynomials) and for his work on quadrature domains. He earned his Ph.D. from the Massachusetts Institute of Technology in 1952 under the supervision of Norman Levinson. His joint publication with Erdős appeared in 1965. According to his profile picture, he professed a deep love for polynomials—especially the Shapiro polynomials.

External Link(s):

Harold S. Shapiro (Wikipedia)

Harold Shapiro (sv-Wikipedia)

**Harold Seymour Shapiro (MathGenealogy)** 

\*Eric Charles Milner (London, England, UK, 17 May 1928 – Calgary, Alberta, Canada, 20 July 1997) was a British-American mathematician who worked primarily in combinatorial set theory. He earned his Ph.D. from the University of London in 1962, under the supervision of Richard Rado. He co-authored 15 papers with Erdős between 1966 and 1978. Milner is also one of the namesakes of the Milner–Rado paradox in set theory.

External Link(s):

**Eric Charles Milner (Wikipedia)** 

**Eric Charles Milner (MacTutor)** 

**Eric C. Milner (MathGenealogy)** 

\*Franz Josef Schnitzer (Leoben, Austria, 14 July 1928 – 20 October 2006) was an Austrian mathematician. He received his Ph.D. from Karl-Franzens-Universität Graz in 1957, with Georg Kantz as his advisor. In 1996, he co-authored a paper with Paul Erdős and István Joó titled *On Pisot Numbers*, which was published in *Ann. Univ. Sci. Budap. Rolando Eötvös, Sect. Math.* 

External Link(s):

Franz Josef Schnitzer (de-Wikipedia)

\*Lee Albert Rubel (New York City, New York, US, 1 December 1928 – 25 March 1995) was an American mathematician known for his contributions to analog computing. He earned his Ph.D. from the University of Wisconsin–Madison in 1954 under the supervision of R. Creighton (Robert) Buck. He coauthored two papers with Erdős, published in 1964 and 1974.

External Link(s):

Lee Albert Rubel (Wikipedia)

**Lee Albert Rubel (MathGenealogy)** 

Lee Albert Rubel (Geni)

\*Erich Härtter (20 December 1928 – 12 December 2015) was a German mathematician recognized for his work in probability theory. He received his Ph.D. from Johannes Gutenberg University Mainz in 1955, where his advisor was Hans Rohrbach. In 1974, he authored the book *Wahrscheinlichkeitsrechnung für Wirtschafts- und Naturwissenschaftler (Probability Theory for Economists and Natural Scientists*), published by Vandenhoeck & Ruprecht. The book aimed to make probability theory accessible to students and professionals in economics and the natural sciences. His joint publication with Erdős was published in 1966.

External Link(s):

**Erich Härtter (VRM Trauer)** 

Erich Härtter (MathGenealogy)

\*Bodo Volkmann (Berlin, Germany, 16 April 1929 – Möglingen, Germany, 18 August 2022) was a German mathematician. He obtained his Ph.D. from Johannes Gutenberg University Mainz in 1951, with Hans Rohrbach as his advisor. His joint publication with Erdős was published in 1966.

External Link(s):

**Bodo Volkmann (de-Wikipedia)** 

**Bodo Volkmann (MathGenealogy)** 

\*Hans Ivar Riesel (Stockholm, Sweden, 28 May 1929 – 21 December 2014) was a Swedish mathematician who discovered the 18th Mersenne prime in 1957 using the BESK computer: 23217–1, which has 969 digits. He held the record for the largest known prime until 1961, when Alexander Hurwitz discovered a larger one. Riesel is also known for identifying the Riesel numbers and developing the Lucas–Lehmer–Riesel test. After working at the Swedish Board for Computing Machinery, he received his Ph.D. from Stockholm University in 1969 with the thesis *Contributions to Numerical Number Theory*. That same year, he joined the Royal Institute of Technology as a senior lecturer and associate professor. His joint publication with Erdős was published in 1988. The Riesel numbers are odd natural numbers *k* such that *k* x 2<sup>n</sup>-1 is composite for all natural numbers *n*. Although many such numbers are known, the smallest Riesel number remains unproven; it is conjectured to be 509203.

External Link(s):

Hans Riesel (Wikipedia)

Hans Riesel (sv-Wikipedia)

Aviezri Siegmund Fraenkel (Hebrew: "אביעזרי פרנקל"; born in Munich, Germany, 1929) is an Israeli mathematician who has made significant contributions to combinatorial game theory. His family moved to Switzerland shortly after his birth, and in 1939 relocated to Jerusalem. He earned his Ph.D. from the University of California, Los Angeles in 1961 under the supervision of Ernst Gabor Straus. His joint publication with Erdős appeared in 1988. In a tragic event many years later, one of his grandchildren was kidnapped and murdered by Hamas in June 2014.

External Link(s):

**Aviezri Fraenkel (Wikipedia)** 

Aviezri Fraenkel (de-Wikipedia)

אביעזרי פרנקל (he-Wikipedia)

Aviezri Siegmund Fraenkel (MathGenealogy)

\*Amram Meir (Hajdúdorog, Hungary, 16 July 1929 – Toronto, Ontario, Canada, 3 January 2019) was a Hungarian-born Canadian mathematician. He received his Ph.D. from the Hebrew University of Jerusalem in 1962. Meir organized the First and Second Conferences on Approximation Theory in Edmonton (1972, 1982) and edited their proceedings. He also served as Co-Editor-in-Chief of the *Canadian Mathematical Bulletin*. Over his career, he published more than 100 research articles, primarily in approximation theory, differential operators, packing problems, and random graphs. He co-authored five papers with Erdős between 1971 and 1978.

External Link(s):

Frank - Meir - Pach: Decomposition of a Cube ...

Holocaust Survivors and Victims Database: 25022. Meir, Amram

**Hebrew Basic Burial: Amram Meir** 

\*Ervin Fried (Budapest, Hungary, 6 September 1929 – Budapest, Hungary, 5 August 2013) was a Hungarian mathematician whose primary field of research was algebra. He earned the degree of *Doctor of Mathematical Sciences* in 1972 and served as a professor in the Department of Algebra and Number Theory at Eötvös Loránd University (ELTE). In addition to numerous academic publications, he authored many lecture notes and textbooks for university students. His joint paper with Erdős was published in 1972.

External Link(s):

Fried Ervin (hu-Wikipedia)

**Ervin Fried (MathGenealogy)** 

Fried Ervin (História – Tudósnaptár)

\*Branko Grünbaum (Hebrew: ברנקו גרונבאום, 'Osijek, Yugoslavia, 2 October 1929 – Seattle, Washington, US, 14 September 2018) was a Croatian-born Jewish mathematician and professor emeritus at the University of Washington in Seattle. He earned his Ph.D. from the Hebrew University of Jerusalem in 1957 under the supervision of Aryeh Dvoretzky. He co-authored two publications with Erdős, published in 1973 and 1974.

External Link(s):

**Branko Grünbaum (Wikipedia)** 

ברנקו גרונבאום (he-Wikipedia)

Branko Grünbaum (McTutor)

**Branko Grünbaum (MathGenealogy)** 

\*Samuel James Taylor (Carrickfergus, Northern Ireland, UK, 13 December 1929 – Pemburi, England, UK, 22 January 2020) was a British mathematician. He spent much of his early childhood in Africa, where he was home-schooled by his mother. His research focused primarily on the fine sample path properties of stochastic processes and their Hausdorff measure characteristics. He earned his Ph.D. from the University of Cambridge in 1954, supervised by Abram Samoilovitch Besicovitch. He coauthored seven papers with Erdős between 1957 and 1963.

External Link(s):

Samuel James Taylor, 1929 -2020

**Samuel James Taylor, Obituary** 

Samuel James Taylor (MathGenealogy)

\*Kazimierz Urbanik (Krzemieniec, Poland, now Kremenec, Ukraine, 5 February 1930 – Wrocław, Poland, 29 May 2005) was a Polish mathematician renowned for his work in stochastic processes and probability theory. He received his Ph.D. from the University of Wrocław in 1956 under the supervision of Edward (Szpilrajn) Marczewski. His joint publication with Erdős was released in 1958.

External Link(s):

Kazimierz Urbanik (Wikipedia)

**Kazimierz Urbanik (pl-Wikipedia)** 

**Kazimierz Urbanik (MacTutor)** 

# Kazimierz Urbanik (MathGenealogy)

**Michael N. Bleicher** (born in 1930) is an American mathematician. He earned a Ph.D. in Number Theory from Tulane University in 1961, supervised by Alan C. Woods, and a Doctorate in the Foundations of Mathematics from the University of Warsaw in the same year, under Helena Rasiowa. He had a distinguished academic career and served as a professor at the University of Wisconsin–Madison. There, he became the founding director of the Wisconsin Mathematical Talent Search and received the Regents Award of Distinction in 1973. He retired as Professor Emeritus in 1993. He co-authored three papers with Erdős, published in 1975 and 1976.

External Link(s):

Michael N. Bleicher (Wikidata)

Michael Nathaniel Bleicher (MathGenealogy)

\*Thomas Kövári (Budapest, Hungary, 10 April 1930 – 12 September 2010) was a Hungarian-English mathematician. He earned his first Ph.D. (Candidate of Sciences degree) from the Hungarian Academy of Sciences in 1956. That same year, he emigrated from Hungary and later obtained a second Ph.D. from the University of London in 1961, under the supervision of Walter Kurt Hayman. His joint publication with Erdős was published in 1956.

External Link(s):

Overview of the Judit Brody-Thomas Kovari correspondence

Thomas Kövári (MathGenealogy)

Fizikusok és matematikusok az Eötvös Collegiumban 1895–1950

**Peter E. Ney** (born in Brno, Czechoslovakia, 1930) is an American mathematician. He served as an associate professor at Cornell University and later became a professor at the University of Wisconsin–Madison, where he chaired the Department of Mathematics from 1974 to 1977. He received his Ph.D. from Columbia University (New York City) in 1961, under the supervision of José Enrique Moyal. His joint publication with Erdős was published in 1974.

Peter E. Ney (de-Wikipedia)

Peter E. Ney (MathGenealogy)

\*Donald Joseph Newman (Brooklyn, New York, US, 27 July 1930 – Philadelphia, Pennsylvania, US, 28 March 2007) was an American mathematician best known for his elegant and simplified proofs of the Prime Number Theorem and the Hardy–Ramanujan partition formula. As a student, he excelled in the Putnam Competition, studying at City College of New York and New York University. He earned his Ph.D. from Harvard University in 1958, where his advisors were David Vernon Widder and Joseph Leonard Walsh. He co-authored five papers with Erdős, published between 1974 and 1993.

External Link(s):

**Donald J. Newman (Wikipedia)** 

**Donald J. Newman (MathGenealogy)** 

\*Vera Turán Sós (Budapest, Hungary, 11 September 1930 – Budapest, Hungary, 22 March 2023) was a Hungarian mathematician specializing in number theory and combinatorics. She was a student and close collaborator of both Paul Erdős and Alfréd Rényi, and frequently collaborated with her husband, Pál Turán. Sós played a key role in founding Hungary's influential combinatorics school and supervised numerous research projects in this area, including the Ramsey–Turán problem set and general formulations of intersection problems in graphs, integer subsets, and set systems. Until 1987, she worked in the Department of Analysis at Eötvös Loránd University before moving to the Alfréd Rényi Institute of Mathematics. She earned her candidate's degree in mathematics from the Hungarian Academy of Sciences in 1970, under the supervision of Lipót (Leopold) Fejér. She was elected a corresponding member of the Hungarian Academy of Sciences in 1985 and became a full member in 1990. In 1997, she received the prestigious Széchenyi Prize. Between 1966 and 1999, she co-authored 35 papers with Erdős. She is one of the namesakes of the Kővári–Sós–Turán theorem, which provides an upper bound in the Zarankiewicz problem concerning the maximum number of edges in a bipartite graph without containing a complete bipartite subgraph of a given size.

External Link(s):

Vera T. Sós (Wikipedia)

T. Sós Vera (hu-Wikipedia)

Vera Turán Sós (MacTutor)

Vera T. Sós (MathGenealogy)

T. Sós Vera (Sós Vera Turán Pálné) (História – Tudósnaptár)

**Gustavus J. Simmons** (born in West Virginia, US, 1930) is an American mathematician and retired cryptographer. He was a longtime manager of the Applied Mathematics Department at Sandia National Laboratories, where he also served as a Senior Fellow. Simmons specialized in authentication theory, designing cryptographic protocols that address problems of mutual distrust and ensure functionality even when some inputs or participants may be compromised. He received his Ph.D. from the University of New Mexico (Albuquerque) in 1969, under the supervision of Julius Rubin Blum. His joint publication with Erdős appeared in 1973.

External Link(s):

**Gustavus Simmons (Wikipedia)** 

**Gustavus Simmons (Wikidata)** 

**Gustavus J Simmons (MathGenealogy)** 

\*John David Brillhart (Berkeley, California, US, 13 November 1930 – 21 May 2022) was an American mathematician who worked primarily in number theory and taught at the University of Arizona. He earned his Ph.D. from the University of California, Berkeley, in 1967 under the supervision of Derrick Henry Lehmer. His joint publication with Erdős was published in 1983.

External Link(s):

John Brillhart (Wikipedia)

John David Brillhart (MathGenealogy)

\*János Czipszer (Budapest, Hungary, 16 November 1930 – Budapest, Hungary, 15 June 1963) was a Hungarian mathematician. His joint publication with Erdős was published in 1962.

External Link(s):

Czipszer János (História – Tudósnaptár)

\***Béla Andrásfai** (born Béla Ottó Holenda, Kám, Hungary, 8 February 1931 – Budapest, Hungary, 6 June 2023) was a Hungarian mathematician. He is best known for the Andrásfai graph, which was named after him. He received the Candidate degree from the Hungarian Academy of Sciences in 1963. His joint publication with Erdős was published in 1974. The **Andrásfai graph**, denoted And(n), is a triangle-free, circulant graph defined for any natural number  $n \ge 1$ . It has 3n - 1 vertices, with each vertex k connected to the vertices  $k \pm j$  for every j congruent to 1 mod 3. Due to its triangle-free nature and independence number of n, the Andrásfai graph provides a lower bound for the Ramsey number 3n - 1.

External Link(s):

Béla Andrásfai (Wikipedia)

Andrásfai Béla (hu-Wikipedia)

Andrásfai Béla (História – Tudósnaptár)

\*Norman J. Pullman (New York City, New York, US, 31 March 1931 – 28 May 1999) was an American mathematician and professor known for his work in number theory, matrix theory, linear algebra, and the theory of tournaments. He received his Ph.D. from Syracuse University (Syracuse, New York) in 1962, under the supervision of Kai Lai Chung. He co-authored two publications with Erdős, published in 1985 and 1986.

External Link(s):

Norman J. Pullman (Wikipedia)

Norman Jay Pullman (MathGenealogy)

Norman Pullman (Ancestry)

\*András Hajnal (Budapest, Hungary, 13 May 1931 – Budapest, Hungary, 30 July 2016) was a Hungarian-American mathematician. He served as a professor of mathematics at Eötvös Loránd University and Rutgers University and was a member of the Hungarian Academy of Sciences. He was renowned for his contributions to set theory and combinatorics. Hajnal earned his Ph.D. from the University of Szeged in 1956 under the guidance of László Kalmár. Between 1958 and 2000, he co-authored 56 papers with Erdős. He is one of the namesakes of the **Hajnal–Szemerédi theorem**, which proves a 1964 conjecture of Erdős. The theorem states that any graph with maximum degree  $\Delta$  admits an equitable coloring using  $\Delta + 1$  colors.

External Link(s):

András Hajnal (Wikipedia)

Hajnal András (matematikus) (hu-Wikipedia)

**András Hajnal (MacTutor)** 

András Hajnal (MathGenealogy)

Hajnal András (História – Tudósnaptár)

\*Roger Charles Entringer (Sioux City, Iowa, US, 17 May 1931 – Albuquerque, New Mexico, US, 18 August 2019) was an American mathematician and professor emeritus at the University of New Mexico. He earned his Ph.D. from the University of New Mexico in 1963, under the supervision of Joerg Werner von Peter (Kalkschmidt) Mayer. He collaborated with Erdős on three publications between 1972 and 1991.

External Link(s):

**Roger Charles Entringer (Geni)** 

**In Memoriam Roger Charles Entringer** 

**Roger Charles Entringer (MathGenealogy)** 

\*Georg Johann Rieger (Bad Kreuznach, Germany, 16 August 1931 – 23 June 2021) was a German mathematician noted for his work in additive number theory. He received his Ph.D. from Justus Liebig University Giessen in 1953, where his advisor was Hans-Joachim Kanold. His joint publication with Erdős was published in 1975.

External Link(s):

Georg Johann Rieger (de-Wikipedia)

Georg Johann Rieger (MathGenealogy)

\*Basil Gordon (Baltimore, Maryland, US, 23 December 1931 – California, US, 12 January 2012) was an American mathematician affiliated with the University of California. He specialized in number theory and combinatorics. He received his Ph.D. from the California Institute of Technology (Pasadena) in 1956 under the supervision of Tom M. (Mike) Apostol. His joint publication with Erdős was published in 1964. It is also noteworthy that he was a descendant of the Gordon family of British distillers, the producers of Gordon's Gin.

External Link(s):

**Basil Gordon (Wikipedia)** 

**Basil Gordon (MathGenealogy)** 

\*Robert Louis Hemminger (Rushsylvania, Ohio, US, 1931 – Nashville, Tennessee, US, 28 July 2024) was an American mathematician and professor emeritus at Vanderbilt University, where he taught for 31 years. He earned his Ph.D. from Michigan State University (East Lansing, Michigan) in 1963 under the supervision of Robert Harvey Oehmke. His joint publication with Erdős appeared in 1984.

External Link(s):

**Robert Hemminger Obituary** 

**Robert Louis Hemminger (MathGenealogy)** 

\***Egbert Harzheim** (Cologne, Germany, 11 February 1932 – 14 December 2012) was a German mathematician known for his work in pure mathematics, particularly in set theory, order theory, topology, and discrete mathematics. One of his most significant contributions is the book *Ordered Sets* (2005), a

comprehensive introduction to the theory of partially ordered sets. He received his Dr. rer. nat. from the University of Cologne (Universität zu Köln) in 1961, under the supervision of Klaus Wagner and Karl Dörge. His joint publication with Erdős was published in 1986.

External Link(s):

Egbert Harzheim (de-Wikipedia)
Egbert Harzheim (MathGenealogy)

\*József Dénes (Budapest, Hungary, 16 April 1932 – Budapest, 19 August 2002) was a Hungarian mathematician. He earned the Candidate's degree in mathematics from the Hungarian Academy of Sciences in 1970. His joint publication with Erdős was published in 1969. His main research areas included combinatorics—particularly graph theory and block designs—combinatorial methods in algebra (finite groups, semigroups, quasigroups), and the algebraic theory of information. His work on Latin squares and their applications is considered foundational and has had significant impact in international mathematical literature.

External Link(s):

Dénes József (NJSZT)

Biographies by Tünde Kántor-Varga

\*Denis Arthur Higgs (England, UK, 6 May 1932 – Toronto, Ontario, Canada, 25 February 2011) was a British mathematician. He pursued higher education at the University of the Witwatersrand in South Africa and at St John's College, University of Cambridge, in England. In 1962, he joined the National Committee of Liberation and became active in the anti-apartheid movement in South Africa. On August 28, 1964, Higgs was kidnapped from his home in Lusaka, Zambia, and was later discovered in Johannesburg, South Africa. Following this incident, he relocated to London in September 1964 and moved to Canada in 1966. He received his Ph.D. from McMaster University (Hamilton, Ontario, Canada) in 1970, under the supervision of Gert Sabidussi. His joint publication with Erdős was published in 1984.

External Link(s):

**Denis Higgs (Wikipedia)** 

**Denis Arthur Higgs (MathGenealogy)** 

\*Renu Chakravarti Laskar (Hindi: रेणु सी॰ লাংকর; Bihar, India, 8 August 1932 – 17 September 2024) was an Indian-born American mathematician who specialized in graph theory. She served as a professor in the Department of Mathematical Sciences at Clemson University from 1968 to 2006. She earned her Ph.D. in Mathematics from the University of Illinois at Urbana-Champaign in 1962 under the supervision of Henry Roy Brahana. Her four joint publications with Erdős appeared between 1983 and 2003.

External Link(s):

Renu C. Laskar (Wikipedia)

Renu Chakravarti Laskar (MathGenealogy)

\*Francis W. Carroll (Philadelphia, Pennsylvania, US, 22 August 1932 – Norfolk, Virginia, US, 30 July 2024) was an American mathematician. In 1960, he joined the Department of Mathematics at Ohio State University, where he served on the faculty for several decades. His research interests were broad, encompassing analytic functions and locally compact groups. He earned his Ph.D. from Purdue University (West Lafayette, Indiana) in 1960, under the supervision of Johannes Henricus Bernardus Kemperman. His joint publication with Erdős was published in 1977.

External Link(s):

Francis William Carroll, JR Obituary

Francis William Carroll (MathGenealogy)

\*Jacobus Hendricus van Lint (Bandoeng, Netherlands East Indies, now Bandung, West Java, Indonesia, 1 September 1932 – Eindhoven, Netherlands, 28 September 2004) was a Dutch mathematician and professor at Eindhoven University of Technology, where he served as rector magnificus from 1991 to 1996. He received his Ph.D. from Utrecht University in 1957, with Frederik van der Blij as his advisor. His two joint publications with Erdős appeared in 1966 and 1982.

External Link(s):

J. H. van Lint (Wikipedia)

**Jacobus Hendricus van Lint (MacTutor)** 

Jacobus Hendricus van Lint (MathGenealogy)

\*Oved Shisha (Tel Aviv, British Mandatory Palestine, now Israel, 27 September 1932 – New York, US, 17 April 1998) was an Israeli-American mathematician specializing in approximation theory and inequalities. In 1961, he joined the mathematics faculty at the University of Rhode Island, where he served until his death. He received his Ph.D. from the Hebrew University of Jerusalem in 1958, under the supervision of Aryeh Dvoretzky. His joint publication with Erdős was published in 1985.

External Link(s):

**Tribute to Oved Shisha** 

**Oved Shisha (AncientFaces)** 

**Oved Shisha (MathGenealogy)** 

\*Jacques Jean-Pierre Neveu (Watermael-Boitsfort, Belgium, 14 November 1932 – Paris, France, 17 May 2016) was a Belgian-French mathematician specializing in probability theory. He was one of the founding figures of the post–World War II French school of probability and statistics. He received his Ph.D. from the University of Paris in 1955, under the supervision of Robert Fortet. His joint publication with Erdős was published in 1963.

External Link(s):

Jacques Neveu (Wikipedia)

Jacques Neveu (fr-Wikipedia)

Jacques Jean-Pierre Joseph Neveu (MacTutor)

Jacques Neveu (MathGenealogy)

\***Juraj Bosák** (Bratislava, Czechoslovakia, 6 April 1933 – Bratislava, Czechoslovakia, 5 April 1987) was a Slovak mathematician. He received his Ph.D. from the Institute of Mathematics of the Slovak Academy of Sciences in 1965 under the supervision of Štefan Schwarz. His joint publication with Erdős appeared in 1971.

External Link(s):

Juraj Bosák (sk-Wikipedia)

Juraj Bosák (1933 - 1987)

Juraj Bosák (MathGenealogy)

\*Kanakanahalli Ramachandra (Hindi: কনকন্তলী रामचन्द्र; Mandya, Mysore Princely State, India, 18 August 1933 – India, 17 January 2011) was an Indian mathematician specializing in both analytic and algebraic number theory. He co-founded the *Hardy–Ramanujan Journal*, which focuses on topics such as prime numbers, Diophantine equations, and transcendental numbers. He earned his Ph.D. from the University of Mumbai in 1965, with Kollagunta G. Ramanathan as his advisor. His two joint publications with Erdős were published in 1975 and 1977.

External Link(s):

Kanakanahalli Ramachandra (Wikipedia)

कनकनहल्ली रामचन्द्र (hi-Wikipedia)

Kanakanahalli Ramachandra (MathGenealogy)

\*Carole Baker Lacampagne (12 September 1933 – 5 August 2021) was an American mathematician affiliated with George Washington University. She was known for her work in mathematics education and for promoting gender equality in the field. She earned her Ed.D. from Teachers College, Columbia University (New York City) in 1964. Her three joint publications with Erdős were published between 1985 and 1993.

External Link(s):

Carole Lacampagne (Wikipedia)

Carole Baker Lacampagne (ProofWiki)

\*Zdeněk Hedrlín (Prague, Czechoslovakia, 1933 – Prague, Czechoslovakia, 22 April 2018) was a Czech mathematician specializing in universal algebra and combinatorial theory, both in pure and applied contexts. He received his Ph.D. from Charles University in Prague in 1963, where his advisor was Miroslav Katětov. His joint publication with Erdős appeared in 1972.

External Link(s):

Zdeněk Hedrlín (Wikipedia)

\*Edgar Milan Palmer (Hartford, Connecticut, US, 17 May 1934 – 17 April 2015) was an American mathematician highly regarded for his contributions to graph theory and its applications. He was professor emeritus at Michigan State University. He earned his Ph.D. from the University of Michigan

(Ann Arbor) in 1965, under the supervision of Frank Harary. His joint publication with Erdős was published in 1983.

External Link(s):

**Edgar Milan Palmer - Obituary** 

Edgar Milan Palmer (MathGenealogy)

\*Pál Révész (Budapest, Hungary, 6 June 1934 – 14 November 2022) was a Hungarian mathematician noted for his work in probability and mathematical statistics, including the foundations of the law of large numbers, density estimation, and random walks. He earned the Candidate degree in 1963 and the D.Sc. in 1969 from the Hungarian Academy of Sciences, where he became a full member in 1987. His ten joint publications with Erdős appeared between 1975 and 1991.

External Link(s):

Pál Révész (Wikipedia)

Révész Pál (hu-Wikipedia)

Pál Révész (MathGenealogy)

Révész Pál (História – Tudósnaptár)

**Daniel J. Kleitman** (born in Brooklyn, New York, US, 1934) is an American mathematician and professor of applied mathematics at the Massachusetts Institute of Technology. His research spans combinatorics, graph theory, genomics, and operations research. He earned his Ph.D. from Harvard University in 1958, under the guidance of Julian Seymour Schwinger and Roy Jay Glauber. His seven joint publications with Erdős were published between 1968 and 1994.

External Link(s):

**Daniel Kleitman (Wikipedia)** 

**Daniel J. Kleitman (MathGenealogy)** 

**Richard Brian Darst** (born in Chicago, Illinois, US, 1934) is an American mathematician and author of *Introduction to Linear Programming: Applications and Extensions*. He earned an M.S. in Mathematics from the Illinois Institute of Technology in 1958 and a Ph.D. from Louisiana State University in 1960 under Pasquale Porcelli. He held positions at MIT and Purdue University before joining Colorado State University in 1971. His research interests include classical and modern analysis and optimization. He co-authored a paper with Erdős in 1981.

External Link(s):

**Richard Brian Darst (Education & Science)** 

Richard Brian Darst (MathGenealogy)

**Richard Brian Darst (Prabook)** 

\*Arun Kumar Varma (Lucknow area, Uttar Pradesh, India, 20 October 1934 – 8 December 1994) was an Indian mathematician whose primary research interest was classical approximation theory.

He received his Ph.D. from the University of Calgary in 1964, under the supervision of Ambikeshwar Sharma. His two joint publications with Erdős appeared in 1986 and 1994.

External Link(s):

In Memoriam Arun Kumar Varma (1934–1994)

**Arun Kumar Varma (MathGenealogy)** 

**Don Raymond Lick** (born in 1934) is an American mathematician who earned his Ph.D. from Michigan State University (East Lansing, Michigan) in 1961 under the supervision of Fritz Herzog. He co-authored two papers with Erdős, published in 1991 and 1997.

External Link(s):

**Don Raymond Lick (MathGenealogy)** 

**Don Raymond Lick (Wikidata)** 

**Endre Csáki** (born in Budapest, Hungary, 1935) is a Hungarian mathematician specializing in mathematical statistics and stochastic processes. He earned the Candidate degree in 1975 and the D.Sc. in 1989 from the Hungarian Academy of Sciences. His joint publication with Erdős was published in 1985.

External Link(s):

Csáki Endre (hu-Wikipedia)

Endre Csáki (MathGenealogy)

\*Zoltán Papp (Tarnivtsi, Czechoslovakia, now Ukraine, 14 January 1935 – Canyonlands National Park, Utah, US, May, 2008) was a Hungarian mathematician. He graduated from Kossuth Lajos University in Debrecen in 1958 and emigrated to the United States in 1967. His first job in the U.S. was with Western Union in New Jersey (1968–1969). In 1969, he joined George Mason College in Northern Virginia as an adjunct professor—then a branch of the University of Virginia, which became an independent university in 1972. He became a U.S. citizen in 1974 and was later granted tenure. Due to relatively low academic salaries in the South, he left teaching in 1981 to work at IBM in Poughkeepsie, NY, as a mathematician specializing in statistics. He retired from IBM in 1996 and returned to Virginia to teach part-time at George Mason University. He died in a tragic accident after falling into a gorge. His joint publication with Erdős appeared in 1980. He also co-authored a publication with Robert Francis Damiano.

\*Richard M. Pollack (New York City, New York, US, 25 January 1935 – Montclair, New Jersey, US, 18 September 2018) was an American geometer who spent most of his academic career at the Courant Institute of Mathematical Sciences at New York University, where he held the position of professor emeritus. He received his Ph.D. from New York University in 1962, under the supervision of Harold Nathaniel Shapiro. His joint publication with Erdős was published in 1989.

External Link(s):

Richard M. Pollack (Wikipedia)

Richard M. Pollack (MathGenealogy)

**Marcel Herzog** (Hebrew: מרצל הרצוג,"; born in Kraków, Poland, 1935) is an Israeli mathematician. He received his Ph.D. from Cornell University (Ithaca, New York) in 1965, where his advisor was Walter Feit. He was a professor at Tel Aviv University during the 1970s and 1980s. His joint publication with Erdős appeared in 1970.

External Link(s):

Marcel Herzog (MathGenealogy)

\*Ronald Lewis Graham (Taft, California, US, 31 October 1935 – San Diego, California, US, 6 July 2020) was an American mathematician described by the American Mathematical Society as "one of the principal architects of the rapid development worldwide of discrete mathematics in recent years." He served as president of both the American Mathematical Society and the Mathematical Association of America, and received numerous honors, including the Leroy P. Steele Prize for lifetime achievement and election to the National Academy of Sciences. He earned his Ph.D. from the University of California, Berkeley in 1962, under the supervision of Derrick Henry Lehmer. His 28 joint publications with Erdős were published between 1972 and 2002. Notable mathematical contributions associated with his name include the Erdős–Graham problem on Egyptian fractions, the Graham–Rothschild theorem in Ramsey theory, the Graham–Pollak theorem, Graham's pebbling conjecture in graph theory, the Coffman–Graham algorithm for scheduling and graph drawing, and the Graham scan algorithm for convex hulls.

External Link(s):

**Ronald Graham (Wikipedia)** 

**Ronald Lewis Graham (McTutor)** 

**Ronald Lewis Graham (MathGenealogy)** 

\*Richard Herbert Schelp (Kansas City, Missouri, US, 21 April 1936 – Memphis, Tennessee, US, 29 November 2010) was an American mathematician known for his research in graph theory and combinatorics. He earned his Ph.D. from Kansas State University (Manhattan, Kansas) in 1970, under the supervision of Richard Joseph Greechie. His 42 joint publications with Erdős appeared between 1976 and 2002.

External Link(s):

**Richard Herbert Schelp (McTutor)** 

Richard Schelp (MathGenealogy)

Mehdi Behzad (Persian: "مهدى بهزاد,"; born in Iran, 1936) is an Iranian mathematician specializing in graph theory. He introduced the theory of total coloring—known as Behzad's Conjecture or the Total Chromatic Number Conjecture—during his Ph.D. studies in 1965. Despite extensive research over the past five decades, the conjecture remains an open and challenging problem in mathematics. He earned his Ph.D. from Michigan State University (East Lansing, Michigan) in 1965, under the guidance of Edward Alfred Nordhaus. His joint publication with Erdős was published in 1991.

External Link(s):

Mehdi Behzad (Wikipedia)

(fa-Wikipedia) مهدی بهزاد

## Mehdi Behzad (MathGenealogy)

\*William Ray Hare, Jr. (Murfreesboro, Arkansas, US, 29 June 1936 – Clemson, South Carolina, US, 27 December 2020) was an American mathematician. He earned his Ph.D. from the University of Florida (Gainesville) in 1961, under the joint supervision of Jerry William Gaddum and John Edward Maxfield. After completing his doctorate, he taught at Duke University before joining the faculty at Clemson University in the fall of 1964. He served as a beloved professor of mathematics for over 39 years and remained in contact with many former students after his retirement. His joint publication with Erdős appeared in 1987.

External Link(s):

William R. Hare Obituary

William Ray Hare, Jr. (MathGenealogy)

**Gary Theodore Chartrand** (born in Sault Ste. Marie, Michigan, US, 1936) is an American mathematician specializing in graph theory. He is well known for his introductory textbooks in the field and for his work on highly irregular graphs. He received his Ph.D. from Michigan State University (East Lansing, Michigan) in 1964, with Edward Alfred Nordhaus as his advisor. His five joint publications with Erdős were published between 1987 and 1991.

External Link(s):

**Gary Chartrand (Wikipedia)** 

**Gary Theodore Chartrand (MathGenealogy)** 

**Gary Theodore Chartrand (Prabook)** 

\*Peter Clingerman Fishburn (Philipsburg, Pennsylvania, US, 2 September 1936 – Racine, Wisconsin, US, 10 June 2021) was an American mathematician recognized as a pioneer in decision theory. In 1978, he co-authored a foundational paper on approval voting with Steven Brams. He earned his Ph.D. from the Case Institute of Technology (Cleveland) in 1962, under the mentorship of Russell Lincoln Ackoff. His nine joint publications with Erdős appeared between 1991 and 1999.

External Link(s):

Peter C. Fishburn (Wikipedia)

Peter Clingerman Fishburn (MathGenealogy)

**Frederick William Galvin** (born in Saint Paul, Minnesota, US, 1936) is an American mathematician and professor at the University of Kansas. His research focuses on set theory and combinatorics. He received his Ph.D. from the University of Minnesota, Twin Cities in 1967, under the supervision of Bjarni Jónsson. His seven joint publications with Erdős were published between 1975 and 2022.

External Link(s):

Fred Galvin (Wikipedia)

Fred Galvin (fr-Wikipedia)

Frederick William Galvin (MathGenealogy)

Fred Galvin (Prabook)

\*Ian Richards (1936 – before 2019) was an American mathematician who made significant contributions to mathematical analysis and its applications. Alongside Marian Pour-El, he co-authored the book *Computability in Analysis and Physics*, which explores the interface between computability theory and analysis, particularly in physical contexts. One of their notable results demonstrated the existence of computable initial data for the wave equation that results in non-computable solutions, highlighting deep connections between computability and differential equations. He earned his Ph.D. from Harvard University (Cambridge, Massachusetts) in 1960, under the direction of Lars Valerian Ahlfors. His joint publication with Erdős appeared in 1977.

External Link(s):

J. Ian (Jonathan) Richards (Wikidata)

J. Ian (Jonathan) Richards (MathGenealogy)

**Ronald Cleveland Mullin** (born in 1936) is a Canadian mathematician noted for his contributions to combinatorics and finite fields. He earned his Ph.D. from the University of Waterloo (Ontario, Canada) in 1964, where he studied under William Thomas Tutte. As a professor at Waterloo, he mentored several students who later made significant contributions to mathematics. His joint publication with Erdős was published in 1983.

External Link(s):

Mullin, Ronald Cleveland (Univ. Waterloo)

Ronald C. Mullin (MathGenealogy)

\*Ruth Silverman (Brooklyn, New York, US, 1936 or 1937 – 25 April 2011) was an American mathematician and computer scientist, best known for her work in computational geometry. She was one of the founding members of the Association for Women in Mathematics in 1971. She received her Ph.D. from the University of Washington in 1970, where her advisor was Victor LaRue Klee. Her joint publication with Erdős appeared in 1983.

External Link(s):

**Ruth Silverman (Wikipedia)** 

**Ruth Silverman (WikiData)** 

**Ruth Silverman Obituary** 

**Ruth Silverman (MathGenealogy)** 

**Underwood Dudley** (born in New York City, New York, US, 1937) is an American mathematician and writer. He is well known for his popular books that explore "crank mathematics"—works by pseudomathematicians who incorrectly claim to have achieved the impossible, such as squaring the circle. He earned his Ph.D. from the University of Michigan (Ann Arbor) in 1965, under the supervision of William Judson LeVeque. His joint publication with Erdős was published in 1983.

External Link(s):

**Underwood Dudley (Wikipedia)** 

**Underwood Dudley (MathGenealogy)** 

**Alexander Rosa** (born in Bratislava, Czechoslovakia, 1937) is a Canadian–Slovak mathematician known for his work in combinatorics, particularly in block designs such as Steiner triple systems. In 2012, he was awarded the Euler Medal. He earned his Ph.D. from the Slovak Academy of Sciences in 1966, where his advisor was Anton Kotzig. His joint publication with Erdős was published in 1971.

### External Link(s):

Alexander Rosa (de-Wikipedia)

Alexander Rosa (sk-Wikipedia)

**Alexander Rosa (MathGenealogy)** 

\*Péter Kiss (Nagyréde, Hungary, 5 March 1937 – 5 March 2002) was a Hungarian mathematician and professor at Eszterházy Károly College, specializing in number theory. He earned his Candidate degree in 1995 and his D.Sc. in 1999 from the Hungarian Academy of Sciences. His two joint publications with Erdős appeared in 1988 and 1996.

### External Link(s):

Péter Kiss (mathematician) (Wikipedia)

Kiss Péter (matematikus) (hu-Wikipedia)

Professor Péter Kiss (1937-2002)

Péter Kiss (MathGenealogy)

\*Andrzej Schinzel (Sandomierz, Poland, 5 April 1937 – Konstancin-Jeziorna, Poland, 21 August 2021) was a Polish mathematician whose work focused primarily on number theory. He received his Ph.D. from the Institute of Mathematics, Polish Academy of Sciences, in 1960, under the supervision of Wacław Franciszek Sierpiński. His two joint publications with Erdős were published in 1960 and 1990.

#### External Link(s):

**Andrzej Schinzel (Wikipedia)** 

Andrzej Schinzel (pl-Wikipedia)

Andrzej Bobola Maria Schinzel (MathGenealogy)

**Zmarł Profesor Andrzej Schinzel** 

\*David Allyn Drake (Lorain, Ohio, US, 29 September 1937 – 14 February 2025) was an American mathematician and professor at the University of Florida (Gainesville). He earned his Ph.D. from Syracuse University (Syracuse, New York) in 1967, where his advisor was Erwin Kleinfeld. His joint publication with Erdős was published in 1990.

### External Link(s):

**David Allyn Drake (Prabook)** 

**David Allyn Drake (MathGenealogy)** 

Remembering David Drake (1937–2025)

\*Sanford Leonard Segal (Troy, New York, US, 11 October 1937 – 7 May 2010) was an American mathematician and historian of science, based at the University of Rochester. His mathematical specialties included analytic number theory and complex analysis. He authored the textbook *Nine Introductions in Complex Analysis* (1981) and the historical volume *Mathematicians Under the Nazis* (2003), which explores mathematics in that period. He received his Ph.D. from the University of Colorado at Boulder in 1963, where his advisor was Sarvadaman D. S. Chowla. His joint publication with Erdős was published in 1978.

External Link(s):

Sanford L. Segal (Wikipedia)

Sanford Leonard Segal (MathGenealogy)

**Sanford Leonard Segal (Prabook)** 

\*John Horton Conway (Liverpool, England, UK, 26 December 1937 – New Brunswick, New Jersey, US, 11 April 2020) was a British mathematician known for his wide-ranging contributions to group theory, knot theory, number theory, combinatorial game theory, and coding theory. He was also famous for his work in recreational mathematics, most notably the invention of the cellular automaton known as the *Game of Life*. He received his Ph.D. from the University of Cambridge in 1964, under the supervision of Harold Davenport. His joint publication with Erdős was published in 1979. In the spring of 2020, he contracted COVID-19 and died three days later.

External Link(s):

John Horton Conway (Wikipedia)

John Horton Conway (McTutor)

John Horton Conway (MathGenealogy)

\*Richard A. Duke (Geneva, Ohio, US, 1937 – 19 February 2015) was an American mathematician specializing in combinatorics and graph theory. He received his Ph.D. from the University of Virginia (Charlottesville) in 1965, under the supervision of Gordon Thomas Whyburn. After seven years at the University of Washington, he joined the faculty at Georgia Tech in 1972 as Assistant Director of the School of Mathematics. He served as Interim Director from 1998 to 2002. His eight joint publications with Erdős appeared between 1977 and 2003.

External Link(s):

**Richard A. Duke 1937-2015** 

Richard Alter Duke (MathGenealogy)

\*Cecil Clyde Rousseau, Jr. (Philadelphia, Pennsylvania, US, 13 January 1938 – Memphis, Tennessee, US, 10 April 2020) was an American mathematician specializing in graph theory and combinatorics. He was a professor at the University of Memphis from 1970 until his retirement in 2008 and was actively involved with the United States of America Mathematical Olympiad (USAMO), including serving as its chair. He received his Ph.D. from Texas A&M University (College Station, Texas) in 1968, under the supervision of John L. Gammel, Jr. His 35 joint publications with Erdős appeared between 1976 and 2002.

External Link(s):

Cecil C. Rousseau (Wikipedia)

**Cecil Clyde Rousseau (MathGenealogy)** 

**Imre Csiszár** (born in Miskolc, Hungary, 1938) is a Hungarian mathematician known for his contributions to information theory and probability theory. In 1996, he received the Claude E. Shannon Award, the highest annual honor in the field of information theory. He earned his Ph.D. (Candidate degree) from the Hungarian Academy of Sciences in 1967, under the supervision of Alfréd Rényi. He has been a full member of the Hungarian Academy of Sciences since 1995. His joint publication with Erdős was published in 1965.

External Link(s):

Imre Csiszár (Wikipedia)

Csiszár Imre (matematikus) (hu-Wikipedia)

Imre Csiszár (MathGenealogy)

**Imre Kátai** (born in Kiskunlacháza, Hungary, 1938) is a Hungarian mathematician and a leading researcher in number theory. He received the Candidate degree in mathematics from the Hungarian Academy of Sciences in 1966 and became a full member of the Academy in 1985. His seven joint publications with Erdős appeared between 1969 and 1981.

External Link(s):

Kátai Imre (hu-Wikipedia)

Imre Kátai (MathGenealogy)

**Raymond Elmer Pippert** (born in Lawrence, Kansas, US, 1938) is an American mathematician. He earned his Ph.D. from the University of Kansas (Lawrence, Kansas) in 1966 under the supervision of S. M. (Swarupchand Mohanlal) Shah. His joint publication with Erdős was published in 1996.

External Link(s):

**Raymond Elmer Pippert (MathGenealogy)** 

**Raymond Elmer Pippert (Prabook)** 

\*Gérard Rauzy (Paris, France, 29 May 1938 – Marseille, France, 4 May 2010) was a French mathematician known for his work in number theory and dynamical systems. He studied at the Lycée Thiers and the École Normale Supérieure and later became a professor at the University of Aix-Marseille II. Among his notable achievements is the introduction of the Rauzy fractals—fractal sets arising from the Tribonacci substitution, where 1 is replaced by 12, 2 by 13, and 3 by 1. (The Tribonacci sequence is similar to the Fibonacci sequence, but begins with three initial terms, and each subsequent term is the sum of the preceding three.) He received his D.Sc. from the Faculté des Sciences (Paris) in 1961, under the supervision of Charles Pisot. His joint publication with Erdős was published in 1999.

External Link(s):

**Gérard Rauzy (fr-Wikipedia)** 

Gérard Rauzy (MathGenealogy)

**József Szabados** (born in Budapest, Hungary, 1938) is a Hungarian mathematician and Doctor of Mathematical Sciences. His primary research interests include approximation theory, interpolation, and weighted polynomial inequalities. He received the Candidate degree in 1968 and the D.Sc. in 1975 from the Hungarian Academy of Sciences. His four joint publications with Erdős were published between 1978 and 1995.

External Link(s):

Szabados József (matematikus) (hu-Wikipedia)

József Szabados (MathGenealogy)

\*Daniel D. Bonar (Murraysville, West Virginia, US, 7 July 1938 – 4 July 2023) was an American mathematician who made significant contributions to both mathematics and computer science. He earned his Ph.D. from Ohio State University in 1968, under the guidance of Francis William Carroll and Paul Valentine Reichelderfer. In 1965, he joined the faculty of Denison University in Granville, Ohio, where he taught mathematics, statistics, and computer science for over 50 years. He served as Chair of the Mathematical Sciences Department for more than six years and was the inaugural holder of the George R. Stibitz Distinguished Professorship in Mathematics and Computer Science. His teaching excellence was recognized with multiple awards, including the Richard King Mellon Foundation Award and the Sears-Roebuck Teaching Excellence and Community Leadership Award. His joint publication with Erdős was published in 1977.

External Link(s):

**Daniel D. Bonar (WWUniv)** 

**Emeritus Daniel (Don) Bonar (Denison)** 

**Daniel Donald Bonar (MathGenealogy)** 

\*James Milne Anderson (Falkirk, Scotland, UK, 28 December 1938 – London, England, UK, 20 November 2015) was a British mathematician. He received his Ph.D. from Imperial College London in 1963, with James G. Clunie and Walter Kurt Hayman as his advisors. Following his doctoral studies, Anderson held positions at ETH Zurich, the University of Michigan, and Harvard University. In 1965, he joined University College London as a Lecturer, later becoming a Reader in 1987 and a Professor in 1991. His joint publication with Erdős was published in 1985. He was also a devoted hiker and a lifelong enthusiast of classical music, especially opera.

External Link(s):

**Milne Anderson Memorial** 

James Milne Anderson (MathGenealogy)

**Thomas Craig Brown** (born in Portland, Oregon, US, 1938) is an American–Canadian mathematician, a Ramsey theorist, and professor emeritus at Simon Fraser University. He earned his Ph.D. from Washington University in St. Louis in 1964, under the supervision of Earl Edwin Lazerson. His two joint publications with Erdős were published in 1985 and 1990.

External Link(s):

<u>Tom Brown (mathematician) (Wikipedia)</u> Thomas Craig Brown (MathGenealogy)

**Stephen Travis Hedetniemi** (born in Washington, D.C., US, 1939) is an American mathematician and computer scientist specializing in graph theory. He received his Ph.D. from the University of Michigan in 1966, under the supervision of Frank Harary and John Henry Holland. His two joint publications with Erdős appeared in 1987 and 2003. Hedetniemi has held faculty positions at several institutions, including the University of Iowa, the University of Virginia, the University of Oregon, and Clemson University, where he is currently Professor Emeritus.

External Link(s):

Stephen T. Hedetniemi (de-Wikipedia)

**Stephen Travis Hedetniemi (MathGenealogy)** 

**Stephen T. Hedetniemi (Computing)** 

\*Niels Bejlegaard (Copenhagen, Denmark, 23 February 1939 – 13 March 2004) was a Danish-Norwegian metallurgist and mathematician. He worked as an engineer at Dansk Industri Syndikat Aktieselskab in Copenhagen from 1977 to 1982. He later moved to Norway, where he served as a lecturer in metallurgy at Stavanger Technology School until his retirement. His interests included recreational mathematics, psychology, and teaching. In 1995, he co-authored a paper with Paul Erdős and two other collaborators titled "Equal Distance Sums in the Plane," published in Normat.

External Link(s):

Niels Martin Bejlegaard (Prabook)

\*Michel Marie Deza (Russian: Мишель Мари Деза; Moscow, Russia, Soviet Union, 27 April 1939 – Paris, France, 23 November 2016) was a Soviet and French mathematician known for his work in combinatorics, discrete geometry, and graph theory. He served as Director of Research at the French National Centre for Scientific Research (CNRS), Vice President of the European Academy of Sciences, Research Professor at the Japan Advanced Institute of Science and Technology, and was one of the three founding editors-in-chief of the European Journal of Combinatorics. He earned his Ph.D. from Lomonosov Moscow State University in 1965, under the supervision of Roland Lvovich Dobrushin. His four joint publications with Erdős appeared between 1975 and 1978.

External Link(s):

Michel Deza (Wikipedia)

Деза, Мишель Мари (ru-Wikipedia)

Michel Deza (MathGenealogy)

\*Stephen H. Hechler (7 June 1939 – 26 September 2018) was an American mathematician. He received his Ph.D. from the University of California, Berkeley in 1967, where his advisor was Robert Martin Solovay. His two joint publications with Erdős were published in 1975 and 1978.

External Link(s):

**Stephen Hechler Obituary** 

## **Stephen Herman Hechler (MathGenealogy)**

**Michael Makkai** (born in Budapest, Hungary, 1939) is a Hungarian-Canadian mathematician specializing in mathematical logic. His areas of expertise include model theory, category theory, algebraic logic, type theory, and the theory of topoi. He earned his Candidate degree in mathematics from the Hungarian Academy of Sciences in 1969 and has been an external member of the Academy since 1995. His joint publication with Erdős was published in 1966.

External Link(s):

Michael Makkai (Wikipedia)

Makkai Mihály (hu-Wikipedia)

Mihály Michael Makkai (MathGenealogy)

\*Ralph Jasper Faudree (Durant, Oklahoma, US, 23 August 1939 – 13 January 2015) was an American mathematician, professor of mathematics, and former provost at the University of Memphis. He earned his Ph.D. from Purdue University (West Lafayette, Indiana) in 1964, under the supervision of Eugene Victor Schenkman. Faudree was a prolific collaborator with Erdős, co-authoring 50 joint publications between 1976 and 2002.

External Link(s):

Ralph Faudree (Wikipedia)

Ralph Jasper Faudree, Jr. (MathGenealogy)

**Edward Arthur Bertram** (born in Los Angeles, California, US, 1939) is an American mathematician. He earned his Ph.D. from the University of California, Los Angeles in 1968, under the supervision of Theodore Samuel Motzkin. He served as a senior statistician at the University of California, Los Angeles from 1967 to 1968. He was an assistant professor at the University of Hawai'i at Mānoa from 1968 to 1976, then an associate professor from 1976 to 1992, and was promoted to full professor in 1992. He also held a position as a visiting assistant professor at UCLA from 1974 to 1976. His joint publication with Erdős appeared in 1994.

External Link(s):

**Edward Arthur Bertram (MathGenealogy)** 

**Edward Arthur Bertram (Prabook)** 

\*Hendrika Cornelia Scott Swart (1939 – 23 February 2016) was a South African mathematician, Professor Emeritus at the University of KwaZulu-Natal, and a former professor at the University of Cape Town. She received her D.Sc. from Stellenbosch University (South Africa) in 1971, under the supervision of Kurt-Rüdiger Kannenberg. Her joint publication with Erdős was published in 1993.

External Link(s):

Henda Swart (Wikipedia)

Hendrika Cornelia Scott Swart (MacTutor)

Hendrika Cornelia Scott Swart (MathGenealogy)

**Harold George Diamond** (born in Wurtsboro, New York, US, 1940) is an American mathematician specializing in analytic number theory, including the distribution of prime numbers and sieve methods. He is Professor Emeritus at the University of Illinois Urbana-Champaign. He earned his Ph.D. from Stanford University in 1978 under Paul Joseph Cohen. He co-authored three papers with Erdős between 1978 and 1981.

External Link(s):

**Harold George Diamond (MathGenealogy)** 

**Harold George Diamond (Prabook)** 

**Kálmán Győry** (born in Ózd, Hungary, 1940) is a Hungarian mathematician, Széchenyi Prize laureate, Professor Emeritus, and a prominent researcher in Diophantine number theory. He earned the Candidate degree in 1973 and the D.Sc. in 1984 from the Hungarian Academy of Sciences. He has been a full member of the Academy since 1998. From 1993 to 1998, he served as Dean of the Faculty of Science at Kossuth Lajos University. His joint publication with Erdős appeared in 1980.

External Link(s):

Győry Kálmán (hu-Wikipedia)

Kálmán Győry (MathGenealogy)

\*Abraham Ziv (Hebrew: "אברהם זיו," Avihayil, British Mandatory Palestine, now Israel, 6 March 1940 as Abraham Zubkowski – Israel, 5 March 2013) was an Israeli mathematician best known for his work on the zero-sum problem and as a co-discoverer of the **Erdős–Ginzburg–Ziv theorem**. This theorem states that any multiset of 2n-1 integers contains a subset of size n whose sum is divisible by n, a property that does not hold for multisets of size 2n-2. He received his Ph.D. from the Israel Institute of Technology. His joint publication with Erdős was published in 1961.

External Link(s):

**Abraham Ziv (Wikipedia)** 

**John Wesley Moon** (born in Hornell, New York, US, 1940) is an American mathematician and has been a professor at the University of Alberta since 1970. He earned his Ph.D. from the University of Alberta (Edmonton, Alberta, Canada) in 1962 under the supervision of Leo Moser. His four joint publications with Erdős were published between 1964 and 1974.

External Link(s):

<u>John Wesley Moon - mathematics educator</u>

John W. Moon (MathGenealogy)

\*Charles Payan (Montréal, Canada, 11 April 1940 – Tullins, France, 23 July 2024) was a French mathematician renowned for his contributions to graph theory and combinatorics. He spent much of his academic career at the French National Centre for Scientific Research (CNRS), where he conducted extensive mathematical research. His work focused on graph theory, including topics such as cube-like

graphs and domination-balanced graphs. He received his *Doctorat de 3e cycle* from Université de Grenoble in 1966 under René Albert Perret, and his *Docteur ès Sciences* from Université Joseph Fourier Grenoble in 1977 under Jean Kuntzmann. His joint publication with Erdős was published in 1982.

External Link(s):

<u>Charles Payan (MATh.en.JEANS)</u> Charles Payan (MathGenealogy)

**Kaipillil Vijayan** (born in Elankunnapuzha, India, 1940) is an Indian statistics educator, researcher and consultant, who earned his Ph.D. from the Indian Statistical Institute, Kolkata, in 1973 under the joint supervision of Jogabratha Roy and C. R. Rao. In 2004, he co-authored the paper "Statistical Exploratory Analysis of Genetic Algorithms", which provides a rigorous statistical methodology for analyzing genetic and other adaptive algorithms. The paper addresses issues such as experimental design, blocking, power calculations, and response curve analysis. Throughout his career, he has contributed to various areas of mathematics, including combinatorics and the statistical analysis of algorithms. He co-authored three papers with Erdős, published between 1985 and 1989.

External Link(s):

<u>Kaipillil Vijayan (MathGenealogy)</u> Kaipillil Vijayan (Prabook)

\*Arthur Marmaduke Hobbs (Washington, D.C., US, 19 June 1940 – 25 October 2020) was an American mathematician specializing in graph theory. He spent his teaching career at Texas A&M University. He received his Ph.D. from the University of Waterloo (Canada) in 1971, where his advisor was William Thomas Tutte. His 4 joint publications with Erdős were published between 1977 and 1996

External Link(s):

<u>Arthur Hobbs (mathematician) (Wikipedia)</u> Arthur M. Hobbs (MathGenealogy)

Endre Szemerédi (born in Budapest, Hungary, 1940) is a Hungarian mathematician and computer scientist working in combinatorics and theoretical computer science. Since 1986, he has been the State of New Jersey Professor of Computer Science at Rutgers University and holds Professor Emeritus status at the Alfréd Rényi Institute of Mathematics of the Hungarian Academy of Sciences. Szemerédi is a recipient of numerous honors, including the 2012 Abel Prize. His seminal contributions include Szemerédi's Theorem, the Szemerédi Regularity Lemma, the Erdős–Szemerédi Theorem, the Hajnal–Szemerédi Theorem, and the Szemerédi–Trotter Theorem. He received the Candidate degree in mathematics from Lomonosov Moscow State University in 1970, where his advisor was Israel Moiseevich Gelfand. He has been a full member of the Hungarian Academy of Sciences since 1987. His 29 joint publications with Erdős appeared between 1966 and 1997.

External Link(s):

Endre Szemerédi (Wikipedia)
Szemerédi Endre (hu-Wikipedia)
Endre Szemerédi (MacTutor)

## Endre Szemerédi (MathGenealogy)

\*Janos Galambos (Zirc, Hungary, 1 September 1940 – Willow Grove, Pennsylvania, US, 19 December 2019) was a Hungarian mathematician affiliated with Temple University in Philadelphia. He became an external member of the Hungarian Academy of Sciences in 1993 and a corresponding member of the Royal Academy of Engineering of Spain in 2001. He earned his *dr. univ.* degree from Eötvös Loránd University (Budapest) in 1963 under the supervision of Alfréd Rényi. His joint publication with Erdős was published in 1974.

External Link(s):

Janos Galambos (Wikipedia)

Galambos János (matematikus) (hu-Wikipedia)

Janos Galambos (MathGenealogy)

**Mark K. Goldberg** (18 December 1940 – 11 February 2023) was a Latvian mathematician. He received his Ph.D. from both the University of Latvia (*Latvijas Universitāte*) and the Sobolev Institute of Mathematics, Novosibirsk, in 1968, under the supervision of Alexander Aleksandrovich Zykov. His joint publication with Erdős appeared in 1988.

External Link(s):

Mark Kopelevich Goldberg (MathGenealogy)

Mark K. Goldberg (Obituary)

**Stefan Andrus Burr** (born in 1940) is an American mathematician and computer scientist, specializing in graph theory and number theory, particularly Ramsey theory. He is a retired professor of computer science at The City College of New York. Burr received his Ph.D. from Princeton University in 1969, under the supervision of Bernard Morris Dwork. He co-authored 27 publications with Erdős between 1975 and 1996.

External Link(s):

**Stefan Burr (Wikipedia)** 

**Stefan Andrus Burr (MathGenealogy)** 

**Charles Kam-tai Chui** (born in 1940) is an American mathematician specializing in approximation theory, harmonic analysis, wavelets, and splines. He earned his Ph.D. from the University of Wisconsin–Madison in 1967, under the supervision of Jacob Korevaar and Simon Hellerstein. He has held academic positions at various institutions, including the University of Missouri and the University of Hong Kong. His joint publication with Erdős was published in 1978.

External Link(s):

Charles K. Chui (MathGenealogy)

Charles Kam-tai Chui (Wikidata)

\*Richard R. Hall (1940 –25 October 2024) was a British mathematician specializing in number theory. He served as Professor Emeritus of Mathematics at the University of York (UK). He earned his Ph.D. from the University of Nottingham in 1970, under the supervision of Heini Halberstam. He coauthored 14 papers with Erdős between 1973 and 1999.

External Link(s):

**Richard Roxby Hall (MathGenealogy)** 

Richard Roxby Hall died

**András Sárközy** (born in Budapest, Hungary, 1941) is a Hungarian mathematician specializing in analytic and combinatorial number theory, although his early work was in geometry and classical analysis. He received the Candidate degree in mathematics from the Hungarian Academy of Sciences in 1969 and has been a full member of the Academy since 2004. Sárközy co-authored the highest number of papers with Paul Erdős—62 in total—published between 1966 and 1999.

External Link(s):

András Sárközy (Wikipedia)

Sárközy András (hu-Wikipedia)

András Sárközy (MathGenealogy)

**Derek Allan Holton** (born in Chesham, England, UK, 1941) is a New Zealand mathematician known for his contributions to combinatorics and mathematics education. He has been affiliated with the University of Otago, where he served as professor and later became Professor Emeritus in 2009. He is the author of several books, including *A First Look at Graph Theory* and *A First Step to Mathematical Olympiad Problems*. He received his Ph.D. from McGill University (Montreal, Canada) in 1970 under the supervision of Hans Wilhelm Eduard Schwerdtfeger. His joint publication with Erdős was published in 1984.

External Link(s):

**Derek Allan Holton (Wikidata)** 

**Derek Allan Holton (MathGenealogy)** 

**Derek Holton Life story** 

\*Torrence Douglas Parsons (Pennsylvania, US, 7 March 1941 – Butte County, California, US, 2 April 1987) was an American mathematician known for his work in graph theory and for introducing a graph-theoretic perspective on pursuit—evasion problems. He earned his Ph.D. from Princeton University in 1966 under the supervision of Albert William Tucker. His joint publication with Erdős was published posthumously in 1988.

External Link(s):

**Torrence Parsons (Wikipedia)** 

**Torrence Parsons (fr-Wikipedia)** 

**Torrence Douglas Parsons (MathGenealogy)** 

\*Péter Vértesi (Budapest, Hungary, 12 July 1941 – 16 July 2024) was a Hungarian mathematician whose research focused on approximation methods, interpolation, and orthogonal polynomials. He received the D.Sc. degree from the Hungarian Academy of Sciences in 1982. His seven joint publications with Erdős appeared between 1980 and 1995.

External Link(s):

Vértesi Péter (hu-Wikipedia)

**Bruce Lee Rothschild** (born in Los Angeles, California, US, 1941) is an American mathematician specializing in combinatorics. He is Professor Emeritus of Mathematics at the University of California, Los Angeles. He earned his Ph.D. from Yale University in 1967, where his advisor was Øystein Ore. Rothschild co-authored nine publications with Erdős between 1973 and 1999.

External Link(s):

**Bruce Lee Rothschild (Wikipedia)** 

**Bruce Lee Rothschild (MathGenealogy)** 

\*Peter Manfred Gruber (Klagenfurt, Austria, 28 August 1941 – Vienna, Austria, 7 March 2017) was an Austrian mathematician known for his work in geometric number theory and convex and discrete geometry. He received his Ph.D. from the University of Vienna in 1966, where his advisors were Nikolaus Hofreiter and Edmund Hlawka. His joint publication with Erdős was published in 1989.

External Link(s):

Peter M. Gruber (Wikipedia)

Peter Gruber (Mathematiker) (de-Wikipedia)

Peter Manfred Gruber (MathGenealogy)

**Phyllis Zweig Chinn** (born in Rochester, New York, US, 1941) is an American mathematician who has held professorships in mathematics, women's studies, and teacher preparation at Cal Poly Humboldt in California. Her work spans graph theory, mathematics education, and the history of women in mathematics. She received her Ph.D. from the University of California, Santa Barbara, in 1969, under the supervision of Paul Joseph Kelly. Her joint publication with Erdős was published in 1981.

External Link(s):

**Phyllis Chinn (Wikipedia)** 

Phyllis Zweig Chinn (MathGenealogy)

\*Michael M. Krieger (Los Angeles, California, US, 19 December 1941–25 October 2024) was an American mathematician and attorney. He received his Ph.D. from the University of California, Los Angeles in 1977, under the supervision of Theodore Samuel Motzkin. As an attorney, his practice was devoted to high technology business issues, especially for software, multimedia and Internet-related development, acquisition, licensing, distribution and services. His joint publication with Erdős appeared in 2022.

External Link(s):

**Michael Krieger Obituary** 

Michael Marvin Krieger (MathGenealogy)

**Gábor Halász** (born in Budapest, Hungary, 1941) is a Hungarian mathematician specializing in number theory and mathematical analysis, particularly analytic number theory. He won a silver medal at the International Mathematical Olympiad in 1959. He received the Candidate of Mathematical Sciences degree in 1970 and the Doctor of Mathematical Sciences degree in 1982 from the Hungarian Academy of Sciences. He is a full member of the Academy and has been a professor at the Faculty of Sciences of Eötvös Loránd University since 1985. His joint publication with Erdős appeared in 1991.

External Link(s):

Gábor Halász (Wikipedia)

Halász Gábor (matematikus) (hu-Wikipedia)

**Peter D. T. A. Elliott** (born in 1941) is an American mathematician working in number theory. He is one of the two mathematicians after whom the Elliott–Halberstam conjecture is named. He earned his Ph.D. from the University of Cambridge in 1966, under the supervision of Hans Arnold Heilbronn, Albert Edward Ingham, and Harold Davenport. His three joint publications with Erdős were published between 1969 and 1979.

External Link(s):

Peter D. T. A. Elliott (Wikipedia)

Peter D. T. A. Elliott (fr-Wikipedia)

Peter D. T. A. Elliott (MathGenealogy)

**Jean-Louis Nicolas** (born in Orleans, France, 1942) is a French number theorist. He is known for the Erdős–Nicolas numbers, named after him and Paul Erdős. Er-dős often collaborated with Nicolas and would even use the desk of Nicolas' wife, Anne-Marie (also a mathematician), during visits. Nicolas received his Ph.D. from the University of Paris in 1969, with Charles Pisot as his advisor. A conference in his honor was held on 14–19 January 2002 at the Centre In-ternational de Rencontres Mathématiques in Marseille. His 19 joint publicati-ons with Erdős appeared between 1975 and 1999.

External Link(s):

Jean-Louis Nicolas (Wikipedia)

Jean-Louis Nicolas (de-Wikipedia)

Jean-Louis Nicolas (MathGenealogy)

Jean-Louis Nicolas (Prabook)

\*Martin Aigner (Linz, Austria, 28 February 1942 – Berlin, Germany, 11 October 2023) was an Austrian mathematician and professor at Freie Universität Berlin from 1974. His research interests included combinatorics and graph theory. He received his Ph.D. from the University of Vienna in 1965, under the supervision of Wilfried Nöbauer. His joint publication with Paul Erdős appeared in 1987.

External Link(s):

Martin Aigner (Wikipedia)

Martin Aigner (de-Wikipedia)

Martin Aigner (MathGenealogy)

\*Robert James McEliece (Washington, D.C., US, 21 May 1942 – Pasadena, California, US, 8 May 2019) was an American mathematician and professor of electrical engineering at the California Institute of Technology (Caltech), best known for his work in error-correcting codes and information theory. He received the Claude E. Shannon Award in 2004 and the IEEE Alexander Graham Bell Medal in 2009. He earned his Ph.D. from Caltech in 1967, with Marshall Hall, Jr. as his advisor. His joint publication with Erdős was published in 1971.

External Link(s):

**Robert McEliece (Wikipedia)** 

**Robert James McEliece (MathGenealogy)** 

**János Komlós** (born in Budapest, Hungary, 1942) is a Hungarian-American mathematician specializing in probability theory and discrete mathematics. He earned the "dr. univ." degree in mathematics from Eötvös Loránd University in 1967, under the supervision of Alfréd Rényi. He has been a professor of mathematics at Rutgers University and an external member of the Hungarian Academy of Sciences since 1998. He co-authored three papers with Erdős between 1970 and 1981.

External Link(s):

János Komlós (Wikipedia)

Komlós János (hu-Wikipedia)

János Komlós (MathGenealogy)

**Leroy B. Beasley** (born in Shelley, Idaho, US, 1942) is an American mathematician. He received his Ph.D. from the University of British Columbia in 1969, with Benjamin Nelson Moyls as his advisor. He later joined the faculty at Utah State University. His joint publication with Erdős was published in 1987.

External Link(s):

LeRoy B. Beasley 's CV

LeRoy B. Beasley (MathGenealogy)

**Amnon B. Barak** (born in Tel-Aviv, British Mandatory Palestine (Alef-Yod), now Israel, 1942) is an Israeli mathematician and computer scientist affiliated with the Hebrew University of Jerusalem. His joint publication with Erdős was published in 1984.

External Link(s):

Reduction of Depth of Boolean Networks...

\*Walter A. Deuber (6 October 1942 – 16 July 1999) was a German mathematician renowned for his contributions to Ramsey theory. He received his Ph.D. from ETH Zürich in 1972, under the supervision of Ernst P. Specker and Hans Läuchli. His work in combinatorics, particularly in Ramsey theory, significantly advanced the understanding of mathematical structures and configurations. His joint publication with Erdős appeared in 1997.

External Link(s):

Walter A. Deuber (MathPeople\_46\_11)

Walter Deuber (MathGenealogy)

\*Patrick Eugene O'Neil (Mineola, New York, US, 1942 – Cambridge, Massachusets, US, 20 September 2019) was an American computer scientist, database expert, and professor of computer science at the University of Massachusetts Boston. He was of Irish descent. He earned his Ph.D. from Rockefeller University in 1969, under the supervision of Gian-Carlo Rota. His joint publication with Erdős was published in 1973.

External Link(s):

Patrick O'Neil (Wikipedia)

Patrick Eugene O'Neil (MathGenealogy)

**Takashi Agoh** (born in Shimane, Japan, 1943) is a Japanese mathematician whose research focuses primarily on number theory and combinatorics. He is Professor Emeritus at the Tokyo University of Science and is known for first proposing the **Agoh–Giuga Conjecture**, which characterizes prime numbers using Bernoulli numbers. He earned his Ph.D. from the Tokyo University of Science in 1984 under the supervision of Shuichi Takahashi. He co-authored the paper "Primes at a (Somewhat Lengthy) Glance" with Paul Erdős and Andrew Granville, published in *The American Mathematical Monthly*.

**Karl-Heinz Indlekofer** (born in Wertheim, Germany, 1943) is a German mathematician known for his contributions to number theory and function theory. He earned his *Dr. rer. nat.* from Albert-Ludwigs-Universität Freiburg im Breisgau in 1970, under the supervision of Wolfgang Karl Schwarz and Theodor Schneider. In 1972, he became a docent at Johann Wolfgang Goethe-Universität Frankfurt am Main and habilitated there in 1974. He later joined the University of Paderborn as a professor, serving until his retirement in 2009. His joint publication with Erdős appeared in 1987. Beyond academia, Indlekofer is also an accomplished organist and choir director.

External Link(s):

**Karl-Heinz Indlekofer (de-Wikipedia)** 

**Karl-Heinz Indlekofer (MathGenealogy)** 

\*James Earl Baumgartner (Wichita, Kansas, US, 23 March 1943 – Hanover, New Hampshire, US, 28 December 2011) was an American mathematician who worked in set theory, mathematical logic, foundations, and topology. He earned his Ph.D. from the University of California, Berkeley, in 1970 under Robert Lawson Vaught. He co-authored two papers with Erdős, published in 1979 and 1984. With András Hajnal, he proved the Baumgartner–Hajnal theorem on partition relations.

External Link(s):

James Earl Baumgartner (Wikipedia)

James Earl Baumgartner (MathGenealogy)

**Michael J. T. Guy** (born in 1943) is a British computer scientist and mathematician. He is known for early work on computer systems, including the Phoenix system at the University of Cambridge, and for contributions to number theory, computer algebra, and polyhedral theory in higher dimensions. He collaborated with John Horton Conway and is the son of mathematician Richard K. Guy. In computer science, Guy worked on the Titan filing system (Cambridge's Atlas 2 computer) alongside Roger Needham. He also co-authored ALGOL 68C with Stephen R. Bourne. Although he did not complete a Ph.D., he conducted research under J. W. S. Cassels at Cambridge and produced notable results on the Hasse principle for cubic surfaces. His joint publication with Erdős appeared in 1979.

External Link(s):

Michael Guy (Wikipedia)

**Neil Bruce Hindman** (born in Waukon, Iowa, US, 1943) in Waukon, Iowa, USA) is an American mathematician and professor emeritus at Howard University. He is best known for Hindman's theorem, a key result in Ramsey theory concerning partitions of natural numbers. He earned his Ph.D. from Wesleyan University (Connecticut) in 1969, supervised by W. Wistar (William) Comfort. He co-authored three papers with Erdős, published between 1976 and 1997.

External Link(s):

Neil Hindman (Wikipedia)

Neil Hindman (MathGenealogy)

**Robert Tijdeman** (born in Oostzaan, Netherlands, 1943) is a Dutch mathematician specializing in number theory, best known for Tijdeman's theorem. He has been a professor at Leiden University since 1975 and served as department chair (1991–1993) and president of the Dutch Mathematical Society (1984–1986). He earned his Ph.D. from the Universiteit van Amsterdam in 1969 under Jan Popken. His joint publication with Erdős appeared in 1988.

External Link(s):

Robert Tijdeman (Wikipedia)

Robert Tijdeman (nl-Wikipedia)

Robert Tijdeman (MathGenealogy)

**Paul Chester Kainen** (born in Washington, D.C., US, 1943) is an American mathematician, serving as an adjunct associate professor of mathematics and director of the Lab for Visual Mathematics at Georgetown University. He is the author of a popular book on the four color theorem and is also known for his work on book embeddings of graphs. He earned his Ph.D. from Cornell University in 1970, where his advisor was Peter John Hilton. His joint publication with Erdős appeared in 1978.

External Link(s):

Paul Chester Kainen (Wikipedia)

Paul Chester Kainen (MathGenealogy)
Paul Chester Kainen (Prabook)

\*Herbert Kenneth Kunen (New York City, New York, US, 2 August 1943 – 14 August 2020) was an American mathematician and professor at the University of Wisconsin–Madison. He made influential contributions to set theory, set-theoretic topology, measure theory, and non-associative algebraic systems. He utilized automated theorem provers like Otter in his work. Kunen received his Ph.D. from Stanford University in 1968, supervised by Dana Stewart Scott. He co-authored a paper with Erdős in 1981 and is one of the namesakes of the Jech–Kunen tree.

External Link(s):

**Kenneth Kunen (Wikipedia)** 

**Kenneth Kunen (MathGenealogy)** 

**Béla Bollobás** (born in Budapest, Hungary, 1943) is a Hungarian-born British mathematician whose work spans functional analysis, combinatorics, graph theory, and percolation. He won IMO bronze in 1959 and gold medals in 1960 and 1961. With Erdős's help, he briefly studied at Cambridge as an undergraduate and later emigrated to pursue his Ph.D. at Cambridge in 1969. He earned his Ph.D. in 1972 under J. Frank Adams. Bollobás has been an external member of the Hungarian Academy of Sciences since 1990. He co-authored 18 papers with Erdős, published between 1962 and 2002.

External Link(s):

Béla Bollobás (Wikipedia)

Béla Bollobás (matematikus) (hu-Wikipedia)

Béla Bollobás (MacTutor)

Béla Bollobás (MathGenealogy)

**Miklós Simonovits** (born in Budapest, Hungary, 1943) in Budapest is a Hungarian mathematician at the Rényi Institute of Mathematics. He won silver (1961) and bronze (1962) medals at the IMO. He earned the candidate's degree from the Hungarian Academy of Sciences in 1970 under Vera T. Sós. A specialist in extremal graph theory, he received the Széchenyi Prize in 2014 and has been a full member of the Hungarian Academy of Sciences since 2007. He co-authored 21 papers with Erdős between 1966 and 1997.

External Link(s):

Miklós Simonovits (Wikipedia)

Simonovits Miklós (hu-Wikipedia)

Miklós Simonovits (MathGenealogy)

William Thomas Trotter Jr. (born in Pine Bluff, Arkansas, US, 1943) is an American mathematician at the Georgia Institute of Technology. He is a leading expert in partially ordered sets and has also contributed to combinatorics, including the Szemerédi–Trotter and Chvátal–Rödl–Szemerédi–Trotter theorems. He authored *Combinatorics and Partially Ordered Sets: Dimension Theory* (1992) and co-authored *Applied Combinatorics* (2017) with Mitchel Keller. Trotter earned his Ph.D. from the

University of Alabama–Tuscaloosa in 1978 under William Jesse Gray. His two joint publications with Erdős appeared in 1978 and 1991.

External Link(s):

William T. Trotter (Wikipedia)

William T. Trotter (de-Wikipedia)

William Thomas Trotter, Jr. (MathGenealogy)

\*Robert Wen-Shaing Chen (29 November 1943 – 11 August 2022) was an American mathematician. After graduating from National Chengchi University, he earned his Ph.D. from the University of Minnesota. He later joined the Department of Mathematics and Computer Science at the University of Miami, where he became a full professor before retiring in 2016. In 1988, he co-authored with Erdős the paper "Random Walks on  $\mathbb{Z}_2^n$ " published in the Journal of Multivariate Analysis.

External Link(s):

**Tribute for Robert Wen-Shaing Chen** 

**Robin James Wilson** (born in London, England, UK, 1943) is a British mathematician and emeritus professor at the Open University. He previously served as Head of Pure Mathematics and Dean of the Faculty. Wilson was a stipendiary lecturer at Pembroke College, Oxford, and served as Gresham Professor of Geometry (2004–2008). He has also taught at Colorado College and is a fellow of Keble College, Oxford. He is the son of former British Prime Minister Harold Wilson. Wilson earned his Ph.D. from the University of Pennsylvania in 1968 under Nesmith Cornett Ankeny. He co-authored a paper with Erdős published in 1977.

External Link(s):

Robin Wilson (mathematician) (Wikipedia)

Robin James Wilson (MathGenealogy)

**R. Daniel Mauldin** (born in 1943) is an American mathematician known for his work in topology, set theory, measure theory, and probability. He received his Ph.D. from the University of Texas at Austin in 1969, supervised by Hubert Stanley Wall. He has been a key figure in the mathematics department at the University of North Texas, where he is now professor emeritus. His five joint publications with Erdős appeared between 1976 and 1997.

External Link(s):

R. Daniel Mauldin (Wikidata)

R. Daniel (Richard) Mauldin (MathGenealogy)

**Siddani Bhaskara Rao** (born in India, 1943) is an Indian graph theorist, professor emeritus, and former director of the Indian Statistical Institute in Kolkata. He was the founding director of the C. R. Rao Advanced Institute of Mathematics, Statistics, and Computer Science. He is known for his work on line graphs, frequency partitions, and degree sequences. He earned his Ph.D. from the Indian Statistical Institute in 1971 under Calyampudi Radhakrishna Rao. His joint publication with Erdős appeared in 1992.

External Link(s):

S. B. Rao (Wikipedia)

Siddani Bhaskara Rao (MathGenealogy)

\*István Beck (1943 – 26 January 2018) was a Norwegian mathematician and professor at the University of Stavanger's Department of Mathematics and Natural Sciences. He earned his Ph.D. from the University of Oslo in 1969 at the age of 27. In 1971, he became an associate professor at the University of Bergen, and in 1981, a professor at the University of Haifa. He joined the University of Stavanger in 1993. Renowned for his originality and talent in combinatorics, Beck co-authored a paper with Erdős published in 1995.

External Link(s):

**INFOMAT Februar 2018** 

\*George B. Purdy (San Francisco, California, US, 20 February 1944 – Cincinnati, Ohio, US, 30 December 2017) was an American mathematician and computer scientist who specialized in cryptography, combinatorial geometry, and number theory. He earned his Ph.D. from the University of Illinois at Urbana-Champaign in 1972 under the supervision of Paul Trevier Bateman. He co-authored eight papers with Paul Erdős, published between 1971 and 1995.

External Link(s):

George B. Purdy (Wikipedia)

George Barry Purdy (MathGenealogy)

**Hugh Lowell Montgomery** (born in Muncie, Indiana, US, 1944) is an American mathematician specializing in analytic number theory and mathematical analysis. As a Marshall Scholar, he earned his Ph.D. from the University of Cambridge in 1972, where his advisor was Harold Davenport. He has long served as a professor at the University of Michigan. His joint publication with Erdős was published in 1999.

External Link(s):

**Hugh Lowell Montgomery (Wikipedia)** 

**Hugh Lowell Montgomery (MathGenealogy)** 

**Edward Thorne Ordman** (born in Norfolk, Virginia, US, 1944) is an American mathematician known for his contributions to number theory and combinatorics. He has held academic positions at the University of Kentucky, New England College, and the University of Memphis. He received his Ph.D. from Princeton University in 1969, with John Robert Stallings, Jr. as his advisor. He co-authored seven papers with Erdős, published between 1985 and 2002.

External Link(s):

**Edward Thorne Ordman (Prabook)** 

**Edward Thorne Ordman (MathGenealogy)** 

**Melvyn Bernard Nathanson** (born in Philadelphia, Pennsylvania, US, 1944) is an American mathematician specializing in number theory. He is a professor of mathematics at Lehman College and the Graduate Center of the City University of New York. His primary research focuses on additive and combinatorial number theory. He earned his Ph.D. from the University of Rochester in 1972, where his advisor was Sanford Leonard Segal. He co-authored 19 papers with Erdős, published between 1975 and 1996.

External Link(s):

Melvyn B. Nathanson (Wikipedia)

Melvyn Bernard Nathanson (MathGenealogy)

**Vance Faber** (born in Buffalo, New York, US, 1944) is an American mathematician known for his work in combinatorics, applied linear algebra, and image processing. He earned his Ph.D. from Washington University in St. Louis in 1971, under the supervision of Franklin Haimo. He co-authored two papers with Erdős, published in 1981 and 1982.

External Link(s):

Vance Faber (Wikipedia)

Vance Faber (MathGenealogy)

**John Adrian Bondy** (born in London, England, UK, 1944) is a retired British mathematician recognized for his work in combinatorics and graph theory. He earned his Ph.D. from the University of Oxford in 1969, where he studied under Dominic James Anthony Welsh. He co-authored two papers with Erdős, published in 1973 and 1999.

External Link(s):

John Adrian Bondy (Wikipedia)

J. Adrian (John) Bondy (MathGenealogy)

**Carl Bernard Pomerance** (born in Joplin, Missouri, US, 1944) is an American number theorist. He studied at Brown University as an undergraduate and earned his Ph.D. from Harvard University in 1972 with a dissertation proving that any odd perfect number has at least seven distinct prime factors. He joined the University of Georgia as a professor, attaining full professorship in 1982, and later worked at Lucent Technologies. He currently serves as a Distinguished Professor at Dartmouth College. His Ph.D. advisor was John Torrence Tate, Jr. He co-authored 23 papers with Erdős, published between 1978 and 2008.

External Link(s):

Carl Pomerance (Wikipedia)

Carl Bernard Pomerance (MathGenealogy)

**Persi Warren Diaconis** (born in New York City, New York, US, 1945) is an American mathematician and former professional magician. He is a professor of Statistics and Mathematics at Stanford

University. He earned his Ph.D. from Harvard University in 1974. His joint publication with Erdős was published in 2004.

External Link(s):

Persi Diaconis (Wikipedia)

**Péter Hamburger** (born in Mexico City, Mexico, 1945) is a Hungarian mathematician. He received the Candidate degree in 1973 from the Hungarian Academy of Sciences. He co-authored the book *Halmazelmélet* (*Set Theory*) with András Hajnal. Hamburger has made significant contributions to mathematics, authoring at least 23 papers between 1992 and 2018. He held a professorship at Purdue University Fort Wayne, where he is now Professor Emeritus. His research interests include set theory, combinatorics, and graph theory, with notable work on Venn diagrams and their extendibility and connectivity properties. His joint publication with Erdős was published in 1996.

External Link(s):

Előterjesztés

Peter Hamburger (MathGenealogy)

**Samuel Standfield Wagstaff Jr.** (born in New Bedford, Massachusetts, US, 1945) is an American mathematician and computer scientist whose research focuses on cryptography, parallel computation, and algorithm analysis, especially number-theoretic algorithms. He is a professor of computer science and mathematics at Purdue University and coordinates the Cunningham Project. He earned his Ph.D. from Cornell University in 1970 under the supervision of Oscar S. Rothaus. His joint publication with Erdős was published in 1980.

External Link(s):

Samuel S. Wagstaff Jr. (Wikipedia)

Samuel Standfield Wagstaff, Jr. (MathGenealogy)

**Robert Charles Vaughan** (born in 1945) is a British mathematician working in analytic number theory. He earned his Ph.D. from the University of London in 1970, where his advisor was Theodor Estermann. He co-authored two papers with Erdős, published in 1974 and 1979.

External Link(s):

**Bob Vaughan (Wikipedia)** 

Robert Charles Vaughan (MathGenealogy)

\*Stanley J. Benkoski (12 April 1945 – 1 December 2017) was an American mathematician who earned his Ph.D. from Pennsylvania State University in 1973 under the supervision of Harlan Riley Stevens. He spent 25 years at Daniel H. Wagner Associates, applying mathematics, operations research, and computer science to complex industrial and governmental problems. His work included search strategies, biotechnology, resource allocation, automated voice processing, and portfolio optimization. He was active in the mathematical community, serving as Chair of the MAA's Committee on Industrial and

Government Mathematics and leading the joint AMS-SIAM-MAA Committee on Employment Opportunities. Benkoski co-authored one paper with Erdős, published in 1974. He was also known for mentoring young mathematicians and promoting collaboration across academia, industry, and government.

External Link(s):

**Stanley Joseph Benkoski Obituary** 

Stanley J. Benkoski, Jr. (Wikidata)

Stanley J. Benkoski, Jr. (MathGenealogy)

**Saharon Shelah** (Hebrew: משהרן שלח,"; born in Jerusalem, British Mandatory Palestine, now Israel, 1945) is an Israeli mathematician. His father was the Israeli poet Uriel Shelach, born in Warsaw in 1908. Shelah is a professor of mathematics at the Hebrew University of Jerusalem and at Rutgers University in New Jersey. He earned his Ph.D. from the Hebrew University of Jerusalem in 1969 under Michael Oser Rabin. He co-authored three papers with Erdős, published between 1972 and 1974.

External Link(s):

Saharon Shelah (Wikipedia)

Saharon Shelah (he-Wikipedia)

**Saharon Shelah (McTutor)** 

Saharon Shelah (MathGenealogy)

**Jenő Lehel** (born in Balassagyarmat, Hungary, 1945) is a Hungarian mathematician who received the "Candidate of Mathematical Science" degree in 1984 from the Hungarian Academy of Sciences. He has made substantial contributions to graph theory and combinatorics and held academic positions at various institutions, including the University of Memphis in Tennessee, where he is now Professor Emeritus. He co-authored two papers with Erdős, published in 1991 and 2001.

External Link(s):

Jenő Lehel (MathGenealogy)

**András Gyárfás** (born in Gyula, Hungary, 1945) is a Hungarian mathematician specializing in graph theory. He is well known for the Erdős–Gyárfás conjecture, proposed with Paul Erdős, which posits that any graph with minimum degree 3 contains a cycle whose length is a power of two. Gyárfás began working at the Computer and Automation Research Institute of the Hungarian Academy of Sciences in 1968. He received his Candidate degree in 1980 and his Doctor of Mathematical Sciences degree in 1992. He co-authored 15 papers with Erdős, published between 1988 and 1999.

External Link(s):

András Gyárfás (Wikipedia)

Gyárfás András (hu-Wikipedia)

**Tarlok Nath Shorey** (born in Patli, Punjab, India, 1945) is an Indian mathematician specializing in number theory. He is a distinguished professor in the Department of Mathematics at the Indian Institute of Technology Bombay. In 1987, he received the Shanti Swarup Bhatnagar Prize for Science and Technology Bombay.

nology, India's highest science award, in the mathematical sciences category. His work includes significant contributions to transcendental number theory, especially in linear forms in logarithms of algebraic numbers, as well as applications of Baker's method to Diophantine equations and Ramanujan's Tfunction. Shorey has also made major contributions to the irreducibility of Laguerre polynomials. He received his Ph.D. from the University of Mumbai in 1975, under the supervision of Kanakanahalli Ramachandra. His joint publication with Erdős was published in 1976.

External Link(s):

Tarlok Nath Shorey (Wikipedia)

Tarlok Nath Shorey (MathGenealogy)

IAS Report

**Richard Michael Wilson** (born in Gary, Indiana, US, 1945) is an American mathematician and Professor Emeritus at the California Institute of Technology. He earned his Ph.D. from Ohio State University in 1969, where his advisor was Dwijendra Kumar Ray-Chaudhuri. He co-authored a paper with Erdős, published in 1985. Wilson is also recognized as a leading authority on historical flutes.

External Link(s):

R. M. Wilson (Wikipedia)
Richard Michael Wilson (MathGenealogy)
Interview by Katherine Saenger

Menachem Magidor (Hebrew: מנחם מגידור," born in Petah Tikva, British Mandatory Palestine, now Israel, 1946) is an Israeli mathematician specializing in mathematical logic, particularly set theory. He served as President of the Hebrew University of Jerusalem, President of the Association for Symbolic Logic (1996–1998), and President of the Division for Logic, Methodology, and Philosophy of Science and Technology of the International Union for History and Philosophy of Science (2016–2019). In 2016, he was elected an honorary foreign member of the American Academy of Arts and Sciences. In 2018, he received the Solomon Bublick Award. He earned his Ph.D. from the Hebrew University of Jerusalem in 1973 under the supervision of Azriel Levy. His joint publication with Erdős was published in 1976.

External Link(s):

Menachem Magidor (Wikipedia)

Menachem Magidor (he-Wikipedia)

**Menachem Magidor (MathGenealogy)** 

**Jaroslav Nešetřil** (born in Brno, Czechoslovakia, 1946) is a Czech mathematician affiliated with Charles University in Prague. His research spans combinatorics (structural combinatorics, Ramsey theory), graph theory (coloring problems, sparse structures), algebra (representation of structures, categories, homomorphisms), posets (diagram and dimension problems), and computer science (complexity, NP-completeness). He earned his Ph.D. from Charles University in 1973, with advisors Ales Pultr and Gert Sabidussi. His four joint publications with Erdős were published between 1983 and 1997.

External Link(s):

Jaroslav Nešetřil (Wikipedia)

<u>Jaroslav Nešetřil (cs-Wikipedia)</u> Jaroslav Nešetřil (MathGenealogy)

**Joel Spencer** (born in New York, US, 1946) is an American mathematician known for his work in combinatorics, particularly probabilistic methods and Ramsey theory. He received his Ph.D. from Harvard University in 1970 under the supervision of Andrew Mattei Gleason. In 2025, he was elected an honorary member of the Hungarian Academy His 23 joint publications with Erdős were published between 1972 and 1996.

External Link(s):

Joel Spencer (Wikipedia)

Joel Harold Spencer (MathGenealogy)

**Gary Lynn Weiss** (born in 1946) is an American mathematician known for his work in operator theory and functional analysis. He was affiliated with the University of Cincinnati (Ohio), where he contributed to both research and teaching. He earned his Ph.D. from the University of Michigan (Ann Arbor) in 1975 under the supervision of Allen Lowell Shields. His joint publication with Erdős was published in 1983.

External Link(s):

**Gary Lynn Weiss (MathGenealogy)** 

**Gary Lynn Weiss Age 79** 

**Miklós Ajtai** (born in Budapest, Hungary, 1946) is a Hungarian-American mathematician and computer scientist at IBM's Almaden Research Center in the United States. In 2003, he received the Knuth Prize for numerous contributions, including the Ajtai–Komlós–Szemerédi sorting network, results on exponential lower bounds, and time-space tradeoffs for branching programs. He is a member of the U.S. National Academy of Sciences and an external member of the Hungarian Academy of Sciences since 1995. He earned his Candidate of Science degree in 1976 from the Hungarian Academy of Sciences. His joint publication with Erdős appeared in 1981.

External Link(s):

Miklós Ajtai (Wikipedia)

Ajtai Miklós (matematikus) (hu-Wikipedia)

Miklos Ajtai (MathGenealogy)

**Václav Chvátal** (born in Prague, Czechoslovakia, 1946) is a Czech-Canadian mathematician, professor emeritus in the Department of Computer Science and Software Engineering at Concordia University in Montreal, and visiting professor at Charles University in Prague. He has made substantial contributions to graph theory, combinatorics, and combinatorial optimization. He received his Ph.D. from the University of Waterloo in 1970, under the supervision of Crispin St. John Alvah Nash-Williams. His three joint publications with Erdős were published between 1972 and 1978.

External Link(s):

Václav Chvátal (Wikipedia)

<u>Václav Chvátal (cs-Wikipedia)</u> Vašek Chvátal (MathGenealogy)

**László Gerencsér** (born in Zalaegerszeg, Hungary, 1946) is a Hungarian mathematician who won a silver medal at the International Mathematical Olympiad in 1963 and a gold medal in 1964. He earned his Candidate of Mathematical Sciences degree in 1976 and the Doctor of the Hungarian Academy of Sciences title in 2000. In 2022, he was elected an emeritus member of the Szent István Academy of Sciences. His joint publication with Erdős was published in 1970.

External Link(s):

Az Egerváry Jenő Emlékplakett 2023. évi díjazottja: Gerencsér László László Gerencsér (MathGenealogy)

**Jean-Marc Deshouillers** (born in Paris, France, 1946) is a French mathematician specializing in analytic number theory. He is a professor at the University of Bordeaux. He earned his Ph.D. from Université Pierre-et-Marie-Curie (Paris VI) in 1972, under the guidance of Charles Pisot and Heini Halberstam. His two joint publications with Erdős were published in 1976 and 1999.

External Link(s):

**Jean-Marc Deshouillers (Wikipedia)** 

Jean-Marc <u>Deshouillers</u> (fr-Wikipedia)

Jean-Marc Deshouillers (MathGenealogy)

**Allan Mark Pinkus** (born in Montreal, Quebec, Canada, 1946) is an Israeli-Canadian mathematician known for his work in approximation theory and neural networks. He earned his Ph.D. from the Weizmann Institute of Science in 1974, under the supervision of Samuel Karlin. His joint publication with Erdős was published in 1985.

External Link(s):

**Allan Pinkus CV** 

Allan Pinkus (MathGenealogy)

**Attila Máté** (born in Szeged, Hungary, 1946) is a Hungarian-American mathematician. He won a bronze medal at the International Mathematical Olympiad in 1963 and earned his Ph.D. (Candidate of Science degree) from the Hungarian Academy of Sciences in 1971. After emigrating to the United States, he became a professor at Brooklyn College (New York) in 1978. His three joint publications with Erdős were published between 1970 and 1984.

External Link(s):

Attila Máté's Home Page Attila Mate (Wikidata) **Peter Mann Winkler** (born in 1946) is an American mathematician and author of more than 125 research papers. He holds patents in a range of fields, from cryptography to marine navigation. His research interests include discrete mathematics, computational theory, and probability. He is a professor of mathematics and computer science at Dartmouth College. He earned his Ph.D. from Yale University in 1975, where his advisors were Abraham Robinson and Angus John Macintyre. His two joint publications with Erdős were published in 1989 and 1995.

External Link(s):

Peter Winkler (Wikipedia)

Peter Winkler (fr-Wikipedia)

Peter Mann Winkler (MathGenealogy)

**Allen John Carl Schwenk** (born in Milwaukee, Wisconsin, US, 1947) is an American mathematician and Professor Emeritus in the Department of Mathematics at Western Michigan University. He specializes in graph theory and combinatorics. He earned his Ph.D. from the University of Michigan (Ann Arbor) in 1973 under the supervision of Frank Harary. He co-authored four papers with Erdős between 1987 and 1992.

External Link(s):

Allen John Carl Schwenk (MathGenealogy)

Allen John Schwenk (Prabook)

**David Preiss** (born in the Czech Republic in 1947) is a Czech-British mathematician specializing in mathematical analysis. He won a silver medal at the International Mathematical Olympiad in 1965. He earned his *Dr. rer. nat.* degree from Charles University (Prague) in 1970. He is currently a professor of mathematics at the University of Warwick. His joint publication with Erdős appeared in 1976.

External Link(s):

**David Preiss (Wikipedia)** 

**David Preiss (MathGenealogy)** 

**Peter Jephson Cameron** (born in Toowoomba, Queensland, Australia, 1947) is an Australian mathematician whose research spans group theory, combinatorics, coding theory, and model theory. He is currently a half-time Professor of Mathematics at the University of St Andrews and Emeritus Professor at Queen Mary University of London. He received his Ph.D. from the University of Oxford in 1971 under the supervision of Peter Michael Neumann. His two joint publications with Erdős were published in 1990 and 1999.

External Link(s):

Peter Cameron (mathematician) (Wikipedia)

**Peter Jephson Cameron (MathGenealogy)** 

**Endre Makai, Jr.** (born in Budapest, Hungary, 1947) is a Hungarian mathematician. He earned bronze medals at the International Mathematical Olympiad in 1963 and 1964, and a gold medal in 1965.

He received his Candidate degree in 1977 and his D.Sc. in 1995 from the Hungarian Academy of Sciences. His three joint publications with Erdős appeared between 1991 and 1997.

**Mihály Szalay** (born in Budapest, Hungary, 1947) is a Hungarian mathematician specializing in number theory. He served as an associate professor at Eötvös Loránd University in Budapest. He received his Candidate degree from the Hungarian Academy of Sciences in 1985. His six joint publications with Erdős were published between 1977 and 1992.

**Robert Freud** (born in Budapest, Hungary, 1947) is a Hungarian mathematician and former associate professor at Eötvös Loránd University (Budapest). He obtained his Candidate degree from the Hungarian Academy of Sciences in 1982. His five joint publications with Erdős appeared between 1983 and 1993.

**Marcel Erné** (born in Altenmarkt an der Alz, Germany, 1947) is a German mathematician affiliated with Leibniz Universität Hannover. His research interests include topology, lattice theory, and order theory, with notable work on Galois connections and their historical development. He earned his Ph.D. from Westfälische Wilhelms-Universität Münster in 1972 under the supervision of Max Koecher. His joint publication with Erdős was published in 1986.

External Link(s):

Marcel Erné (Wikidata)

Marcel Erné (MathGenealogy)

**Zhenxiang Zhang** (born in Yancheng, Jiangsu, China, 1947) is a Chinese mathematician and professor emeritus at Anhui Normal University (Wuhu, Anhui, China). He received his Ph.D. from the University of Limoges in 1993 under the supervision of Guy Robin. That same year, he co-authored two papers with Paul Erdős, published in *Proceedings of the American Mathematical Society* and *Computers & Mathematics with Applications*, respectively.

External Link(s):

**Zhenxiang Zhang (Prabook)** 

Home page of Zhenxiang Zhang

\*Peter Lawrence Montgomery (San Francisco, California, US, 25 September 1947 – Pong, Phayao, Thailand, 18 February 2020) was an American mathematician known for his work in computational number theory and cryptography. He worked at the System Development Corporation and Microsoft Research. He is especially noted for developing the Montgomery multiplication algorithm, Montgomery curves, and the Montgomery ladder—widely used in elliptic curve cryptography. He received his Ph.D. from the University of California, Los Angeles, in 1992 under David Geoffrey Cantor. His three joint publications with Erdős appeared between 1973 and 1975.

External Link(s):

Peter Montgomery (mathematician) (Wikipedia)

**Peter Lawrence Montgomery (MathGenealogy)** 

**Andreas Raphael Blass** (born in Nuremberg, Germany, 1947) is an American mathematician and a professor at the University of Michigan. He specializes in mathematical logic, particularly set theory, as well as theoretical computer science. He earned his Ph.D. from Harvard University in 1970 under the supervision of Frank Arvey Wattenberg. His joint publication with Erdős was published in 1992.

External Link(s):

**Andreas Blass (Wikipedia)** 

**Andreas Raphael Blass (MathGenealogy)** 

**Alan Dana Taylor** (born in Melrose, Massachusetts, US, 1947) is an American mathematician best known for co-developing the Brams–Taylor procedure for envy-free cake-cutting among any number of people. He earned his Ph.D. from Dartmouth College in 1975, where his advisor was James Earl Baumgartner. His joint publication with Erdős was published in 1992.

External Link(s):

Alan D. Taylor (Wikipedia)

Alan D. Taylor (de-Wikipedia)

Alan Dana Taylor (MathGenealogy)

**Lajos Pósa** (born in Budapest, Hungary, 1947) is a Hungarian mathematician specializing in combinatorics and one of Hungary's most influential mathematics educators, especially known for organizing mathematics camps for gifted students. He won a silver medal at the International Mathematical Olympiad in 1965 and a gold medal in 1966. A recipient of the Széchenyi Prize, he was considered Paul Erdős's "favorite child," having discovered theorems as early as age 13. Since 2002, he has worked at the Rényi Institute of the Hungarian Academy of Sciences, and previously at Eötvös Loránd University in the Departments of Mathematical Analysis and Computer Science. His four joint publications with Erdős appeared between 1962 and 1975.

External Link(s):

Lajos Pósa (mathematician) (Wikipedia)

Pósa Lajos (matematikus) (hu-Wikipedia)

Shlomo Moran (Hebrew: "שלמה מורן"; born in Haifa, Israel, 1947) is an Israeli computer scientist and the Bernard Elkin Chair in Computer Science at the Technion – Israel Institute of Technology in Haifa. He earned his Ph.D. there in 1979 under the supervision of Azaria Paz. His two joint publications with Erdős were published in 1987 and 1988.

External Link(s):

Shlomo Moran (Wikipedia)

שלמה מורן (he-Wikipedia)

Shlomo Moran (MathGenealogy)

Schlomo Moran (Prabook)

\*William Alfred Staton, III (Waco, Texas, US, 17 January 1948 – 13 November 2023) was an American mathematician. He earned his Ph.D. in mathematics from the University of Houston in 1978 under the supervision of Siemion Fajtlowicz. Following his doctorate, he spent his entire academic career as a professor at the University of Mississippi. Dr. Staton was deeply passionate about mathematics, both in his research and in his dedication to teaching and mentoring students. He supervised numerous Ph.D. candidates and actively participated in tutoring programs, including those run by the Boys and Girls Club. Outside academia, he enjoyed a wide range of interests. He was an avid traveler and a coin collector, and he had a deep passion for running, participating in numerous races and earning many medals and trophies. His enthusiasm for mathematics extended beyond the classroom, and he was known for offering spontaneous lessons or explanations to anyone interested. His four joint publications with Erdős were published between 1991 and 1996.

External Link(s):

Dr. William A. "Bill" Staton III Obituary
William Alfred Staton, III (MathGenealogy)

**László Lovász** (born in Budapest, Hungary, 1948) is a Hungarian mathematician and professor emeritus at Eötvös Loránd University, best known for his work in combinatorics. He was awarded the 2021 Abel Prize jointly with Avi Wigderson. He won a silver medal at the International Mathematical Olympiad in 1963 and three consecutive gold medals in 1964, 1965, and 1966. He earned his Candidate degree in mathematics from the Hungarian Academy of Sciences in 1971 under the supervision of Tibor Gallai. Lovász served as president of the International Mathematical Union from 2007 to 2010 and of the Hungarian Academy of Sciences from 2014 to 2020. In graph theory, his key contributions include the proof of Kneser's conjecture, the formulation of the **Lovász local lemma**, and the **Erdős–Faber–Lovász conjecture**. He is also one of the co-creators of the **LLL lattice reduction algorithm**. His seven joint publications with Erdős appeared between 1973 and 1989.

External Link(s):

László Lovász (Wikipedia)
Lovász László (matematikus) (hu-Wikipedia)
László Lovász (McTutor)
László Lovász (MathGenealogy)

**Paul René Louis Deheuvels** (born in Istanbul, Turkey, 1948) is a French statistician. He earned his Doctorat d'État from Université Pierre-et-Marie-Curie (Paris VI) in 1974, supervised by Daniel Dugué. A professor at Sorbonne University (formerly Paris VI), he was elected a corresponding member of the French Academy of Sciences on March 28, 1994, and became a full member on November 6, 2000. His joint publication with Erdős was published in 1987.

External Link(s):

Paul Deheuvels (Wikipedia)

Paul Deheuvels (fr-Wikipedia)

Paul Rene Louis Deheuvels (MathGenealogy)

**Derbiau Frank Hsu** (born in 1948) is an American computer scientist renowned for his work in data science, combinatorial fusion analysis, interconnection networks, and cognitive neuroscience. He earned his Ph.D. from the University of Michigan in 1979 under the supervision of Thomas Frederick Storer. He currently serves as the Clavius Distinguished Professor of Science and Professor of Computer and Information Science at Fordham University, where he also directs the Laboratory of Informatics and Data Mining. His joint publication with Erdős was published in 1992.

External Link(s):

D. Frank Hsu (WorldCat)

Frank Hsu (FordhamUniv)

**Derbiau Frank Hsu (MathGenealogy)** 

**Jean-Marie De Koninck** (born in Quebec City, Quebec, Canada, 1948) is a Canadian mathematician and a professor at Université Laval since 1972. He is also the creator of *Opération Nez Rouge* ("Red Nose Operation"), a road safety initiative to prevent drunk driving. He received his Ph.D. from Temple University (Philadelphia) in 1973 under the supervision of Emil Grosswald. His joint publication with Erdős was published in 1981.

External Link(s):

Jean-Marie De Koninck (Wikipedia)

Jean-Marie De Koninck (fr-Wikipedia)

Jean-Marie De Koninck (MathGenealogy)

\*Paul Allen Catlin (Bridgeport, Connecticut, US, 25 June 1948 – 20 April 1995) was an American mathematician who worked in graph theory and number theory. His notable work includes research on chromatic numbers and Brooks' theorem, especially his paper *Hajós graph coloring conjecture: variations and counterexamples*. He received his Ph.D. from The Ohio State University in 1976 under the supervision of G. Neil Robertson and Thomas Allan Dowling. His joint publication with Erdős was published in 1980.

External Link(s):

Paul A. Catlin (Wikipedia)

Paul Allen Catlin (MathGenealogy)

K-0530 - Paul Allen Catlin

**Katalin Vesztergombi** (born in Budapest, Hungary, 1948) is a Hungarian mathematician specializing in graph theory and discrete geometry. She is emeritus associate professor at Eötvös Loránd University. She earned her Candidate degree in mathematics from the Hungarian Academy of Sciences in 1987. Her two joint publications with Erdős were published in 1988 and 1989.

External Link(s):

Katalin Vesztergombi (Wikipedia)

Katalin Vesztergombi (MathGenealogy)

**Alexander Soifer** (born in Moscow, Russia, Soviet Union, 1948) is a Russian-born American mathematician and mathematics author. He received his Ph.D. from the Moscow State Pedagogical Institute in 1973 under the supervision of Leonid Ya. Kulikov. His two joint publications with Erdős appeared in 1993 and 1995.

External Link(s):

**Alexander Soifer (Wikipedia)** 

Александр Сойфер (alphapedia.ru)

Alexander Soifer (MathGenealogy)

**Carsten Thomassen** (born in Grindsted, Denmark, 1948) is a Danish mathematician specializing in discrete mathematics, particularly graph theory. He has been a professor at the Technical University of Denmark since 1981 and a member of the Royal Danish Academy of Sciences and Letters since 1990. He earned his Ph.D. from the University of Waterloo in 1976 under the supervision of Daniel Haven Younger. His joint publication with Erdős was published in 1989.

External Link(s):

Carsten Thomassen (mathematician) (Wikipedia)

**Carsten Thomassen (da-Wikipedia)** 

**Carsten Thomassen (MathGenealogy)** 

\*István Joó (Sárvár, Hungary, 19 September 1948 - Budaörs, Hungary, 8 December, 1998) was a Hungarian mathematician whose research spanned analysis, orthogonal series, martingale theory, game theory, operations research, and number theory. He earned his Candidate degree in 1981 and his D.Sc. in 1994 from the Hungarian Academy of Sciences. He was affiliated with Eötvös Loránd University in Budapest. Joó authored 12 joint publications with Erdős between 1987 and 1998 and collaborated with other prominent mathematicians, such as Ferenc Forgó. For example, they co-authored the paper "Necessary conditions for two-function minimax inequalities," published in *New Trends in Mathematical Programming* (1998).

External Link(s):

Joó István matematikus (Névpont)

Wen-Ching Winnie Li (Chinese: 李文卿; born in Chiayi, Taiwan, 1948) is a Taiwanese-American mathematician and Distinguished Professor of Mathematics at Pennsylvania State University. She specializes in number theory, with a focus on automorphic forms and their applications to coding theory and spectral graph theory. Her work has contributed to the construction of efficient communication networks such as Ramanujan graphs and complexes. She received her Ph.D. from the University of California, Berkeley in 1974 under the supervision of Andrew Pollard Ogg. Her joint publication with Erdős was published in 1996.

External Link(s):

Winnie Li (Wikipedia)

Winnie Li (fr-Wikipedia)

李文卿 (数学家) (zh-Wikipedia)

#### **Wen-Ching Winnie Li (MathGenealogy)**

**Kevin Thomas Phelps** (born in New York, US, 1948) is an American mathematician. He earned his Ph.D. from Auburn University in 1976 under the supervision of Charles Curtis Lindner. He joined the Georgia Tech faculty in 1977 and was promoted to associate professor in 1983. His research interest were in design theory and coding theory, and in 1988 he returned to Auburn which had a very active group in those areas. In 1985, he co-authored a paper with Paul Erdős titled *Two results on block designs*, published in *Discrete Mathematics*.

External Link(s):

**Mathematics at Georgia Tech** 

**Kevin Thomas Phelps (MathGenealogy)** 

\*Aleksandar Ivić (Belgrade, Yugoslavia, 6 March 1949 – Belgrade, Yugoslavia, 27 December 2020) was a Serbian mathematician specializing in analytic number theory. He gained international recognition for his lectures on the Riemann zeta function, delivered at universities worldwide. Ivić earned his Ph.D. from the University of Belgrade in 1975, under the supervision of Đuro (Georges) Kurepa. He co-authored 8 publications with Paul Erdős, published between 1980 and 1996.

External Link(s):

<u> Aleksandar Ivić (Wikipedia)</u>

Александар Ивић (sr-Wikipedia)

Aleksandar Ivić (MathGenealogy)

**Christopher David Godsil** (born in Bendigo, Victoria, Australia, 1949) is an Australian-Canadian mathematician and Professor Emeritus at the University of Waterloo, where he previously chaired the Department of Combinatorics and Optimization. He earned his Ph.D. from the University of Melbourne in 1979, under the guidance of Derek Allan Holton. He is known for co-authoring the textbook *Algebraic Graph Theory* with Gordon Royle, and his earlier work on algebraic combinatorics focused on distance-regular graphs and association schemes. His joint publication with Erdős appeared in 1988.

External Link(s):

Chris Godsil (Wikipedia)

**Chris Godsil (Wikidata)** 

Godsil, C. D. (Christopher David) (LibraryCongress)

**Christopher David Godsil (MathGenealogy)** 

**Vojtěch Rödl** (born in Prague, Czech Republic, 1949) is a Czech-American mathematician and Samuel Candler Dobbs Professor at Emory University. He is renowned for his contributions to combinatorics, having authored hundreds of research papers. Rödl received his Ph.D. from Charles University in Prague in 1976, supervised by Zdeněk Hedrlín. He co-authored 11 papers with Erdős, published between 1983 and 2003.

External Link(s):

Vojtěch Rödl (Wikipedia)

Vojtech Rödl (MathGenealogy) Vojtěch Rödl (cs-Wikipedia)

\*György Elekes (Budapest, Hungary, 19 May 1949 – Fót, Hungary, 29 September 2008) was a Hungarian mathematician and computer scientist specializing in combinatorial geometry and set theory. He is regarded as a pioneer in the area now known as additive combinatorics. A bronze medalist at the International Mathematical Olympiad in 1965 and a gold medalist in 1967, he earned the Candidate degree in 1994 and the D.Sc. degree in 2001 from the Hungarian Academy of Sciences. His 2 joint publications with Erdős were released in 1981 and 1994.

External Link(s):

**György Elekes (Wikipedia)** 

Elekes György (matematikus) (hu-Wikipedia)

Elekes György (História – Tudósnaptár)

**David Christopher Arney** (born in Rochester, New York, US, 1949) is an American mathematician and retired military officer. A 1971 graduate of the United States Military Academy at West Point, he later earned three degrees from Rensselaer Polytechnic Institute: M.S. in Mathematics (1980), M.S. in Computer Science (1982), and Ph.D. in Mathematics (1985). He served as a professor of mathematics at West Point, attaining the rank of lieutenant colonel in 1989. His research focused on networks and has been cited over 500 times. He also coached soccer and is a member of professional organizations including SIAM, ASA, and ASEE. He co-authored a paper with Paul Erdős in 1996.

External Link(s):

**David Christopher Arney (Prabook)** 

**David Christopher Arney (MathGenealogy)** 

**Andrew Michael Odlyzko** (born in Tarnów, Poland, 1949) is a Polish-American mathematician. He spent 26 years at Bell Telephone Laboratories starting in 1975, before joining the University of Minnesota in 2001, where he directed both the Digital Technology Center and the Minnesota Supercomputing Institute. He earned his Ph.D. from the Massachusetts Institute of Technology in 1975, under Harold Mead Stark. He co-authored 3 papers with Erdős, published between 1979 and 1987.

External Link(s):

Andrew Odlyzko (Wikipedia)

Andrew Michael Odlyzko (MathGenealogy)

**Alan Glynne Williamson** (born in Bramhall, England, UK, 1949) is a British mathematician who received his Ph.D. from Cardiff University in 1974 under the guidance of James Wiegold. His joint publication with Erdős was published in 1987. He is a member of the London Mathematical Society, the Mathematical Association (book reviewer since 1989), and the Irish Mathematical Society. Beyond academics, his interests include walking, genealogy, the game of go, cross-country skiing, and orienteering.

External Link(s):

### <u>Alan Glynne Williamson (Prabook)</u> Alan Glynne Williamson (MathGenealogy)

**Anthony Brian Evans** (born in Tidworth, England, UK, 1949) is an American mathematician. He moved to the United States in 1976 and earned his Ph.D. in mathematics from Washington State University in 1981, under the supervision of Michael Joseph Kallaher and Theodore G. Ostrom. He has held the following academic positions: instructor of mathematics at the University of Petroleum and Minerals, Dhahran, Saudi Arabia (1973–1975), assistant professor of mathematics at Wright State University, Dayton, Ohio (1981–1987), associate professor of mathematics at Wright State University (since 1987). He co-authored two papers with Erdős, published in 1989 and 1996.

External Link(s):

Anthony B. Evans (MathGenealogy)
Anthony Brian Evans (Prabook)

\*Brent Pendleton Smith (Falfurrias, Texas, US, 11 September 1949 – Iliamna, Alaska, US, 22 August 2006) was an American mathematician noted for his work in analysis and analytic number theory. He earned his Ph.D. from Louisiana State University in 1977, where he was supervised by O. Carruth McGehee. He held teaching positions at various institutions, including Kansas State University, University of Kentucky, Illinois State University, and Caltech. He returned to Kansas State as a professor in 1989. Smith also spent summers commercial salmon fishing in Alaska. He died during a storm while securing his fishing boat. Kansas State University honors him through the Brent P. Smith Memorial Lectures.

External Link(s):

Brent P. Smith Memorial Lectures
Brent P. Smith '71 (Reed Obituaries)
Brent Pendleton Smith (MathGenealogy)

**Fan-Rong King Chung Graham** (Chinese: 金芳蓉; born in Kaohsiung, Taiwan, 1949), known professionally as *Fan Chung*, is a Taiwanese-American mathematician specializing in spectral graph theory, extremal graph theory, and random graphs. Her work has generalized the Erdős–Rényi model to accommodate power-law networks. She earned her Ph.D. from the University of Pennsylvania in 1974, supervised by Herbert Wilf. Her 14 joint publications with Erdős were published between 1979 and 2002.

External Link(s):

Fan Chung (Wikipedia)

Fan Chung (zh-Wikipedia)

Fan Rong K Chung Graham (McTutor)

Fan-Rong King Chung Graham (MathGenealogy)

Gutti Jogesh Babu (Hindi: गुट्टी जोगेश बाबू: born in 1949) is an Indian-American mathematician and Distinguished Professor at Pennsylvania State University. He received his Ph.D. from the Indian

Statistical Institute, Kolkata in 1974, under Jayanta Kumar Ghosh. His research interests include astrostatistics, big data, and asymptotic methods. He co-authored 3 papers with Erdős, published between 1975 and 1989.

External Link(s):

Babu (Begriffsklärung) (de-Wikipedia)

Jogesh Babu (PSU)

G. Jogesh (Gutti) Babu (MathGenealogy)

**Cameron Leigh Stewart** (born in 1949) is a Canadian mathematician and Professor of Pure Mathematics at the University of Waterloo. He has made notable contributions to number theory, particularly to the *abc* conjecture. In 1976, with Alan Baker, he achieved an effective improvement to Liouville's Theorem. He earned his Ph.D. from the University of Cambridge in 1976, where Baker was his advisor. Stewart co-authored 4 papers with Erdős, published between 1976 and 1994.

External Link(s):

**Cameron Leigh Stewart (Wikipedia)** 

**Cameron Leigh Stewart (de-Wikipedia)** 

Cameron Leigh Stewart (MathGenealogy)

Navin Madhavprasad Singhi (Hindi: नवीन माधवप्रसाद सिंघी; born in Indore, Madhya Pradesh, India, 1949) is an Indian mathematician and Professor Emeritus at the Tata Institute of Fundamental Research in Mumbai, known for his work in combinatorics and graph theory. He received the Shanti Swarup Bhatnagar Prize for Science and Technology and is recognized for research in block designs, projective planes, intersection graphs of hypergraphs, and coding theory. He obtained his Ph.D. from the University of Mumbai in 1974, under Shartchandra S. Shrikhande. He co-authored 2 papers with Erdős, published in 1977 and 1978.

External Link(s):

Navin M. Singhi (Wikipedia)

Navin M. Singhi (hi-Wikipedia)

Navin Madhavprasad Singhi (MathGenealogy)

**Shmuel Zaks** (born in 1949) is an Israeli mathematician and computer scientist specializing in distributed computing and computer networks. He is a professor at the Technion – Israel Institute of Technology, where he holds the Joan Callner-Miller Chair in Computer Science. He received his Ph.D. from the University of Illinois at Urbana-Champaign in 1979, under the supervision of C. L. (Chung Laung) Liu. His joint publication with Erdős was published in 1988.

External Link(s):

Shmuel Zaks (Wikipedia)

**Lane Henry Clark** (born in 1949) is an American mathematician recognized for his contributions to combinatorics and graph theory. He earned his Ph.D. from the University of New Mexico in 1980, where he was supervised by Roger Charles Entringer. He held academic positions at several institutions,

including Louisiana State University, California State University Long Beach, and Southern Illinois University Carbondale, where he retired as Professor Emeritus in 2014. He co-authored a publication with Erdős in 1993. He has served as editor for *ISRN Combinatorics* and *International Scholarly Research Notices* and was named a Foundation Fellow of the Institute of Combinatorics and Its Applications in 1991.

External Link(s):

Dr. Lane Clark, Ph.D. (Ex Tenebris)

Lane Clark (MathGenealogy)

**Lane Clark in New Mexico (Spokeo)** 

Frances Foong Yao (Chinese: 儲楓; born in Taiwan, 1950) is a Taiwanese-American mathematician and theoretical computer scientist. She received her Ph.D. from the Massachusetts Institute of Technology (Cambridge, Massachusetts) in 1973, under the supervision of Michael John Fischer. She subsequently held academic positions at the University of Illinois at Urbana-Champaign, Brown University, and Stanford University. In 1979, she joined Xerox PARC (Palo Alto Research Center), where she managed the Theoretical Computer Science group and served as principal scientist until her retirement in 1999. In 2003, she became the head and Chair Professor of the Department of Computer Science at City University of Hong Kong, a position she held until June 2011. She is currently a Chair Professor at the Institute for Interdisciplinary Information Sciences (IIIS) at Tsinghua University and an Honorary Professor at City University of Hong Kong. Her research interests include algorithm design in various areas such as energy-efficient computing, computational geometry, and wireless networks. She is particularly known for her work on variable-voltage energy-efficient scheduling, binary space partitions, finite-resolution computational geometry, and speedups in dynamic programming. Her joint publication with Erdős was published in 1979.

External Link(s):

Frances Yao (Wikipedia)

儲楓 (zh-Wikipedia)

Frances Yao (Biyografya)

Frances Foong Yao (IIIS)

F. Frances (Foong) Yao (MathGenealogy)

**Ronald James Gould** (born in Dunkirk, New York, US, 1950) is an American mathematician specializing in combinatorics and graph theory. He is a Goodrich C. White Professor Emeritus in the Department of Mathematics at Emory University. He received his Ph.D. from Western Michigan University (Kalamazoo, Michigan) in 1979, under the supervision of Gary Theodore Chartrand. His four joint publications with Erdős were published between 1987 and 2001.

External Link(s):

Ronald Gould (mathematician) (Wikipedia)

Ronald J. Gould (MathGenealogy)

**Ronald James Gould (Prabook)** 

**Louis Caccetta** (born in Sinagra, Italy, 1950) is an Australian mathematician and professor emeritus at Curtin University in Perth, Western Australia. His research interests include combinatorial mathematics, computing and optimization, graph theory, operations research, and optimal control. He received his Ph.D. from the University of Western Australia. He joined Curtin University in 1981 and rose through the ranks to full professor (Personal Chair) in 1992. He served as head of department from 1994 to 2004, and again after 2010. He co-authored four publications with Erdős between 1985 and 1989.

External Link(s):

**Emeritus Professor Louis Caccetta** 

**László Babai** (born in Budapest, Hungary, 1950) is a Hungarian-American mathematician and computer scientist affiliated with the University of Chicago. His research focuses on computational complexity theory, algorithms, combinatorics, and finite groups, particularly on the interplay between these fields. He won silver medals at the International Mathematical Olympiad in 1966 and 1967, and a gold medal in 1968. He received the Candidate degree in 1975 and the D.Sc. in 1984 from the Hungarian Academy of Sciences, of which he has been a full member since 1995. His three joint publications with Erdős were published between 1980 and 1982.

External Link(s):

Babai, László (Wikipedia)

Babai László (hu-Wikipedia)

László Babai (MathGenealogy)

**Sidney West Graham** (born in Oklahoma, US, 1950) is an American mathematician whose interests lie in analytic number theory. He is a professor at Central Michigan University. He received his Ph.D. from the University of Michigan (Ann Arbor) in 1977 under the supervision of Hugh Lowell Montgomery. His joint publication with Erdős was published in 1996.

External Link(s):

**Sidney Graham (Wikipedia)** 

**Sidney West Graham (MathGenealogy)** 

\*George Eugene Hardy (Edmonton, Alberta, Canada, October 1950 – 11 February 2015) was a Canadian mathematician specializing in number theory, particularly additive number theory, prime number theory, and the distribution of integers. He received his Ph.D. from the University of Alberta (Edmonton) in 1979. His joint publication with Erdős was published in 1978.

External Link(s):

**Eulogy for George Hardy** 

On the schnirelmann density...

**Vitaly Bergelson** (Russian: Виталий Бергельсон; born in Kiev, Ukraine, Soviet Union, 1950) is an American mathematician and professor at Ohio State University in Columbus, Ohio. His research focuses on ergodic theory and combinatorics. He received his Ph.D. from the Hebrew University of

Jerusalem in 1984, where he was advised by Harry (Hillel) Furstenberg. His joint publication with Erdős was published in 1997.

External Link(s):

Vitaly Bergelson (Wikipedia)

Бергельсон, Виталий (ru-Wikipedia)

**Vitaly Bergelson (MathGenealogy)** 

**Steven George Krantz** (born in San Francisco, California, US, 1951) is an American mathematician and prolific author. He has published over 350 research papers and more than 150 books. He has also served as editor for journals such as *Notices of the American Mathematical Society* and *The Journal of Geometric Analysis*. He earned his Ph.D. from Princeton University in 1974, under the supervision of Elias Menachem Stein. His joint publication with Erdős was published in 1988.

External Link(s):

Steven G. Krantz (Wikipedia)

**Steven George Krantz (MathGenealogy)** 

**David Michael Avis** (born in 1951) is an American mathematician. He received his Ph.D. from Stanford University in 1977, with Vašek Chvátal as his advisor. His two joint publications with Erdős appeared in 1988 and 1991.

External Link(s):

David Avis (Wikipedia)

**David Avis (es-Wikipedia)** 

**David Michael Avis (MathGenealogy)** 

**Henry Andrew Kierstead** (born in Providence, Rhode Island, US, 1951) is an American mathematician. He earned his Ph.D. from the University of California, San Diego in 1979 under the direction of Alfred Berry Manaster. His joint publication with Erdős was published in 1991.

External Link(s):

DAVXD M. JONES BIBLE

Henry A. Kierstead (MathGenealogy)

**Zbigniew J. Palka** (born in Poznań, Poland, 1951) is a Polish mathematician specializing in discrete mathematics. He studied mathematics at Adam Mickiewicz University in Poznań, where he earned his doctorate in 1980. He has held various academic positions, including Dean of the Faculty of Mathematics and Computer Science (1999–2005) and President of the Polish Mathematical Society (2003–2005). His two joint publications with Erdős were published in 1983 and 1984.

External Link(s):

**Zbigniew Palka (pl-Wikipedia)** 

**Peter Horák** (born in Prešov, Czechoslovakia, 1951) is a Slovakian-American mathematician who earned his Ph.D. from Comenius University in Bratislava in 1980, under the supervision of Štefan Znám. He co-authored a paper with Erdős in 1994. He is currently a professor in the Sciences and Mathematics division of the School of Interdisciplinary Arts and Sciences at the University of Washington Tacoma. His research interests include discrete mathematics and theoretical computer science, with a focus on combinatorics, graph theory, design theory, coding theory, cryptography, algorithm complexity, and database security. He has solved four problems posed by Paul Erdős and one by Donald Knuth, earning an Erdős number of 1. He also serves on the editorial boards of several international research journals.

External Link(s):

Peter Horak, Ph.D. (UnivWashington)

Peter Horak (MathGenealogy)

Peter Horak (Prabook)

**Brendan Damien McKay** (born in Melbourne, Victoria, Australia, 1951) is an Australian computer scientist and mathematician. He is an Emeritus Professor in the Research School of Computer Science at the Australian National University (ANU). He has published extensively in combinatorics. He received his Ph.D. from the University of Melbourne in 1980, with Derek Allan Holton as his advisor. His joint publication with Erdős was published in 1984.

External Link(s):

Brendan McKay (mathematician) (Wikipedia)

**Brendan Damien McKay (MathGenealogy)** 

**Maria Margaret Klawe** (born in Toronto, Ontario, Canada, 1951) is a Canadian-American computer scientist who served as the fifth president of Harvey Mudd College from 2006 to 2023. She became a U.S. citizen in 2009. Before that, she served as Dean of the School of Engineering and Applied Science at Princeton University. She is widely known for her advocacy for women in STEM. She is president of Math for America (MfA), an organization dedicated to transforming the teaching of math and science by building and supporting communities of master STEM teachers. She earned her Ph.D. from the University of Alberta in 1977, under the supervision of Anthony To-Ming Lau. Her joint publication with Erdős was published in 1980.

External Link(s):

Maria Klawe (Wikipedia)

Maria M. Klawe (MathGenealogy)

Maria Margaret Klawe (Prabook)

**Gérald Tenenbaum** (born in Nancy, France, 1952) is a French mathematician and novelist. He is known as one of the namesakes of the Erdős–Tenenbaum–Ford constant. He received his Ph.D. from Université Bordeaux in 1976, with Jean-Marc Deshouillers and François Dress as advisors. His seven joint publications with Erdős were published between 1981 and 1999.

External Link(s):

**Gérald Tenenbaum (Wikipedia)** 

#### Gérald Tenenbaum (MathGenealogy)Gérald Tenenbaum (fr-Wikipedia)

Ron Aharoni (Hebrew: "רון אהרוני,"; born in 1952) is an Israeli mathematician specializing in finite and infinite combinatorics. He is a professor at the Technion – Israel Institute of Technology (Haifa), where he earned his Ph.D. in 1979 under the supervision of Abraham (Avi) Berman. He co-authored generalizations of Hall's Marriage Theorem for infinite bipartite graphs with Nash-Williams and Shelah, and later proved analogs of König's and Menger's theorems for infinite graphs (the latter with Eli Berger). His joint publication with Erdős was published in 1988.

External Link(s):

Ron Aharoni (Wikipedia) רון אהרוני (he-Wikipedia)

Ron Aharoni (MathGenealogy)

**Bruce Reznick** (born in New York City, New York, US, 1953) is an American mathematician and long-time faculty member at the University of Illinois at Urbana—Champaign. A prolific researcher, he is noted for his contributions to number theory and for his work on the combinatorial, algebraic, and analytic properties of polynomials. He earned his Ph.D. from Stanford University in 1976 under the supervision

of Per H. Enflo. His joint publication with Erdős appeared in 1987.

External Link(s):

**Bruce Reznick (Wikipedia)** 

**Bruce Arie Reznick (MathGenealogy)** 

**Péter Frankl** (born in Kaposvár, Hungary, 1953) is a Hungarian–Japanese mathematician. He won a gold medal at the International Mathematical Olympiad (IMO) in 1971. He studied mathematics at Eötvös Loránd University in Budapest, submitting his Ph.D. thesis while still an undergraduate. He received the Candidate degree from the Hungarian Academy of Sciences in 1977 and also holds a Ph.D. from University Paris Diderot. Since 1988, he has lived in Japan, where he is a public figure and frequently appears in the media. He continues to travel throughout Japan, performing (e.g., juggling) and giving public lectures on various topics. He has been an external member of the Hungarian Academy of Sciences since 1998. His six joint publications with Erdős were published between 1978 and 1991. His 6 joint publications with Erdős were published between 1978 and 1991.

External Link(s):

Péter Frankl (Wikipedia)

Frankl Péter (matematikus) (hu-Wikipedia)

ピーター・フランクル (ja-Wikipedia)

Peter Frankl (MathGenealogy)

**Nathan Linial** (Hebrew: "נתן ליניאל,"; born in Haifa, Israel, 1953) is an Israeli mathematician and computer scientist. He is a professor at the Rachel and Selim Benin School of Computer Science and Engineering at the Hebrew University of Jerusalem, where he also earned his Ph.D. in 1978 under Micha Asher Perles. His two joint publications with Erdős were published in 1987 and 1988.

External Link(s):

Nati Linial (Wikipedia)

נתן ליניאל (he-Wikipedia)

Nathan Linial (MathGenealogy)

**Nathan Linial (Prabook)** 

**Péter Komjáth** (born in Budapest, Hungary, 1953) is a Hungarian mathematician specializing in set theory, especially combinatorial set theory. He won a gold medal at the IMO in 1971. He received the Candidate degree in 1984 and the D.Sc. in 1989 from the Hungarian Academy of Sciences. He is a professor at Eötvös Loránd University and a visiting faculty member at Emory University in the Department of Mathematics and Computer Science. He has been a full member of the Hungarian Academy of Sciences since 2016. His two joint publications with Erdős appeared in 1986 and 1996.

External Link(s):

Péter Komjáth (Wikipedia)

Komjáth Péter (hu-Wikipedia)

Péter Komjáth (MathGenealogy)

**Edward Howorka** (born in 1953) is an American mathematician known for his significant contributions to graph theory, particularly in the study of distance-hereditary graphs. Beyond academia, he has applied his mathematical expertise in the financial technology industry, serving in executive roles such as Chief Technology Officer and Senior Vice President. In these positions, he successfully designed global electronic trading systems and authored numerous patents and publications in the field of electronic trading. He earned his Ph.D. from the University of Florida (Gainesville) in 1979 under the supervision of Stanisław Marcin Ulam. His joint publication with Erdős appeared in 1980.

External Link(s):

**Edward Ryszard Howorka (FloridaResidents)** 

Edward R. Howorka (MathGenealogy)

**Imre Z. Ruzsa** (born in Budapest, Hungary, 1953) is a Hungarian mathematician specializing in number theory. He won a silver medal at the International Mathematical Olympiad in 1969 and gold medals in 1970 and 1971. He earned the Candidate's degree in mathematics from the Hungarian Academy of Sciences in 1979. He has been a full member of the Hungarian Academy of Sciences since 2004 and joined the Academia Europaea in 2024. His five joint publications with Erdős were published between 1973 and 1996. He is one of the namesakes of the **Ruzsa–Szemerédi problem**, which explores the maximum number of edges in a graph where each edge belongs to a unique triangle. Equivalent formulations concern bipartite graphs with edge partitions into a linear number of induced matchings, or selecting triples from nnn points such that any six points contain at most two triples. Ruzsa and Endre Szemerédi first proved that the problem's upper bound is slightly less than  $n^2$ , though the exact factor remains unknown.

External Link(s):

Imre Z. Ruzsa (Wikipedia)

Ruzsa Z. Imre (hu-Wikipedia)

**Zsolt Tuza** (born in Budapest, Hungary, 1953) is a Hungarian mathematician renowned for his contributions to combinatorics, discrete mathematics, and graph theory. He won a gold medal at the International Mathematical Olympiad in 1972. He earned the Candidate's degree in 1986 and the D.Sc. degree in 1992 from the Hungarian Academy of Sciences. He holds positions at the Alfréd Rényi Institute of Mathematics in Budapest, the University of Pannonia in Veszprém, and Pázmány Péter Catholic University. His 11 joint publications with Erdős appeared between 1989 and 1996. He is the namesake of the **Tuza Conjecture**, which states that if a simple graph contains at most *k* edge-disjoint triangles, then there exists a set of at most 2*k* edges intersecting every triangle in the graph. While proven for several graph classes, the conjecture remains unproven in full generality.

External Link(s):

Tuza Zsolt (hu-Wikipedia)

Zsolt Tuza (MathGenealogy)

**Maruti Ram Pedaprolu Murty** (born in Guntur, Andhra Pradesh, India, 1953) is an Indo-Canadian mathematician who holds a Queen's Research Chair in mathematics at Queen's University. He earned his Ph.D. from the Massachusetts Institute of Technology in 1980, under the supervision of Harold Mead Stark and Dorian Morris Goldfeld. His two joint publications with Erdős appeared in 1987 and 1999. His younger brother, V. Kumar Murty, is also a co-author of Paul Erdős.

External Link(s):

M. Ram Murty (Wikipedia)

M. Ram Pedaprolu (Maruti) Murty (MathGenealogy)

**Helmut Maier** (born in Geislingen an der Steige, Germany, 1953) is a German mathematician and professor at the University of Ulm. He is recognized for his contributions to analytic number theory and mathematical analysis, notably for Maier's matrix method and Maier's theorem on primes in short intervals. His work also includes studies on exponential and trigonometric sums over special integer sets and the Riemann zeta function. He earned his Ph.D. from the University of Minnesota in 1981, under the supervision of J. Ian (Jonathan) Richards. His joint publication with Erdős was published in 1987.

External Link(s):

**Helmut Maier (Wikipedia)** 

**Helmut Maier (Mathematiker) (de-Wikipedia)** 

**Helmut Maier (MathGenealogy)** 

**Charles Joseph Colbourn** (born in Toronto, Ontario, Canada, 1953) is a Canadian mathematician and computer scientist whose work focuses on graph algorithms, combinatorial designs, and their applications. He served as the Dorothean Professor of Computer Science at the University of Vermont from 1996 to 2001 and is currently a professor at Arizona State University. He earned his Ph.D. from the University of Toronto in 1980 under Derek Gordon Corneil. His joint publication with Erdős was published in 1985. Among his many collaborations, a notable one involves authors from four countries—Canada, Hungary, Spain, and Germany: Colbourn, G. Kéri, P. P. Rivas Soriano, and J.-C. Schlage-Puchta

co-authored "Covering and radius-covering arrays: Constructions and classification," published in Discrete Applied Mathematics in 2010, which has received over 75 citations. Radius-covering arrays generalize covering codes and covering arrays.

External Link(s):

Charles Colbourn (Wikipedia)

**Charles Joseph Colbourn (MathGenealogy)** 

**Douglas Brent West** (born in Queens, New York, US, 1953) is an American mathematician specializing in graph theory. He completed his undergraduate studies at Princeton University in 1974 and earned his Ph.D. from MIT in 1978 under the supervision of Daniel J. Kleitman. He is well known for his influential textbook *Introduction to Graph Theory*. His three joint publications with Erdős were published between 1985 and 1993.

External Link(s):

**Douglas West (fr-Wikipedia)** 

**Douglas Brent West (MathGenealogy)** 

\*Thomas Maxsein (1953 – 2004) was a German mathematician specializing in number theory. He received his Ph.D. from the Johann Wolfgang Goethe University in Frankfurt am Main in 1985, under the supervision of Wolfgang Karl Schwarz. His joint publication with Erdős appeared in 1990. He passed away in 2004. An obituary titled *Zum Gedenken an Thomas Maxsein* was published in *Elementare und Analytische Zahlentheorie*, reflecting on his contributions to mathematics.

External Link(s):

**Zum Gedenken an Thomas Maxsein** 

**Thomas Maxsein (MathGenealogy)** 

**Nicholas Charles Wormald** (born in 1953) is an Australian mathematician and professor at Monash University. He specializes in probabilistic combinatorics, graph theory, graph algorithms, Steiner trees, web graphs, mine optimization, and related areas. He earned his Ph.D. from the University of Newcastle (New South Wales, Australia) in 1979 under the supervision of Alexander Sotirios Kechris. His joint publication with Erdős was published in 1986.

External Link(s):

Nick Wormald (Wikipedia)

**Nicholas Charles Wormald (MathGenealogy)** 

**Norbert Hegyvári** (born in Budapest, Hungary, 1954) is a Hungarian mathematician. He has been a professor at Eötvös Loránd University since 1985. His research interests include arithmetic combinatorics and additive problems in finite fields. He received the Candidate degree in 1994 and the D.Sc. degree in 2018 from the Hungarian Academy of Sciences. His three joint publications with Erdős appeared between 1983 and 1992.

External Link(s):

# Norbert Hegyvári's homepage Norbert Hegyvári (MathGenealogy)

**Vilmos Totik** (born in Mosonmagyaróvár, Hungary, 1954) is a Hungarian mathematician whose work spans classical analysis, harmonic analysis, orthogonal polynomials, approximation theory, and potential theory. He is a professor at the University of Szeged and, since 1989, has also been a part-time professor at the University of South Florida (Tampa). He received the Candidate degree in 1980 and the D.Sc. degree in 1987 from the Hungarian Academy of Sciences. He has been a full member of the Academy since 2001. His joint publication with Erdős appeared in 1996.

External Link(s):

Vilmos Totik (Wikipedia)

**Totik Vilmos (hu-Wikipedia)** 

Vilmos Totik (MathGenealogy)

**János Pach** (born in Hungary, 1954) is a Hungarian mathematician and computer scientist specializing in combinatorics and discrete and computational geometry. He received the Candidate degree in 1983 and the D.Sc. degree in 1995 from the Hungarian Academy of Sciences. He has been a corresponding member of the Academy since 2022. His 21 joint publications with Erdős appeared between 1980 and 2000.

External Link(s):

János Pach (Wikipedia)

Pach János (hu-Wikipedia)

János Pach (MathGenealogy)

**Vilmos Komornik** (born in Budapest, Hungary, 1954) is a Hungarian mathematician recognized for his contributions to analysis, combinatorial number theory, partial differential equations, and control theory. He won a gold medal at the International Mathematical Olympiad in 1972. He received the Candidate degree in 1983 and the D.Sc. degree in 1991 from the Hungarian Academy of Sciences. He has been affiliated with the University of Strasbourg for over three decades and holds the title of "exceptional class professor." He has been an external member of the Hungarian Academy of Sciences since 2016. His four joint publications with Erdős appeared between 1990 and 1998.

External Link(s):

Komornik Vilmos (hu-Wikipedia)

Vilmos Komornik (MathGenealogy)

**Ervin Győri** (born in Kaposvár, Hungary, 1954) is a Hungarian mathematician renowned for his work in extremal graph theory and combinatorics. He won a bronze medal at the International Mathematical Olympiad in 1972. He received the Candidate degree in 1980 and the D.Sc. degree in 1994 from the Hungarian Academy of Sciences. His two joint publications with Erdős appeared in 1992 and 1995.

External Link(s):

Ervin Győri: CV

#### Ervin Gyori (MathGenealogy)

**Zoltán Füredi** (born in Budapest, Hungary, 1954) is a Hungarian mathematician specializing in combinatorics, with a focus on discrete geometry and extremal combinatorics. He won two silver medals at the International Mathematical Olympiad in 1970 and 1971, and a gold medal in 1972. He received the Candidate degree in 1981 and the D.Sc. degree in 1989 from the Hungarian Academy of Sciences. He is a research professor at the Alfréd Rényi Institute of Mathematics and a professor at the University of Illinois Urbana-Champaign. He has been a full member of the Hungarian Academy of Sciences since 2010. His ten joint publications with Erdős were published between 1982 and 1999.

External Link(s):

Zoltán Füredi (Wikipedia)

Füredi Zoltán (matematikus) (hu-Wikipedia)

Zoltán Füredi (MathGenealogy)

Ron Holzman (Hebrew: רון הולצמן,"; born in Bucharest, Romania, 1954) is an Israeli mathematician and professor in the Department of Mathematics at the Israel Institute of Technology (Technion). He earned his Ph.D. from the Hebrew University of Jerusalem in 1985, under the supervision of Bezalel Peleg. His research interests include combinatorics and game theory. He co-authored two papers with Erdős, published in 1994 and 1996.

External Link(s):

**Ron Holzman (Technion)** 

Ron Holzman (MathGenealogy)

**András Kroó** (born in Uzhrorod, Ukraine, Soviet Union, 1954) is a Hungarian mathematician known for his work in approximation theory. He received the Candidate degree in 1979 and the D.Sc. degree in 1988 from the Hungarian Academy of Sciences. His joint publication with Erdős appeared in 1989.

External Link(s):

András Kroó: a life in approximation theory

Charles D. Ashbacher (born in Fort Riley, Kansas, US, 1954) is an American mathematician whose interests include recreational mathematics, computer science, and logic. He has also contributed to the field of neutrosophic logic, which deals with indeterminate and inconsistent information. He has held various academic and professional positions throughout his career: instructor of mathematics and computer science at Mount Mercy College, Cedar Rapids (1983–1989), computer instructor at Kirkwood Community College, Cedar Rapids (since 1990), research programmer at the University of Iowa, Iowa City (1990–1992), research scientist at Decisionmark, Cedar Rapids (1993–1996), founder of Charles Ashbacher Technologies, Hiawatha, Iowa (since 1996), computer instructor at Hamilton College, Cedar Rapids (since 1997), computer instructor at Kirkwood Community College (since 1998). He has also served as a review panelist for mathematics and computer education (Hicksville, New York) since 1990. In 1997, he co-authored with Erdős the paper "Thoughts of Pál Erdős on Some Smarandache Notions," published in Smarandache Notions Journal.

External Link(s):

**Charles David Ashbacher (Prabook)** 

**Jozef Širáň** (born in 1954) is a Slovak mathematician specializing in graph theory and topological graph theory. He earned his Ph.D. from Comenius University in Bratislava in 1983 under the supervision of Štefan Znám, with a dissertation titled *The Crossing Number of Graphs*. He is known for his work on highly symmetric graphs, including the co-introduction of the McKay–Miller–Širáň graphs—a class of highly symmetric graphs with diameter two and a large number of vertices relative to their degree. This research, conducted with Brendan McKay and Mirka Miller, was published in 1998. He has held academic positions at the Slovak University of Technology and has contributed significantly to the advancement of mathematics in Slovakia and beyond. His joint publication with Erdős appeared in 1994.

External Link(s):

<u>Jozef Širáň (Učená Spoločnosť Slovenska)</u> <u>Jozef Siran (MathGenealogy)</u>

**John Gordon Gimbel** (born to Canadian parents in Los Angeles, California, US, 1954) is an American mathematician specializing in graph theory and combinatorics. He earned his Ph.D. from Western Michigan University in 1984 under the supervision of Linda M. Lesniak, with a dissertation on graph theory. He later joined the Department of Mathematics and Statistics at the University of Alaska Fairbanks, where he has served as a professor. In 1990, he helped organize *Quo Vadis*, a conference on the future of graph theory, featuring prominent speakers including Béla Bollobás, Paul Erdős, Ron Graham, and Bill Tutte. He has collaborated with many distinguished mathematicians, such as Carsten Thomassen and Jarik Nešetřil. His research interests include Ramsey theory—where he explores the notion that complete disorder is impossible—and graph colorings, which involve partitioning graphs to achieve uniformity within subsets. His four joint publications with Erdős appeared between 1990 and 1993.

External Link(s):

John Gimbel (UnivAlaska)
John G. Gimbel (MathGenealogy)

**Svante Janson** (born in Uppsala, Sweden, 1955) is a Swedish mathematician. He has been a chaired professor of mathematics at Uppsala University since 1987 and a member of the Royal Swedish Academy of Sciences since 1994. He earned his Ph.D. from Uppsala University in 1977 under the supervision of Lennart Carleson, and later received a second Ph.D. from the same institution in 1984, supervised by Carl-Gustav Esseen. His joint publication with Erdős was published in 1996.

External Link(s):

**Svante Janson (Wikipedia)** 

**Svante Janson (sv-Wikipedia)** 

**Svante Janson (MathGenealogy)** 

**Svante Janson (Playback)** 

**Péter Pál Pálfy** (born in Debrecen, Hungary, 1955) is a Hungarian mathematician specializing in algebra, particularly group theory and universal algebra. He won silver medals at the International Mathematical Olympiad in 1972 and 1973. He received the Candidate degree in 1983 and the D.Sc. degree in 1997 from the Hungarian Academy of Sciences. He has been a full member of the Academy since 2010. From 2006 to 2018, he served as director of the Alfréd Rényi Institute of Mathematics. His three joint publications with Erdős appeared between 1987 and 1999.

External Link(s):

Péter Pál Pálfy (Wikipedia)

Pálfy Péter Pál (hu-Wikipedia)

Péter Pál Pálfy (MathGenealogy)

**László Aladár Székely** (born in Budapest, Hungary, 1955) is a Hungarian-American mathematician and a professor at the University of South Carolina. He received the Candidate degree in 1983 and the D.Sc. degree in 1997 from the Hungarian Academy of Sciences. Before relocating to the United States, he held academic positions at the University of Szeged and Eötvös Loránd University. He also held post-doctoral and visiting positions at the University of Auckland, the University of Bonn, and the University of New Mexico. His research interests lie in combinatorics and graph theory, with applications in areas such as crossing numbers of graphs and phylogenetic trees. His two joint publications with Erdős were published in 1987 and 1993.

External Link(s):

László A. Székely (MathGenealogy)

**Craig Aaron Tovey** (born in Washington, D.C., US, 1955) is an American mathematician and a professor at the Georgia Institute of Technology. He earned his Ph.D. from Stanford University in 1981 under the supervision of George Bernard Dantzig. His joint publication with Erdős was published in 1997.

External Link(s):

**Craig Aaron Tovey (IndustryLeaders)** 

Craig Aaron Tovey (MathGenealogy)

Krishnaswami Alladi (Hindi: अल्लादी कृष्णस्वामी; born in Thiruvananthapuram, Kerala, India, 1955) is an Indian-American mathematician specializing in number theory. He is a professor of mathematics at the University of Florida and served as chair of the department from 1998 to 2008. He is the founding editor-in-chief of *The Ramanujan Journal* (published by Springer), established in 1997. He received his Ph.D. from the University of California, Los Angeles in 1978 under the supervision of Ernst Gabor Straus. His five joint publications with Erdős were published between 1977 and 1989.

External Link(s):

Krishnaswami Alladi (Wikipedia)

Krishnaswami Alladi (MathGenealogy)

**David Shane Gunderson** (born in 1955) is a Canadian mathematician. He earned his Ph.D. from Emory University (Atlanta, Georgia, USA) in 1995 under the supervision of Vojtěch Rödl. His three joint publications with Erdős were published between 1995 and 2002.

External Link(s):

<u>David Shane Gunderson CV</u> <u>Some history of Mathematics retirees</u> David Shane Gunderson (MathGenealogy)

**Marc Aron Berger** (born in Pittsburgh, Pennsylvania, US, 1955) is an American mathematician. He received his Ph.D. from the Carnegie Mellon University, Pittsburgh in 1977. He served as an associate professor at Georgia Institute of Technology (Atlanta). He spent a considerable amount of time in Israel, holding positions at the Hebrew University and at the Weizmann Institute of Science. His position at Georgia Tech was terminated in 1994. Since this year, he worked as chief scientist for OliVER Corporation, Life Picture, Inc., MGI Software Corporation, and most recently, iSee Media, Inc. In 1988, he coauthored the paper "Nearly Disjoint Covering Systems" with Erdős and two additional co-authors, published in Ars Combinatoria.

External Link(s):

**Mathematics at Georgia Tech - MA Berger** 

**Grzegorz M. Kubicki** (born in 1955) is a Polish mathematician who earned his first Ph.D. from Wrocław University of Science and Technology in 1982 under the supervision of Rastislav Telgarsky, and a second Ph.D. from Western Michigan University in 1989, where his advisor was Gary Chartrand. His dissertation at Western Michigan University was titled "On Greatest Common Divisors and Least Common Multiples of Graphs." He has made significant contributions to graph theory and combinatorics, including a joint paper with Paul Erdős in 1991. He has been affiliated with the University of Louisville's Department of Mathematics. Student reviews note his clear, step-by-step teaching style and emphasize that while he has an accent, it does not interfere with comprehension. Grzegorz Kubicki is married to Ewa Maria Kubicka, also a mathematician and faculty member at the University of Louisville, who is known for introducing the chromatic sum concept and also has an Erdős number of 1.

External Link(s):

Grzegorz Kubicki (MathGenealogy)
Grzegorz M Kubicki, Age 70 (Spokeo)

**Arthur Leonard Rubin** (born in Eugene, Oregon, US, 1956) is an American mathematician and aerospace engineer. He was named a Putnam Fellow four times consecutively from 1970 to 1973. His mother, Jean E. Rubin, was a professor of mathematics at Purdue University, and his father, Herman Rubin, was a professor of statistics at the same university. Arthur co-authored his first paper with his mother in 1969 at the age of 13. He earned his Ph.D. from the California Institute of Technology in 1978 under the supervision of Alexander Sotirios Kechris. His joint publication with Erdős was published in 1980.

External Link(s):

Arthur Rubin (Wikipedia)
Arthur Rubin (MathGenealogy)
Rubin, Arthur L. (Astro)

Noga Alon (Hebrew: "נוגה אלון,"; born in Haifa, Israel, 1956) is an Israeli mathematician and computer scientist. He is professor emeritus at Tel Aviv University and currently a professor at Princeton University. Alon is the recipient of numerous prestigious awards, including the 2005 Gödel Prize, the 2008 Israel Prize in Mathematical Research, the 2011 A.M.T. Prize, the 2022 Shaw Prize, and the 2024 Wolf Prize. He earned his Ph.D. from the Hebrew University of Jerusalem in 1983, under the supervision of Micha Asher Perles. His five joint publications with Erdős were published between 1985 and 2002.

External Link(s):

Noga Alon (Wikipedia)

נוגה אלון (he-Wikipedia)

Noga M. Alon (MathGenealogy)

\*Claudia Alison Spiro (Altadena, California, US, 4 March 1956 – 4 January 2023) was an American mathematician. She showed exceptional mathematical talent from an early age, reportedly performing three-digit multiplication in her head before the age of five. She earned her Ph.D. from the University of Illinois at Urbana-Champaign in 1981, under the supervision of Paul Trevier Bateman. Her dissertation was titled *The Frequency with Which an Integral-Valued, Prime-Independent, Multiplicative or Additive Function of n Divides a Polynomial Function of n.* Spiro taught mathematics at both the college and high school levels, encouraging students to apply mathematical concepts to real-world problems. In later years, she expanded into programming and data science, collaborating with professionals across various fields to analyze large datasets. She co-authored a publication with Paul Erdős in 1990, giving her an Erdős number of 1.

External Link(s):

Claudia Spiro Obituary

Claudia Alison Spiro (MathGenealogy)

**Michael Ezra Saks** (born in 1956) is an American mathematician. He currently serves as Chair of the Mathematics Department at Rutgers University, where he previously directed the graduate program. Saks earned his Ph.D. from the Massachusetts Institute of Technology in 1980 with a dissertation titled *Duality Properties of Finite Set Systems*, supervised by Daniel J. Kleitman. His joint publication with Erdős was published in 1986.

External Link(s):

Michael Saks (mathematician) (Wikipedia)

Michael Saks (Wikidata)

Michael Ezra Saks (MathGenealogy)

\*Dominique de Caen (11 May 1956 – 25 June 2002) was a Canadian mathematician specializing in graph theory, probability theory, and information theory. He was especially known for his work on

Turán-type extremal problems for hypergraphs. De Caen earned his Ph.D. from the University of Toronto in 1982 under the supervision of Eric Mendelsohn. His joint publication with Erdős was published in 1986.

External Link(s):

**Dominique de Caen (Wikipedia)** 

**Dominique de Caen (MathGenealogy)** 

**Vijaya Kumar Murty** (born in Guntur, Andhra Pradesh, India, 1956) is an Indo-Canadian mathematician specializing in number theory. His older brother, M. Ram Murty, is also a co-author of Paul Erdős. He received his Ph.D. from Harvard University in 1982, where his advisor was John Torrence Tate Jr. His joint publication with Erdős was published in 1987..

External Link(s):

V. Kumar Murty (Wikipedia)

Vijaya Kumar Murty (MathGenealogy)

**Douglas Robert Stinson** (born in Guelph, Ontario, Canada, 1956) is a Canadian mathematician and cryptographer. He is currently professor emeritus at the University of Waterloo. He earned his Ph.D. from the University of Waterloo in 1981 under the supervision of Ronald C. Mullin. His joint publication with Erdős was published in 1983.

External Link(s):

**Doug Stinson (Wikipedia)** 

**Douglas Robert Stinson (MathGenealogy)** 

**Antal Balog** (born in Budapest, Hungary, 1956) is a Hungarian mathematician. He received the Candidate degree in 1991 and the D.Sc. degree in 2000 from the Hungarian Academy of Sciences. He currently serves as a scientific advisor at the Alfréd Rényi Institute of Mathematics. His research focuses on analytic number theory, especially the distribution of prime numbers, sieve methods, automorphic functions, additive combinatorics, and sum-product estimates. In 1991, he received the Alfréd Rényi Prize, awarded biennially by the Institute to recognize outstanding mathematical research. His joint publication with Erdős was published in 1990.

External Link(s):

**Balog Antal CV** 

**Adolf Hildebrand, Jr.** (born in Leutkirch, Germany, 1956) is an American mathematician specializing in number theory, probability, and analysis. He earned his *Dr. rer. nat.* degree from the Albert-Ludwigs-Universität Freiburg im Breisgau in 1982, under the supervision of Jürgen Spilker, and later obtained his *Doctorat d'État* from the Université de Paris-Sud in 1984. He is Professor Emeritus at the University of Illinois Urbana-Champaign. His joint publication with Erdős was published in 1987.

External Link(s):

A J Hildebrand (Univ Illinois)

## Adolf J. Hildebrand (MathGenealogy) Adolf Joseph Hildebrand (Prabook)

**Jeffrey Outlaw Shallit** (born in Philadelphia, Pennsylvania, US, 1957) is an American mathematician and computer scientist. He is known for his work in number theory and his public critiques of intelligent design. He earned his Ph.D. from the University of California, Berkeley in 1983, under the supervision of David M. Goldschmidt and Manuel Blum. His joint publication with Erdős was published in 1991.

External Link(s):

Jeffrey Shallit (Wikipedia)

Jeffrey Outlaw Shallit (MathGenealogy)

**Janice L. Malouf** (born in 1957) is an American mathematician whose research interests include combinatorics and number theory. As a Ph.D. student, she wrote a paper titled *An Integer Sequence from a Rational Recursion*, which includes her proof of the integrality of the Somos-4 and Somos-5 sequences. This is believed to be the first known proof of these results, though others worked independently on similar proofs. She earned her Ph.D. from the University of Illinois at Urbana-Champaign in 1994, under the supervision of Zoltán Füredi. After several years as a postdoctoral fellow and working in industry, she returned to her hometown of Bakersfield, California, where she now teaches at California State University, Bakersfield, as a lecturer in the Mathematics Department. Her joint publication with Erdős was published in 1999.

External Link(s):

Janice Malouf (OfficialUSA)

Janice Malouf (Zeilberg)

Janice L. Malouf (MathGenealogy)

\*Béla Brindza (Csongrád, Hungary, 18 September 1958 – Debrecen, Hungary, November 2003) was a Hungarian mathematician and an internationally recognized researcher in hyperelliptic and Diophantine equations. He held academic positions including Assistant Professor at Kossuth Lajos University (Debrecen), Visiting Researcher at Leiden University (1985), Guest Professor at Macquarie University in Sydney (1987–1990), Associate Professor at Kossuth Lajos University (1990–2000), and Visiting Professor at Kuwait University (from 1992 onward). He received his Candidate degree from the Hungarian Academy of Sciences in 1985, under the supervision of Kálmán Győry. His joint paper with Erdős was published in 1991.

External Link(s):

Brindza Béla (Névpont)

Béla Brindza (MathGenealogy)

**Eric Jonathan Schmutz** (born in Wilmington, Delaware, US, 1958) is an American mathematician and Professor in the Department of Mathematics at Drexel University. He earned his Ph.D. from the University of Pennsylvania in 1988, under the supervision of Herbert Saul Wilf. Throughout his

career, he has taught in Philadelphia and has continued to live within walking distance of his birthplace. He is the proud father of Michael Tait, also a Concord High School graduate and an Erdős-influenced mathematician. His joint paper with Erdős was published in 1991.

External Link(s):

Eric J. Schmutz (MathGenealogy)

\*Ákos Seress (Budapest, Hungary, 24 November 1958 – Columbus, Ohio, US, 12 February 2013) was a Hungarian mathematician specializing in discrete mathematics, group theory, and algorithmic complexity. He earned a bronze medal at the International Mathematical Olympiad in 1975, followed by two silver medals in 1976 and 1977. After graduating, he briefly worked at the Alfréd Rényi Institute of Mathematics in Budapest, returning there after completing his Ph.D. in the United States. In 1989, he moved back to Columbus, where he remained until his death. He received his Ph.D. from The Ohio State University in 1985, with Dwijendra Kumar Ray-Chaudhuri as his advisor. His joint paper with Erdős was published in 1986.

External Link(s):

Seress Ákos (hu-Wikipedia)

Ákos Seress (MathGenealogy)

**Paul Rozarlien Pudaite** (St. Charles, Illinois, US, 1959) is an American mathematician. He received his Ph.D. from the University of Illinois at Urbana–Champaign in 1991, where his advisor was Robert Gary Muncaster. His academic work reflects a strong focus on mathematical modeling and analysis. His joint publication with Erdős was published in 1987

External Link(s):

Paul Pudaite (MathGenealogy)

Explicit mathematical models... Pudaite, Paul Rozarlien

\*Christian Mauduit (Marseille, France, 10 November 1959 – near Marseille, France, 13 August 2019) was a French mathematician. He received his Ph.D. from the Université de la Méditerranée (Aix-Marseille) in 1986, under the supervision of Gérard Rauzy. He co-authored two papers with Erdős, published in 1998 and 1999.

External Link(s):

**Christian Mauduit (mathématicien) (fr-Wikipedia)** 

**Christian Mauduit (MathGenealogy)** 

\*Dieter Kratsch (Altenburg, Germany, 1959 - Jena, Germany, 18 October 2020) was a German and French mathematician affiliated with the University of Lorraine. He earned his *Dr. rer. nat.* from the Friedrich Schiller University Jena in 1989, under the supervision of Gerd Wechsung and Andreas Brandstädt. His joint publication with Erdős was published in 1991.

External Link(s):

Hommage à Dieter Kratsch

#### **Dieter Kratsch (MathGenealogy)**

**Miklós Horváth** (born in Budapest, Hungary, 1960) is a Hungarian mathematician and a professor at the Institute of Mathematics, Budapest University of Technology and Economics. He earned the Candidate degree in 1992 and the D.Sc. degree in 2009 from the Hungarian Academy of Sciences. His research focuses primarily on differential equations and inverse scattering. His joint publication with Erdős was published in 1991.

External Link(s):

Miklós Horváth CV

Horváth Miklós CV (Hungarian)

**László Pyber** (born in Budapest, Hungary, 1960) is a Hungarian mathematician and a researcher at the Alfréd Rényi Institute of Mathematics in Budapest. He specializes in combinatorics and group theory. He earned the Candidate degree in 1989 and the D.Sc. degree in 1998 from the Hungarian Academy of Sciences. He has been a full member of the Academy since 2019. His three joint publications with Erdős appeared between 1988 and 1997.

External Link(s):

László Pyber (Wikipedia)

Pyber László (hu-Wikipedia)

László Pyber (MathGenealogy)

**Mario Szegedy** (born in Budapest, Hungary, 1960) is a Hungarian-American computer scientist and professor of computer science at Rutgers University. He won a bronze medal at the International Mathematical Olympiad in 1979. He received his Ph.D. from the University of Chicago in 1989 under the supervision of László Babai and Janos Simon. His research areas include computational complexity theory, quantum computing, computational geometry, and theoretical computer science. He was awarded the Gödel Prize twice (2001 and 2005) for work on probabilistically checkable proofs and the space complexity of approximating frequency moments in data streams. His joint publication with Erdős was published in 1987.

External Link(s):

Mario Szegedy (Wikipedia)

Mario Szegedy (MathGenealogy)

**Neil J. Calkin** (born in Hartford, Connecticut, US, 1961) is a British-Canadian mathematician born in the United States. He is a professor in the Algebra and Discrete Mathematics group at Clemson University's School of Mathematical and Statistical Sciences. His research interests include combinatorial and probabilistic methods, particularly in number theory. He earned his Ph.D. from the University of Waterloo in 1988 under the supervision of Ian Peter Goulden. He co-authored two papers with Erdős, published in 1996 and 1997.

External Link(s):

Neil J. Calkin (Wikipedia)

#### **Neil James Calkin (MathGenealogy)**

**János T. Tóth** (born in Nové Zámky, Czechoslovakia, 1962) is a Slovak mathematician and professor. He currently serves as rector of J. Selye University in Komárno. He earned his Ph.D. in 1998. In 1997, he co-authored with Paul Erdős and two other collaborators the paper "Remarks on the (R)-density of sets of numbers, II," published in Mathematica Slovaca.

External Link(s):

János Tóth (J. Selye University)

János Tóth biography, Hungarian (J. Selye University)

János Tóth biography, Slovakian (J. Selye University)

**Guoping Jin** (born in 1962) is a British mathematician who earned his Ph.D. from the University of Cambridge in 1993 under the supervision of Béla Bollobás. His dissertation, "Extremal Combinatorics of Graphs and Sets of Integers," reflects his research in combinatorics and graph theory. He co-authored two papers with Erdős, published in 1993 and 1995. Notable among his works are the papers "*The number of complete subgraphs of equi-partite graphs*" (*Discrete Mathematics*, 1998), and "*On a problem of Erdős and Graham*" (co-authored with Bollobás and Hegyvári, *Discrete Mathematics*, 1997).

External Link(s):

**Guoping Jin (MathGenealogy)** 

**Vsevolod F. Lev** (born in Moscow, Russia, Soviet Union, 1962) is a Russian-born American mathematician known for contributions to combinatorial group theory, number theory, and uniform distribution theory. He received his M.Sc. from the Moscow Institute of Transportation Engineering in 1984 and his Ph.D. from Tel Aviv University in 1996. After moving to Israel in 1991, he held academic positions at Tel Aviv University, the University of Georgia, and the Hebrew University of Jerusalem. He is currently a full professor in the Department of Mathematics at the University of Haifa at Oranim. His joint publication with Erdős was published in 1999.

External Link(s):

Vsevolod F. Lev (Prabook)

Vsevolod F. Lev (MathGenealogy)

**Andrew James Granville** (born in London, England, UK, 1962) is a British mathematician specializing in number theory. He earned his Ph.D. from Queen's University at Kingston (Canada) in 1987 under the supervision of Paulo Ribenboim. He co-authored two papers with Erdős, published in 1990 and 1997.

External Link(s):

**Andrew Granville (Wikipedia)** 

**Andrew James Granville (MathGenealogy)** 

**Andrew Granville Life story** 

\*Dmitrii Germanovich Fon-der-Flaass (Russian: Дмитрий Германович Фон-дер-Флаасс; Krasnokamsk, Russia, Soviet Union, 8 September 1962 – 10 June 2010) was a Russian mathematician known for significant contributions to combinatorics, especially graph theory and coding theory. He earned the Candidate degree from Novosibirsk State University in 1986 under Victor Danilovich Mazurov. Although he never formally defended a D.Sc. dissertation, he completed one titled *Algebraic Method in Combinatorial Problems*. He was a long-standing member of the All-Russian Olympiad Committee and served as deputy leader of the Russian team at the International Mathematical Olympiad in 2007 and 2008. His joint publication with Erdős appeared in 1992.

#### External Link(s):

Фон-дер-Флаасс, Дмитрий Германович (ru-Wikipedia)

**Dmitry Germanovich Von der Flaass (no-Wiki7)** 

Памяти Дмитрия Германовича Фон-Дер-Флаасса

**Dmitrii Germanovich Fon-Der-Flaass (MathGenealogy)** 

**Brent N. Clark** (born in Moosomin, Saskatchewan, Canada, 1962) is a Canadian computer scientist affiliated with the University of Waterloo. His research focuses on unit disk graphs and series-parallel networks. His joint publication with Erdős was published in 1985.

External Link(s):

Maximizing the Mean Number of...

**József Bukor** (born in Hurbanovo, Czechoslovakia, 1963) is a Slovak mathematician and associate professor at J. Selye University in Komárno. He earned his Ph.D. in 2001. In 1997, he co-authored with Paul Erdős and two others the paper "*Remarks on the (R)-density of sets of numbers, II*," published in *Mathematica Slovaca*.

External Link(s):

József Bukor (J. Selye University)

**Boris Aronov** (born in 1963) is an American computer scientist and professor at the Tandon School of Engineering, New York University. He specializes in computational geometry and is a recipient of a Sloan Research Fellowship. He received his Ph.D. from New York University in 1989, under the supervision of Micha Sharir. His joint publication with Erdős was published in 1994.

External Link(s):

**Boris Aronov (Wikipedia)** 

**Boris Aronov (MathGenealogy)** 

**Tomasz Łuczak** (born in Poznań, Poland, 1963) is a Polish mathematician and professor at both Adam Mickiewicz University in Poznań and Emory University. He works in combinatorics, focusing on discrete structures and random graphs. He earned his Ph.D. from Adam Mickiewicz University in 1987 under the supervision of Michał Karoński. He co-authored seven papers with Erdős between 1992 and 1997.

External Link(s):

Tomasz Łuczak (Wikipedia)

Tomasz Łuczak (pl-Wikipedia)

Tomasz Luczak (MathGenealogy)

**Martin Loebl** (born in Prague, Czechoslovakia, 1963) is a Czech mathematician whose research spans discrete mathematics, graph theory, and algorithmic game theory. He earned his Ph.D. from Charles University in 1989 under Jaroslav Nešetřil. He is a professor at Charles University, heads the Department of Applied Mathematics, and serves as president of the Learned Society of the Czech Republic. His joint publication with Erdős was published in 1995.

External Link(s):

**Martin Loebl CV** 

Martin Loebl (MathGenealogy)

**Miklós Ruszinkó** (born in Uzhrorod, Ukraine, Soviet Union, now Ukraine, 1963) is a Hungarian mathematician whose work includes information theory, combinatorics, extremal set theory, and coding theory. He received the Candidate degree in 1995 and the D.Sc. in 2009 from the Hungarian Academy of Sciences. His joint publication with Erdős appeared in 1998.

External Link(s):

Ruszinkó Miklós cv (MTA SZTAKI)

Miklós Ruszinkó (MathGenealogy)

**Yoshiharu Kohayakawa** (born in Marília, São Paulo, Brazil, 1963) is a Brazilian mathematician working in discrete mathematics and probability theory. Of Japanese descent, he earned his Ph.D. from the University of Cambridge in 1990 under Béla Bollobás. He is noted for extending Szemerédi's regularity lemma to sparse graphs. His joint publication with Erdős was published in 1997.

External Link(s):

Yoshiharu Kohayakawa (Wikipedia)

Yoshiharu Kohayakawa (pt-Wikipedia)

Yoshiharu Kohayakawa (MathGenealogy)

**Leonard J. Y. Schulman** (born in Princeton, New Jersey, US, 1963) is an American computer scientist and professor in the Computing and Mathematical Sciences Department at Caltech. His research covers algorithms, information theory, coding theory, and quantum computing. He earned his Ph.D. from MIT in 1992 under Michael Fredric Sipser. His joint publication with Erdős was published in 1994.

External Link(s):

**Leonard Schulman (Wikipedia)** 

Leonard J. Y. Schulman (MathGenealogy)

**Daniel Grieser** (born in Berlin, Germany, 1964) is a German mathematician. He won a gold medal at the International Mathematical Olympiad in 1983. He received his Ph.D. from the University of California, Los Angeles in 1992, under the supervision of Christopher Donald Sogge. His joint publication with Erdős appeared in 1987. After completing his doctorate, he served as an Instructor at MIT from 1992 to 1995 and was a postdoctoral fellow at the Mathematical Sciences Research Institute (MSRI) in Berkeley from 1995 to 1996. He then returned to Germany, working as a research assistant at Humboldt University in Berlin from 1996 to 2002, where he completed his habilitation in 2001. In 2002, he was awarded a Heisenberg Fellowship by the German Research Foundation (DFG). Since September 2005, he has been a full professor of analysis at the University of Oldenburg. His research interests include partial differential equations, the geometry and analysis of singular spaces, and global analysis. He has also contributed to mathematical physics, differential geometry, and combinatorics. In addition to his research, he has authored educational materials, including the book *Exploring Mathematics: Problem-Solving and Proof*, aimed at undergraduate students.

External Link(s):

<u>Daniel Grieser (de-Wikipedia)</u> Daniel Grieser (MathGenealogy)

**Michael Krivelevich** (Hebrew: מיכאל קריבלביץ, Russian: Михаил Кривелевич; born in Kaliningrad, Russia, Soviet Union, 1966) is an Israeli mathematician and professor at the School of Mathematical Sciences, Tel Aviv University. He received his Ph.D. from Tel Aviv University in 1997 under the supervision of Noga Alon. His joint publication with Erdős was published in 1996.

External Link(s):

Michael Krivelevich (Wikipedia) Михаил Кривелевич (alphapedia.ru) מיכאל קריבלביץ (he-Wikipedia)

Michael Krivelevich (MathGenealogy)

**Jonathan Charles Knappenberger** (born in Philadelphia, Pennsylvania, US, 1966) is an American mathematician. He received his Ph.D. from Temple University (Philadelphia) in 1993, under the supervision of Donald J. Newman. His joint publication with Erdős appeared in 1993.

External Link(s):

<u>Jonathan Charles Knappenberger (MathGenealogy)</u> Jonathan Charles Knappenberger (Prabook)

**Gábor Naum Sárközy** (born in Budapest, Hungary, 1966) is a Hungarian-American mathematician and the son of renowned mathematician András Sárközy. He is currently a faculty member in the Computer Science Department at Worcester Polytechnic Institute (Massachusetts, USA) and a senior research fellow at the Alfréd Rényi Institute of Mathematics of the Hungarian Academy of Sciences. He earned the Candidate degree in 1994 and the D.Sc. degree in 2009, both from the Hungarian Academy of Sciences. His joint publication with Erdős was published in 1997.

External Link(s):

#### Gábor N. Sárközy (Wikipedia)

**Michael Sean O'Brien Molloy** (born in Ottawa, Canada, 1967) is an American mathematician. He received his Ph.D. from the Carnegie Mellon University (Pittsburgh, Pennsylvania) in 1994, where his advisor was Alan M. Frieze. Later he moved to Toronto and spent his entire career at the University of Toronto. His joint publication with Erdős was published in 2002.

External Link(s):

Michael Sean O'Brien Molloy (MathGenealogy)

**Giuseppe Melfi** (born in Uznach, Switzerland, 1967) is an Italo-Swiss mathematician whose research includes work on practical numbers and modular forms. His joint publication with Erdős was published in 1999.

External Link(s):

**Giuseppe Melfi (Wikipedia)** 

**Florian Luca** (born in Galați, Romania, 1969) is a Romanian mathematician specializing in number theory, particularly Diophantine equations, linear recurrences, and the distribution of values of arithmetic functions. He has made notable contributions to the proof that irrational automatic numbers are transcendental and to a proof of a conjecture by Erdős regarding the intersection of the Euler totient function and the sum-of-divisors function. He received his Ph.D. from the University of Alaska, Fairbanks in 1996 under the supervision of Robert John Piacenza. His joint publication with Erdős appeared in 2008.

External Link(s):

Florian Luca (Wikipedia)

Florian Luca (MathGenealogy)

**Csaba Sándor** (born in Budapest, Hungary, 1972) is a Hungarian mathematician specializing in Diophantine equations and combinatorial number theory. He received his Ph.D. from Eötvös Loránd University (Budapest) in 1999 and is currently an associate professor at the Budapest University of Technology and Economics. His joint publication with Erdős was published in 1999.

External Link(s):

Csaba Sándor's self-written CV

Csaba Sándor (MathGenealogy)

**Gergely Harcos** (born in Budapest, Hungary, 1973) is a Hungarian mathematician. He won a bronze medal at the International Mathematical Olympiad in 1990 and a silver medal in 1991. He earned his undergraduate degree from the University of Illinois and completed his Ph.D. at Princeton University in 2003 under the supervision of Peter Clive Sarnak. He has been a Doctor of the Hungarian Academy of Sciences since 2012 and became a member of the Academia Europaea in 2024. His joint publication with Erdős was published in 1999.

External Link(s):

### G. Harcos's home page at the site of the Rényi Institute Gergely Harcos (MathGenealogy)

**Amites Sarkar** (born in London, England, UK, 1973) is a British-American mathematician. He earned a bronze medal at the International Mathematical Olympiad in 1990. He received his Ph.D. from the University of Cambridge in 1998, under the supervision of Béla Bollobás. He spent five years at Philips Research Laboratories working on GPS receiver algorithms, followed by four years at the University of Memphis focusing on random geometric graphs. His current research interests include extremal and probabilistic combinatorics as well as stochastic geometry. His joint publication with Erdős was published in 1999.

External Link(s):

**Amites Sarkar (MathGenealogy)** 

Amites Sarkar, professor at Western Washington University

**David Paul Galvin** (born in Los Angeles, California, US, 1973) is an American entrepreneur and consultant. He received an M.A. in mathematics from the University of Louisville in 1999. He worked at Putnam Investments from 2000 to 2012, with a focus on structured fixed income products such as CDOs and CMBS. From 2012 to 2020, he led data science and programmatic advertising at CarGurus, contributing from its early startup phase through and beyond its IPO in 2017. He later founded the advertising startup ImprezzAI in 2022, which focused on improving the efficiency of digital advertising, and which was sold in December 2024. He currently works as an independent consultant. His joint publication with Erdős appeared in 2022.

**Miklós István Joó** (born in Budapest, Hungary, 1975) is a Hungarian-American mathematician and software engineer. He is the son of mathematicians István Joó and Katherine Balázs (later Katherine Balázs-Kilgore). In 1992, at the age of 17, he co-authored a paper with Paul Erdős and his father, István Joó, titled "On a problem of Tamás Varga," which was published in the Bulletin de la Société Mathématique de France.

**László Á. Kóczy** (born in Budapest, Hungary, 1976) is a Hungarian mathematician and economist. His work focuses on cooperative game theory, power indices, apportionment problems, and experimental economics. He received his Ph.D. from Katholieke Universiteit Leuven in 2003 under the supervision of Luc Lauwers. He has been a Doctor of the Hungarian Academy of Sciences since 2020. His joint publication with Erdős was published in 1998.

External Link(s):

Kóczy Á. László (hu-Wikipedia)

László Á. Kóczy (QSMS Research Group)

László Á. Kóczy (self-written CV)

Laszlo A. Koczy (MathGenealogy)

**Steven Kay Butler** (born in 1977) is an American mathematician specializing in graph theory and combinatorics. He is a professor of mathematics at Iowa State University. He became the 512th—and so

far final—person to have an Erdős number of 1 when he co-authored the paper "Egyptian fractions with each denominator having three distinct prime divisors" with Paul Erdős and Ronald Graham. He received his Ph.D. from the University of California, San Diego in 2008 under the supervision of Fan Chung Graham. His joint publication with Erdős appeared in 2015.

External Link(s):

**Steve Butler (mathematician) (Wikipedia)** 

**Steve Butler (MathGenealogy)** 

We have now reached the end of the list of Erdős's co-authors with known birth years. The final section is devoted to those for whom no exact or approximate birth year could be found.

**Leonard Few** is a British mathematician. He received his Ph.D. from the University of London in 1953. His joint publication with Erdős appeared in 1964.

External Link(s):

L. Few (MathGenealogy)

**Herbert Taylor** is an American mathematician. He received his Ph.D. from the University of Southern California (Los Angeles) in 1981 under the supervision of Solomon Wolf Golomb. He co-authored three papers with Paul Erdős, published between 1971 and 1992.

External Link(s):

**Herbert Taylor (MathGenealogy)** 

**Roger B. Eggleton** is an Australian-born American mathematician whose research focuses on combinatorics, graph theory, and number theory. He is Professor Emeritus at Illinois State University. He earned his Ph.D. from the University of Calgary in 1973 under Richard Kenneth Guy. He co-authored seven papers with Erdős between 1972 and 1990.

External Link(s):

Roger Benjamin Eggleton (MathGenealogy)

**Charles Ryavec** is an American mathematician. He earned his Ph.D. from the University of Michigan (Ann Arbor) in 1970, where his advisor was Donald John Lewis. His joint publication with Erdős was published in 1972.

External Link(s):

**Charles Albert Ryavec (MathGenealogy)** 

**William G. Brown** is a Canadian mathematician specializing in graph theory. He is professor emeritus of mathematics at McGill University. He received his Ph.D. from the University of Toronto in 1963, under the joint supervision of H. S. M. Coxeter and William Thomas Tutte. He co-authored six publications with Erdős between 1973 and 1985.

External Link(s):

W. G. Brown (Wikipedia)

William G. Brown (MathGenealogy)

**Charles C. Harner** is an American mathematician. He received his Ph.D. from the University of New Mexico in 1970, under the supervision of Roger Charles Entringer. His joint publication with Erdős was published in 1973.

External Link(s):

**Charles C. Harner (MathGenealogy)** 

**A. R. Reddy** is an American mathematician who has held academic positions at the University of Toledo, Michigan State University (East Lansing), and the Institute for Advanced Study (Princeton, New Jersey). He co-authored 11 publications with Paul Erdős, published between 1973 and 1978.

**Harvey Abbott** is a Canadian mathematician specializing in graph theory. He received his Ph.D. from the University of Alberta (Canada) in 1965 under the supervision of Leo Moser. His joint publication with Erdős was published in 1974.

External Link(s):

**Harvey Leslie Abbott (MathGenealogy)** 

**J. Marshall Ash** is an American mathematician and professor emeritus at DePaul University (Chicago). He received his Ph.D. from the University of Chicago in 1966, where his advisor was Antoni Zygmund. His joint publication with Erdős appeared in 1974.

External Link(s):

J. Marshall Ash (MathGenealogy)

**LinkedIn - Marshall Ash** 

**Robert Bonnet** is a French mathematician. He earned his Doctorat d'État from the Université Claude Bernard Lyon in 1978, where his advisor was Ernest Corominas. His joint publication with Erdős was published in 1974.

External Link(s):

Robert Bonnet (MathGenealogy)

**S. L. G. Choi** is a British mathematician formerly affiliated with the University of British Columbia. He earned his Ph.D. from the University of London in 1969 under the supervision of Klaus F. Roth. He co-authored three publications with Paul Erdős between 1974 and 1980.

External Link(s):

Shiu Lun Godfrey Choi (MathGenealogy)

**E. F. Ecklund, Jr.** is an American mathematician. He earned his Ph.D. from Washington State University in 1992, where his advisor was James Henry Jordan. He co-authored two papers with Erdős, published in 1974 and 1978.

External Link(s):

Earl Frank Ecklund Jr. (MathGenealogy)

**Denis Hanson** is a Canadian mathematician and retired professor at the University of Regina. He earned his Ph.D. from the University of Alberta in 1970, under the supervision of Harvey Leslie Abbott. His joint publication with Erdős was published in 1974.

External Link(s):

LinkedIn - Denis Hanson

**Denis Hanson (MathGenealogy)** 

**John D. Bovey** is an American mathematician known for significant contributions to computer science and information systems. His research includes context-aware applications, speech segmentation in working environments, and graphical retrieval systems. His joint publication with Erdős appeared in 1975.

**Norbert W. Sauer** is an Austrian-Canadian mathematician. He received his Ph.D. from the University of Vienna in 1965 and has since been affiliated with the University of Calgary (Canada). His joint publication with Erdős was published in 1975.

External Link(s):

Norbert W. Sauer (MathGenealogy)

**Jonathan Schaer** is a Canadian mathematician affiliated with the University of Calgary. His ResearchGate profile lists 26 publications. His joint paper with Erdős was published in 1975.

**T. K. Sheng** is an American mathematician affiliated with the University of Colorado. In 1975, he co-authored with Paul Erdős the paper "Distribution of Rational Points on the Real Line", published in the Journal of the Australian Mathematical Society.

**Marshall L. Cates** is an American mathematician. He received his Ph.D. from the University of Illinois at Urbana-Champaign in 1971, where his advisor was Ralph Jasper Faudree, Jr. His joint publication with Erdős was published in 1976.

External Link(s):

**Marshall Cates (MathGenealogy)** 

**Chuan Chong Chen** is a Canadian mathematician. He received his Ph.D. from Queen's University at Kingston (Canada) in 1967. His joint publication with Erdős was published in 1976.

External Link(s):

**Chuan-Chong Chen (MathGenealogy)** 

**Stephen D. Cohen** is a British mathematician with research interests in finite fields, number theory, and combinatorial designs. He earned his Ph.D. from the University of Glasgow in 1969, under the supervision of J. Hunter. He served as Professor of Number Theory at the University of Glasgow until his retirement in 2009 and is currently an Honorary Research Fellow there. His joint publication with Erdős appeared in 1976.

External Link(s):

**Stephen D. Cohen (MathGenealogy)** 

\***David E. Daykin** (Newcastle upon Tyne, England, UK – 6 August 2010) was a British mathematician with significant contributions to combinatorics. He received his Ph.D. from the University of Reading in 1961 under Richard Rado. He co-authored two papers with Erdős, both published in 1976.

External Link(s):

**David E. Daykin (MathGenealogy)** 

\*Satgur Prasad Khare (Sagar, Madhya Pradesh, India – Raipur, Chhattisgarh, India, 30 April 2021) was an Indian mathematician specializing in number theory. He studied under Professor H. Gupta at the University of Allahabad in Prayagraj, India. After retirement, Khare continued his research in number theory and developed an interest in cryptography. At the time of his sudden passing due to cardiac arrest, he was working on a research monograph on number theory. His joint publication with Erdős was published in 1976.

External Link(s):

Primality and factorization - a computer challenge

**L. Bruce Richmond** is a Canadian mathematician affiliated with the University of Waterloo, where he has served as a professor in the Department of Combinatorics and Optimization. His research interests include asymptotic enumeration, probabilistic methods in combinatorics, and algorithm analysis. He earned his Ph.D. from the University of Alberta in 1969, under the supervision of Hubert Stanley Wall. He co-authored five papers with Erdős between 1976 and 1993.

External Link(s):

**Lawrence Bruce Richmond (MathGenealogy)** 

**D. T. Busolini** is an American mathematician known for contributions to graph theory, particularly in collaboration with Paul Erdős. In 1977, they co-authored "On a Problem in Extremal Graph Theory," published in the Journal of Combinatorial Theory, Series B. Busolini has also published on edge-colored graphs, including "Monochromatic Paths and Circuits in Edge-Colored Graphs" (1971) and "On a Problem of C. C. Chen and D. E. Daykin" (1978). He was affiliated with the Mathematics Group at Hatfield Polytechnic in England during his collaboration with Erdős.

**Siemion Fajtlowicz** is a Polish-American mathematician and creator of the conjecture-generating program *Graffiti*. He earned his Ph.D. from the Polish Academy of Sciences in 1968 under Edward Szpilrajn Marczewski. Formerly a professor at the University of Houston, he co-authored five papers with Erdős between 1977 and 1999.

External Link(s):

Siemion Fajtlowicz (Wikipedia)

Siemion Fajtlowicz (MathGenealogy)

Itshak Borosh (Hebrew: "יצחק בורוש,") is an American mathematician. He received his Ph.D. from the Weizmann Institute of Science (Rehovot, Israel) in 1966, supervised by Aviezri Siegmund Fraenkel. He has held various academic positions, including Professor Emeritus in the Department of Mathematics at Texas A&M University. His joint publication with Erdős was published in 1978.

External Link(s):

Itzhak Borosh (MathGenealogy)

**Frank S. Cater** is an American mathematician. He earned his Ph.D. from the University of Southern California in 1960 under the supervision of Donald Holmes Hyers and Henry Abel Dye, Jr. His joint publication with Erdős was published in 1978.

External Link(s):

Frank Sydney Cater (MathGenealogy)

\*Jun Shung Hwang was an American mathematician. He earned his Ph.D. from Wayne State University (Detroit) in 1971, under the supervision of Wladimir Seidel. He co-authored two papers with Erdős, published in 1978.

External Link(s):

**Jun-Shung James Hwang (MathGenealogy)** 

\*David Emory Penney, III (unknown – 3 June 2014) was an American mathematician who made significant contributions to calculus and differential equations. He co-authored several widely used textbooks, including *Calculus and Analytic Geometry* and *Differential Equations and Boundary Value Problems: Computing and Modeling*, both known for integrating traditional problem-solving with conceptual development and geometric visualization. He earned his Ph.D. from Tulane University (New Orleans) in 1966 under the supervision of Bruce (Leon) Treybig. His joint publication with Erdős was published in 1978.

External Link(s):

David Emory Penney, III (MathGenealogy)

**Hallard T. Croft** is a British mathematician known for his contributions to geometry and combinatorics. He co-authored the book *Unsolved Problems in Geometry* with Kenneth J. Falconer and Richard K. Guy. He earned his Ph.D. from the University of Cambridge in 1961 under the supervision of John Edensor Littlewood. His collaboration with Erdős resulted in a publication in 1979.

External Link(s):

Hallard T. Croft (MathGenealogy)

**Jean Ann Larson** is an American mathematician, set theorist, and historian of mathematical logic. She is a professor at the University of Florida. In 1972, she became the first woman to earn a doctorate in mathematics from Dartmouth College (Hanover, New Hampshire), under the supervision of James Earl Baumgartner. She is known for her research in infinitary combinatorics and the theory of linear spaces. She co-authored five papers with Erdős, published between 1979 and 1993.

External Link(s):

Jean A. Larson (Wikipedia)

Jean A. Larson (pt-Wikipedia)

Jean Ann Larson (MathGenealogy)

**John H. Loxton** is an Australian mathematician who has held various academic positions at Australian universities, including Macquarie University in Sydney, where he served as a professor in the Department of Mathematics. His research interests include transcendental number theory, Diophantine approximation, and related fields. He has published extensively in these areas. He received his Ph.D. from the University of Cambridge in 1973 under the supervision of J. W. S. (John William Scott) Cassels. His joint paper with Erdős was published in 1979.

External Link(s):

John Harold Loxton (MathGenealogy)

**Bahman Saffari** was a Persian-born French mathematician. He pursued his higher education in France and earned his doctorate in mathematics from the University of Paris in 1966 under the supervision of Jean-Pierre Kahane. He later became a professor at the University of Paris XI (Paris-Sud) in Orsay, where he made significant contributions to harmonic analysis and number theory. His joint publication with Erdős appeared in 1979.

**Stanley M. Selkow** is an American computer scientist known for his contributions to graph theory and algorithm design. He has held faculty positions at institutions in Montreal, Knoxville (TN), Worcester (MA), Chongqing, Lausanne, and Paris. In addition to his academic research, he co-authored books aimed at making complex algorithms accessible, such as *Algorithms in a Nutshell*. He earned his Ph.D. from the University of Pennsylvania (Philadelphia) in 1970, under the supervision of James F. Korsh. His joint publication with Erdős appeared in 1980.

External Link(s):

**Stanley Melvyn Selkow (MathGenealogy)** 

**Duane Charles Boes** is an American mathematician primarily focused on statistics and probability theory. He received his Ph.D. from Purdue University (West Lafayette, Indiana) in 1963, under the supervision of Henry E. Teicher. His joint publication with Erdős was published in 1981.

External Link(s):

**Duane Charles Boes (MathGenealogy)** 

**George Harlow Mills** is an American mathematician who received his Ph.D. from the University of California, Berkeley, in 1977 under the supervision of Leo Anthony Harrington. His joint paper with Erdős was published in 1981.

External Link(s):

George Harlow Mills (MathGenealogy)

**Fred B. Jones** is an American mathematician affiliated with the University of Colorado. In 1982, he co-authored the paper "*Projective*  $(2n,n,\lambda,1)$ -designs" with Paul Erdős and Vance Faber, published in the *Journal of Statistical Planning and Inference*.

**Earl Rodney Canfield** is an American mathematician and professor emeritus of computer science at the University of Georgia. He received his Ph.D. from the University of California, San Diego in 1975, where his advisors were Edward Anton Bender and Gill (Stanley) Williamson. His joint publication with Erdős was published in 1983

External Link(s):

Earl Rodney Canfield (MathGenealogy)

**Richard Patrick Morton** is an American mathematician and professor emeritus at Indiana University—Purdue University Indianapolis (IUPUI). He received his Ph.D. from the University of Michigan (Ann Arbor, Michigan) in 1979 under the supervision of Donald John Lewis. His joint paper with Erdős was published in 1983.

External Link(s):

**Richard Patrick Morton (MathGenealogy)** 

**Robert William Robinson** is an American mathematician known for his work in mathematical logic and theoretical computer science. He earned his Ph.D. from Cornell University in 1966 under the supervision of Gerald Enoch Sacks. After a postdoctoral year at the Institute for Advanced Study in Princeton, he joined the Department of Computer Science at the University of Georgia, where he is now Professor Emeritus. His joint publication with Erdős was published in 1983.

External Link(s):

**Robert William Robinson (MathGenealogy)** 

**Alan H. Stein** is an American mathematician known for his contributions to mathematical logic, combinatorics, and theoretical computer science. He earned his Ph.D. from New York University in 1973, under the supervision of Harold Nathaniel Shapiro. His joint publication with Erdős appeared in 1983.

External Link(s):

Alan Stein (MathGenealogy)

\*Jan Turk was a Dutch mathematician who earned his Ph.D. from Universiteit Leiden in 1979 under the supervision of Robert Tijdeman. His joint publication with Erdős appeared in 1984.

External Link(s):

Johannes Wilhelmus Maria Turk (MathGenealogy)

**Mohamed H. El-Zahar** is a Canadian mathematician known for his work in graph theory and combinatorics. He served as a postdoctoral fellow at the University of Calgary in 1986–87. His joint paper with Erdős, titled "Ramsey Multiplicity of Graphs," was published in *Combinatorica* in 1985.

**Joel Christopher Fowler** is an American mathematician and Associate Professor Emeritus at Kennesaw State University. He earned his Ph.D. from the California Institute of Technology in 1984 under Richard Michael Wilson. He co-authored two papers with Erdős, published in 1985 and 1999.

External Link(s):

Joel Christopher Fowler (MathGenealogy)

**Donald K. Skilton** is an Australian mathematician known for his contributions to graph theory and combinatorial mathematics. He earned his Ph.D. from the University of Newcastle (New South Wales, Australia) in 1985 under the supervision of Roger Benjamin Eggleton. His research focuses on extremal problems in graph theory, including Ramsey theory, edge colorings, and properties of hypergraphs. Between 1985 and 1990, he co-authored three papers with Paul Erdős in the fields of combinatorial number theory and discrete mathematics.

External Link(s):

**Donald Skilton (MathGenealogy)** 

**Alfred John Boals** is an American mathematician. He earned his Ph.D. from Michigan State University in 1967 under the supervision of Kyung Whan Kwun. He co-authored two publications with Erdős, published in 1987 and 1988.

External Link(s):

**Alfred John Boals (MathGenealogy)** 

**Karl Grill** is an Austrian mathematician who earned his Ph.D. from the University of Vienna (*Universität Wien*) in 1983. He was awarded a silver medal at the International Mathematical Olympiad in 1975 and gold medals in 1976 and 1977. Currently, he is affiliated with the Institute of Statistics and

Mathematical Methods in Economics at TU Wien, where he is involved in teaching and examining in areas related to measure theory and probability. His joint publication with Erdős was published in 1987.

External Link(s):

Karl Grill (MathGenealogy)

**Michael S. Jacobson** is an American mathematician and a professor of Mathematical and Statistical Sciences at the University of Colorado Denver. He earned his Ph.D. from Emory University (Atlanta, Georgia) in 1980, under the supervision of Henry S. Sharp, Jr. His three joint publications with Erdős were published between 1987 and 2001.

External Link(s):

Michael Scott Jacobson (Wikipedia)

Michael Scott Jacobson (MathGenealogy)

**John William Kennedy** is an American mathematician affiliated with Baruch College of the City University of New York. In 1987, he co-authored the paper "k-Connectivity in Random Graphs" with Paul Erdős, published in the European Journal of Combinatorics.

**Paresh Malde** is an American mathematician, physician, and economist. He earned his Ph.D. in mathematics from Western Michigan University (Kalamazoo, Michigan) in 1988 under the supervision of Allen John Carl Schwenk, and a Ph.D. in high energy physics from the University of Michigan in 1999 under Robin Stuart. In addition to his academic pursuits, he has worked in the technology and finance sectors, holding roles such as Vice President of Banking and Capital Markets at Nexient and CEO of SU2 Systems. His professional interests include risk management, business strategy, and software development. He co-authored two papers with Erdős, published in 1987 and 1989.

External Link(s):

Paresh J. Malde (MathGenealogy)

**Ortrud R. Oellermann** (born in Vryheid, South Africa) is a South African mathematician specializing in graph theory. She is a professor of mathematics at the University of Winnipeg. She earned her Ph.D. from Western Michigan University (Kalamazoo, Michigan) in 1986, under the supervision of Gary Theodore Chartrand. She co-authored four papers with Erdős, published in 1987 and 1988.

External Link(s):

**Ortrud Oellermann (Wikipedia)** 

**Ortrud Oellermann (fr-Wikipedia)** 

Ortrud R. Oellermann (MathGenealogy)

**Jeffrey David Vaaler** is an American mathematician and Professor Emeritus in the Department of Mathematics at the University of Texas at Austin. He received his Ph.D. from the University of Illinois at Urbana-Champaign in 1974, with a dissertation titled "Some Results on Uniform Distribution with

Weights", under the supervision of Harold George Diamond. Dr. Vaaler has made significant contributions to number theory and has mentored many students. His research includes topics such as lower bounds for regulators of number fields, inequalities involving S-regulators and multiplicatively independent S-units, and Mahler measures. He is also a co-author of the book *An Invitation to Modern Number Theory* with Steven J. Miller and Bamin Takloo-Bighash. He co-authored two papers with Erdős, published in 1987 and 1989.

External Link(s):

Jeffrey David Vaaler (MathGenealogy)

**Yechezkel Zalcstein** is an American computer scientist known for his work in theoretical computer science, especially in computational complexity and algebraic structures. He earned his Ph.D. from the University of California, Berkeley in 1968 under the supervision of John Lewis Rhodes. He coauthored three papers with Erdős, published between 1987 and 1997.

External Link(s):

Yechezkel Zalcstein (MathGenealogy)

**Alexander Gersh Felzenbaum** is an Israeli mathematician. He earned his Ph.D. from the Weizmann Institute of Science in 1987, under the supervision of Aviezri Siegmund Fraenkel. His collaboration with Erdős was published in 1988.

External Link(s):

**Alexander Felzenbaum (MathGenealogy)** 

**Dean Robert Hickerson** is an American mathematician and researcher in cellular automata, known for his contributions to combinatorics. He earned his Ph.D. in mathematics from the University of California, Berkeley, in 1980, under the supervision of Elwyn Ralph Berlekamp and Sherman Kopald Stein. He co-authored two papers with Paul Erdős, published in 1988 and 1989. Hickerson made pioneering contributions to cellular automata, particularly through the discovery of oscillators and spaceships in Conway's *Game of Life*. In 1989, he created the first oscillator search program, which enabled the discovery of many small, low-period oscillators such as the caterer, monogram, and fumarole. He also found numerous sparkers and billiard table configurations, including the first known period-17 oscillators. His automated searches led to the discovery of new types of spaceships traveling at speeds of c/3, c/4, and 2c/5, including the first diagonal c/4 spaceship (other than the glider) and the first period-2 spaceships. In 1991, he achieved a major breakthrough by combining thirteen switch engines to form the first c/12 diagonal spaceship, known as the 13-engine Cordership. That same year, he designed the first sawtooth pattern, *sawtooth 1212*, using his c/3 spaceship called the *turtle*. His discoveries have had a lasting influence on cellular automata research.

External Link(s):

**Dean Hickerson (LifeWiki)** 

**Dean Robert Hickerson (MathGenealogy)** 

**Israel Koren** is an American mathematician affiliated with the University of Massachusetts. In 1988, he co-authored the paper "Minimum-Diameter Cyclic Arrangements in Mapping Data-Flow Graphs onto VLSI Arrays" with Paul Erdős and three other authors, published in Mathematical Systems Theory.

**Michael Ellsworth Mays** is an American mathematician and professor emeritus in the Department of Mathematics at West Virginia University. He earned his Ph.D. from The Pennsylvania State University (State College, Pennsylvania) in 1977 under the supervision of Raymond George D. Ayoub. He co-authored a paper with Erdős published in 1988.

External Link(s):

Michael Ellsworth Mays (MathGenealogy)

**Peter Salamon** is an American mathematician and a professor at San Diego State University. He has published over 200 articles related to biomathematics, finite-time thermodynamics, geometrical thermodynamics, optimization, and mathematical modeling. He is especially known for founding and extensively developing the field of Finite Time Thermodynamics. His joint publication with Erdős was published in 1988.

External Link(s):

Peter Salamon (Wikipedia)

**Gabriel M. Silberman** is an Israeli computer scientist affiliated with the Israel Institute of Technology (Haifa). In 1988, he co-authored with Paul Erdős and three other collaborators the paper "Minimum-Diameter Cyclic Arrangements in Mapping Data-Flow Graphs onto VLSI Arrays", published in Mathematical Systems Theory.

**Joseph Hammer** is an American mathematician. In 1989, he co-authored the paper *Lattice Points* with Paul Erdős and Peter M. Gruber.

**Pavol Hell** is a Canadian mathematician and computer scientist, born in Czechoslovakia. He is a professor of computing science at Simon Fraser University. He began his mathematical studies at Charles University in Prague and moved to Canada in August 1968 following the Warsaw Pact invasion of Czechoslovakia. He earned his Ph.D. from the Université de Montréal in 1973, under the supervision of Gert Sabidussi. His joint publication with Erdős appeared in 1989.

External Link(s):

Pavol Hell (Wikipedia)

Pavol Hell (fr-Wikipedia)

Pavol Hell (MathGenealogy)

**Allen Roy Freedman** is an American mathematician. He earned his Ph.D. from Oregon State University in 1965 under Robert Delmer Stalley. His collaboration with Erdős was published in 1990.

External Link(s):

#### Allen Roy Freedman (MathGenealogy)

**Ewa Maria Kubicka** is a Polish mathematician known for her work in graph theory and actuarial science. She introduced the concept of the *chromatic sum* of a graph—the minimum possible sum of labels assigned to vertices using natural numbers, such that no two adjacent vertices have the same label. She studied mathematics at Wrocław University of Science and Technology starting in 1974 and earned a master's degree there in 1979. She later earned a second master's degree in computer science and a Ph.D. in mathematics from Western Michigan University in 1989, under the supervision of Allen John Carl Schwenk. Her joint publication with Erdős was published in 1990.

External Link(s):

Ewa Kubicka (Wikipedia)

Ewa Kubicka (pl-Wikipedia)

Ewa Kubicki (MathGenealogy)

**Paul R. Smith** is a German mathematician affiliated with Johann Wolfgang Goethe University Frankfurt. In 1990, he co-authored with Paul Erdős and Thomas Maxsein the paper "Primzahlpotenzen in rekurrenten Folgen", published in Analysis.

**Joseph H. Straight** is an American mathematician. He received his Ph.D. from Western Michigan University (Kalamazoo, Michigan) in 1977 under the supervision of Don Raymond Lick. His joint publication with Erdős was published in 1990.

External Link(s):

H. Joseph Straight (MathGenealogy)

**Prasad Venkata Tetali** (born in Visakhapatnam, Andhra Pradesh, India) is an Indian-American mathematician and computer scientist. He is a professor at Carnegie Mellon University, and his research focuses on probability theory, discrete mathematics, and approximation algorithms. He earned his Ph.D. from New York University in 1991 under the supervision of Joel Harold Spencer. He co-authored two papers with Erdős, published in 1990 and 1995.

External Link(s):

Prasad V. Tetali (Wikipedia)

Prasad V. Tetali (MathGenealogy)

Abraham Zaks (Hebrew: אברהם זקס,") is an Israeli mathematician, a professor emeritus at the Israel Institute of Technology. He received his Ph.D. from the Brandeis University (Waltham, Massachusetts) in 1966, where his advisor was Maurice Auslander. His joint publication with Erdős was published in 1990.

External Link(s):

**Abraham Zaks (MathGenealogy)** 

**Hang Chen** is an American mathematician. He earned his Ph.D. from Western Michigan University (Kalamazoo, Michigan) in 1992, where his advisor was Allen John Carl Schwenk. His joint publication with Erdős was published in 1992.

External Link(s):

Hang Chen (MathGenealogy)

**Aleksandr V. Kostochka** is a Russian-American mathematician specializing in combinatorics and graph theory. He received his Ph.D. from Novosibirsk State University in 1978, where his advisor was Herbert Saul Wilf. He currently serves as a professor in the Department of Mathematics at the University of Illinois at Urbana-Champaign. His two joint publications with Erdős were published in 1992 and 1997.

External Link(s):

Alexandr Kostochka (MathGenealogy)

**Jiuqiang Liu** is an American mathematician and professor emeritus in the Department of Mathematics and Statistics at Eastern Michigan University. He earned his Ph.D. from Western Michigan University (Kalamazoo, Michigan) in 1992, with Yousef Alavi as his advisor. He co-authored two papers with Erdős, published in 1992 and 1997.

External Link(s):

Jiuqiang Liu (MathGenealogy)

**Joseph Edward McCanna** is an American mathematician. He received his Ph.D. from the University of New Mexico (Albuquerque) in 1990 under the supervision of Roger Charles Entringer. His joint paper with Erdős was published in 1992.

External Link(s):

Joe McCanna (MathGenealogy)

**Guantao Chen** is an American mathematician specializing in graph theory. He received his Ph.D. from The University of Memphis in 1991, under the supervision of Richard Schelp. He co-authored five publications with Erdős between 1993 and 1998.

External Link(s):

**Guantao Chen (MathGenealogy)** 

**Johannes Hendrik Hattingh** is a South African mathematician specializing in graph theory and combinatorics. He earned his Ph.D. from Rand Afrikaans University (Johannesburg) in 1989, under the supervision of Izak Broere. His joint publication with Erdős was published in 1993.

External Link(s):

**Johannes Hendrik Hattingh CV** 

Johannes H. Hattingh (MathGenealogy)

**Michael Anthony Henning** is a South African mathematician. He earned his Ph.D. from the University of Natal (Durban, South Africa) in 1988, under the supervision of Herbert Saul Wilf. His joint publication with Erdős was published in 1993.

External Link(s):

**Michael Anthony Henning CV** 

Michael Anthony Henning (MathGenealogy)

**Huicheng Sun** is an American mathematician. In 1993, he co-authored with Paul Erdős and three other collaborators the paper "Extremal Problems for the Bondy—Chvátal Closure of a Graph".

**Wayne Dean Goddard** is an American mathematician specializing in graph theory and discrete mathematics. He earned his Ph.D. in 1992 from the Massachusetts Institute of Technology (MIT), where he was advised by Daniel J. Kleitman. He has been a faculty member at Clemson University, contributing to the field through both teaching and research. His joint publication with Erdős was published in 1994.

External Link(s):

Wayne Dean Goddard (MathGenealogy)

**Stephen Craig Jackson** is an American set theorist at the University of North Texas. Much of his most notable work focuses on the descriptive set-theoretic consequences of the Axiom of Determinacy. He is particularly known for having calculated the values of all the projective ordinals—the suprema of the lengths of all prewellorderings of the real numbers at each level of the projective hierarchy—under the assumption that the Axiom of Determinacy holds. He received his Ph.D. from the University of California, Los Angeles in 1983, where his advisor was Donald Anthony Martin. His two joint publications with Erdős appeared in 1994 and 1997.

External Link(s):

**Steve Jackson (mathematician) (Wikipedia)** 

**Stephen Craig Jackson (MathGenealogy)** 

**Michael Richard Klugerman** is an American mathematician. He earned his Ph.D. from the Massachusetts Institute of Technology (Cambridge, Massachusetts) in 1994, under the supervision of F. Thomson (Frank) Leighton. He has contributed to several areas in computer science, including algorithms and data structures. His co-authored works cover topics such as embedding complete graphs into hypercubes and designing small-depth counting networks. His joint publication with Erdős was published in 1994.

External Link(s):

Michael Richard Klugerman (MathGenealogy)

**Arie Bialostocki** is an Israeli-American mathematician specializing in discrete mathematics and finite groups. He earned his Ph.D. in 1984 under the supervision of Marcel Herzog. His joint publication with Erdős was published in 1995.

External Link(s):

Arie Bialostocki (Wikipedia)

Arie Bialostocki (MathGenealogy)

**Hanno Lefmann** is a German mathematician and professor at Chemnitz University of Technology. He received his Dr. rer. nat. degree from Universität Bielefeld in 1985. He is recognized for his work in combinatorics and graph theory, particularly in extremal graph theory. His research includes significant contributions to the study of independent sets in graphs, edge colorings, and random graphs. His joint publication with Erdős appeared in 1995.

External Link(s):

Hanno Lefmann (MathGenealogy)

**Talmage James Reid** is an American mathematician affiliated with the University of Mississippi. He received his Ph.D. from Louisiana State University (Baton Rouge) in 1988. In 1995 and 1996, he coauthored two papers with Paul Erdős and three other collaborators; both were published in *Discrete Mathematics*.

**Eric Saias** is a French mathematician affiliated with Université Paris. He has made notable contributions to number theory, including research on the Riemann zeta function and divisor graphs. In 1995, he co-authored with Paul Erdős the paper "Sur le graphe divisoriel", published in Acta Arithmetica.

\*Stephen Suen was a British mathematician specializing in probability theory, combinatorics, and discrete mathematics. He earned his Ph.D. from the University of Bristol in 1985 under the supervision of Geoffrey Richard Grimmett. His research focused on random structures, probabilistic combinatorics, and applications of probabilistic methods in discrete mathematics. One of his notable achievements was a collaboration with Paul Erdős, resulting in a joint publication in 1995.

External Link(s):

Steven Suen (Deceased) (UnivSouthFlorida)

**Stephen W Suen (MathGenealogy)** 

**Yolanda** (**Columbus**) **Debose** is an American entrepreneur with a diverse professional background. She earned her Ph.D. in Educational Psychology and Market Research from Texas A&M University. According to her LinkedIn profile, her areas of expertise include executive coaching, leadership development, and team building. Her joint publication with Erdős was published in 1996.

External Link(s):

Yolanda Columbus (LinkedIn)

**Yolanda Debose Columbus (Ouora)** 

**Aron Kumar Jagota** is an American mathematician. In 1996, he co-authored a paper with Paul Erdős and two other authors titled "Large Subgraphs of Minimal Density or Degree", published in the Journal of Combinatorial Mathematics and Combinatorial Computing.

**Pavel Valtr** is a Czech mathematician affiliated with the Department of Applied Mathematics at the Faculty of Mathematics and Physics, Charles University in Prague. He received his Ph.D. from Charles University in 1996, under the supervision of Jaroslav Nešetřil and Emmerich (Emo) Welzl. His research interests include discrete and computational geometry, classical combinatorics, probabilistic methods in combinatorics, Ramsey theory, and stochastic geometry. His joint publication with Erdős was published in 1996.

External Link(s):

Pavel Valtr (MathGenealogy)

**William Douglas Weakley** is an American mathematician. He received his Ph.D. from Northwestern University (Evanston, Illinois) in 1980 under the supervision of Eben Matlis. His joint publication with Erdős appeared in 1996.

External Link(s):

William Douglas Weakley (MathGenealogy)

**Peter Che Bor Lam** (unknown – 29 April 2025) was a Chinese mathematician affiliated with Hong Kong Baptist University. In 1997, he co-authored a paper with Paul Erdős and three other researchers titled "Upper bounds on linear vertex-arboricity of complementary graphs," published in Utilitas Mathematica. In addition to this collaboration with Erdős, he has co-authored several other research papers. For instance, in 2007, he collaborated with Bing Wei on the paper "On the total domination number of graphs," also published in Utilitas Mathematica, which explores properties of total domination numbers in graphs. His primary research interests were in graph theory and combinatorics, and he has contributed to various topics within these fields.

**Jianfang Wang** is a Chinese mathematician affiliated with the Institute of Applied Mathematics at the Chinese Academy of Sciences and the Asia-Pacific Operational Research Center. In 1997, he coauthored a paper with Paul Erdős and three other authors titled "Upper Bounds on Linear Vertex-Arboricity of Complementary Graphs", published in Utilitas Mathematica.

**Anja Gabriele Meyer** is a German mathematician. She received her Ph.D. from Universität Bielefeld in 1998, under the supervision of Thomas W. Müller and Heinz Helling. Her joint paper with Erdős was published in 1997.

External Link(s):

**Anja Gabriele Meyer (MathGenealogy)** 

**Moshe Rosenfeld** is an Israeli mathematician. He received his Ph.D. from the Hebrew University of Jerusalem in 1971 under the supervision of Branko Grünbaum. His joint publication with Erdős was published in 1997.

External Link(s):

Moshe Rosenfeld (MathGenealogy)

**Warren Eugene Shreve** is an American mathematician. He received his Ph.D. from the University of Nebraska–Lincoln in 1967 under the supervision of Arlington Michael Fink. His joint publication with Erdős appeared in 1998.

External Link(s):

Warren Eugene Shreve (MathGenealogy)

**Richard Fred Blecksmith** is an American mathematician. He received his Ph.D. from the University of Arizona (Tucson) in 1983 under the supervision of John David Brillhart. His joint publication with Erdős appeared in 1999.

External Link(s):

**Richard Fred Blecksmith (MathGenealogy)** 

**Marc Deléglise** is a French mathematician known for his work in computational number theory. His research includes arithmetic functions, prime-counting algorithms, and analytic number theory. He earned his Ph.D. from Université Claude Bernard Lyon 1 in 1991, under Jean-Louis Nicolas. His collaboration with Erdős was published in 1999.

External Link(s):

Marc Deléglise (MathGenealogy)

**Thomas George Fowler** is an American mathematician. He received his Ph.D. from the Georgia Institute of Technology in 1998 under Robin Thomas. His joint publication with Erdős was published in 1999.

External Link(s):

**Thomas George Fowler (MathGenealogy)** 

**Grigori Abramovich Kolesnik** is a Russian mathematician. He received his Ph.D. from Lomonosov Moscow State University in 1971, where his advisor was Anatoly Alekseevich Karatsuba. His joint publication with Erdős appeared in 1999.

External Link(s):

Grigori Abramovich Kolesnik (MathGenealogy)

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An asterisk (\*) before a name indicates that the person is known to be deceased. A plus sign (+) following a birth year signifies that the full date of birth is known but cannot be published for privacy reasons if the individual is still living. The places of birth and death are given according to the current country to which the city belongs (as of 2025).

name	date of birth	place of birth	date of death	place of death	page
Harvey Abbott					112
*János Dezső Aczél	26 December 1924	Budapest, Hungary	1 January 2020	Ottawa, Canada	32
Takashi Agoh	1943+	Shimane, Japan			66
Ron Aharoni	1952				90
*Martin Aigner	28 February 1942	Linz, Austria	11 October 2023	Berlin, Germany	64
Miklós Ajtai	1946+	Budapest, Hungary			75
*Leonidas Alaoglu	19 March 1914	Red Deer, Canada	August 1981		18
*Yousef Alavi	19 March 1928	Ahvaz, Iran	21 May 2013		37
Krishnaswami Alladi	1955+	Thiruvananthapuram, India			98
Noga Alon	1956+	Haifa, Israel			99
*James Milne Anderson	28 December 1938	Falkirk, UK	20 November 2015	London, UK	56
*Béla Andrásfai	8 February 1931	Kám, Hungary	6 June 2023	Budapest, Hungary	43
*Nesmith Cornett Ankeny	1927	Walla Walla, US	4 August 1993	Seattle, US	37
*Norman Herbert Anning	28 August 1883		1 May 1963	Sunnydale, US	5
*Joseph Arkin	25 May 1923	Brooklyn, US	5 August 2002		30
David Christopher Arney	1949+	Rochester, US			84
Boris Aronov	1963+				106
J. Marshall Ash					112
Charles D. Ashbacher	1954+	Fort Riley, US			96
David Michael Avis	1951+				89
László Babai	1950+	Budapest, Hungary			88
Gutti Jogesh Babu	1949				85
*Frederick Bagemihl	25 June 1920	Bronx, US	12 April 2002		26
Antal Balog	1956+	Budapest, Hungary			101
*Leon Bankoff	13 December 1908	New York City, US	16 February 1997		11
Amnon B. Barak	1942+	Tel-Aviv, Israel	265 1 2012	***	65
*Paul Trevier Bateman	6 June 1919	Philadelphia, US	26 December 2012	Urbana, US	25
*James Earl Baumgartner	23 March 1943	Wichita, US	28 December 2011	Hanover, US	66
Leroy B. Beasley	1942+	Shelley, US	26.1 2010		65
*István Beck	1943		26 January 2018		70 50
Mehdi Behzad	1936+	Canada and Danieria	12 M1- 2004		50
*Niels Bejlegaard	23 February 1939	Copenhagen, Denmark	13 March 2004 1 December 2017		57 72
*Stanley J. Benkoski	12 April 1945	Vviv Illeroine	1 December 2017		72 88
Vitaly Bergelson Marc Aron Berger	1950+ 1955	Kyiv, Ukraine Pittsburgh, US			98
Edward Arthur Bertram	1939+	Los Angeles, US			58
Arie Bialostocki	1939+	Los Aligeles, OS			124
Andreas Raphael Blass	1947+	Nuremberg, Germany			78
Richard Fred Blecksmith	1947+	Nuteriberg, Germany			127
Michael N. Bleicher	1930+				41
Alfred John Boals	19301				118
*Ralph Philip Boas Jr.	8 August 1912	Walla Walla, US	25 July 1992	Seattle, US	17
Duane Charles Boes	o riagust 1712	Walla Walla, Ob	23 July 1992	Seattle, CS	116
Béla Bollobás	1943+	Budapest, Hungary			68
*Daniel D. Bonar	7 July 1938	Murraysville, US	4 July 2023		56
John Adrian Bondy	1944	London, UK			71
Robert Bonnet		,			112
Itshak Borosh					114
*Juraj Bosák	6 April 1933	Bratislava, Slovakia	5 April 1987	Bratislava, Slovakia	47
John D. Bovey	•		÷		113
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*Joel Lee Brenner	2 August 1912	Boston, US	14 November 1997	Palo Alto, US	16
*John David Brillhart	13 November 1930	Berkeley, US	21 May 2022		42
*Béla Brindza	18 September 1958	Csongrád, Hungary	November 2003	Debrecen, Hungary	102
Thomas Craig Brown	1938	Portland, US			56
William G. Brown	20.4	G1 1 1 770	4.7.1		111
*Robert Creighton Buck	30 August 1920	Cincinnati, US	1 February 1998	Wisconsin, US	27
József Bukor	1963+	Hurbanovo, Slovakia			106
Stefan Andrus Burr	1940				61
D. T. Busolini					114
Steven Kay Butler	1977+				110
Louis Caccetta	1950+	Sinagra, Italy			87
Neil J. Calkin	1961+	Hartford, US			104
Peter Jephson Cameron	1947+	Toowoomba, Australia			77
Earl Rodney Canfield					117
*Francis W. Carroll	22 August 1932	Philadelphia, US	30 July 2024	Norfolk, US	46
Frank S. Cater					115
Marshall L. Cates					113
*Paul Allen Catlin	25 June 1948	Bridgeport, US	20 April 1995		81
*John Henry Holloway Chalk	13 September 1922	London, UK	28 June 2004	West Vancouver, Canada	30
Gary Theodore Chartrand	1936+	Sault Ste. Marie, US			51
Chuan Chong Chen					113
Guantao Chen					123
Hang Chen					122
*Robert Wen-Shaing Chen	29 November 1943		11 August 2022		69
Phyllis Zweig Chinn	1941+	Rochester, US			63
S. L. G. Choi					112
*Sarvadaman D. S. Chowla	22 October 1907	London, UK	10 December 1995	Laramie, US	10
Charles Kam-tai Chui	1940				61
Fan-Rong King Chung Graham	1949+	Kaohsiung, Taiwan			85
*Kai Lai Chung	19 September 1917	Hangzhou, China	2 June 2009	Philippines	23
Václav Chvátal	1946+	Prague, Czech Republic			75
Brent N. Clark	1962+	Moosomin, Canada			106
Lane Henry Clark	1949				86
*James Andrew Clarkson	7 February 1906	Newburyport, US	6 June 1970		8
*James Gourlay Clunie	26 October 1926	St Andrews, UK	5 March 2013	York, UK	35
Stephen D. Cohen					113
Charles Joseph Colbourn	1953+	Toronto, Canada			93
*John Horton Conway	26 December 1937	Liverpool, UK	11 April 2020	New Brunswick, US	54
*Arthur Herbert Copeland	22 June 1898	Rochester, US	6 July 1970		6
Hallard T. Croft					115
Endre Csáki	1935+	Budapest, Hungary			49
Imre Csiszár	1938+	Miskolc, Hungary			55
*János Czipszer	16 November 1930	Budapest, Hungary	15 June 1963	Budapest, Hungary	43
*Donald Allan Darling	4 May 1915	Los Angeles, US	24 June 2014		20
Richard Brian Darst	1934+	Chicago, US			48
*Harold Davenport	30 October 1907	Huncoat, UK	9 June 1969	Cambridge, UK	10
*Roy O. Davies	1927	Uttoxeter, UK	12 June 2023		37
*David E. Daykin		Newcastle upon Tyne, UK	6 August 2010		114
*Nicolaas Govert de Bruijn	9 July 1918	The Hague, Netherlands	17 February 2012	Nuenen, Netherlands	24
*Dominique de Caen	11 May 1956		25 June 2002		100
Jean-Marie De Koninck	1948+	Quebec City, Canada			81
Yolanda (Columbus) Debose					125
Paul René Louis Deheuvels	1948+	Istanbul, Turkey			80
Marc Deléglise					127
*József Dénes	16 April 1932	Budapest, Hungary	19 August 2002	Budapest, Hungary	45
Jean-Marc Deshouillers	1946+	Paris, France			76
*Walter A. Deuber	6 October 1942		16 July 1999		65
*Michel Marie Deza	27 April 1939	Moscow, Russia	23 November 2016	Paris, France	57
Persi Warren Diaconis	1945+	New York City, US			71
Harold George Diamond	1940+	Wurtsboro, US			59
*Gabriel Andrew Dirac	13 March 1925	Budapest, Hungary	20 July 1984	Arlesheim, Switzerland	33
Jacques Dixmier	1924+	Saint-Étienne, France			31
*Yael Naim Dowker	30 October 1919	Tel Aviv, Israel	28 January 2016	Oxford, UK	25

*David Allyn Drake	29 September, 1937	Lorain, US	14 February 2025		53
Underwood Dudley	1937+	New York City, US	, , , , , , , , , , , , , , , , , , ,		52
*Richard A. Duke	1937	Geneva, US	19 February 2015		54
*Aryeh Dvoretzky	3 May 1916	Khorol, Ukraine	8 May 2008	Jerusalem, Israel	21
E. F. Ecklund, Jr.					112
*Albert Edrei	26 November 1914	Alexandria, Egypt	29 April 1998	Princeton, US	19
Roger B. Eggleton					111
Mohamed H. El-Zahar					118
*György Elekes	19 May 1949	Budapest, Hungary	29 September 2008	Fót, Hungary	83
Peter D. T. A. Elliott	1941				64
*Roger Charles Entringer	17 May 1931	Sioux City, US	18 August 2019	Albuquerque, US	44
Marcel Erné	1947+	Altenmarkt, Germany			78
Anthony Brian Evans	1949+	Tidworth, England, UK			84
Vance Faber	1944+	Buffalo, US			71
Siemion Fajtlowicz					114
*Ralph Jasper Faudree	23 August 1939	Durant, US	13 January 2015		58
*László Fejes Tóth	12 March 1915	Szeged, Hungary	17 March 2005	Budapest, Hungary	19
*Ervin Feldheim	21 September 1912	Košice, Slovakia	12 March 1944	Bor, Serbia	17
*William Feller	7 July 1906	Zagreb, Croatia	14 January 1970	New York City, US	9
Alexander Gersh Felzenbaum					120
Leonard Few	2 C	DL:11:1 LIC	10 I 2021	Danius IIC	110
*Peter Clingerman Fishburn	2 September 1936	Philipsburg, US	10 June 2021	Racine, US	51
*Géza Fodor *Dmitrii Germanovich FdFlaass	6 May 1927	Szeged, Hungary Krasnokamsk, Russia	28 September 1977 10 June 2010	Szeged, Hungary	36 105
Joel Christopher Fowler	8 September 1962	Krasiiokaiiisk, Russia	10 June 2010		103
Thomas George Fowler					127
Aviezri Siegmund Fraenkel	1929+	Munich, Germany			39
Péter Frankl	1953+	Kaposvár, Hungary			91
Allen Roy Freedman	1)331	Kuposvar, Hungary			121
*Gregory Abelevich Freiman	3 July 1926	Kazan, Russia	19 September 2024	Tel Aviv, Israel	34
*Géza Freud	4 January 1922	Budapest, Hungary	27 September 1979	Ohio, USA	29
Robert Freud	1947+	Budapest, Hungary	<u> </u>	2, 2.2	77
*Ervin Fried	6 September 1929	Budapest, Hungary	5 August 2013	Budapest, Hungary	40
*Hans Fried	12 November 1905	Vienna, Austria	1990	New York City, US	8
*Wolfgang Fuchs	19 May 1915	Munich, Germany	24 February 1997	Ithaka, US	20
Zoltán Füredi	1954+	Budapest, Hungary	-		95
*Steven Alexander Gaal	22 February 1924	Budapest, Hungary	17 March 2016	Nevada, US	31
*Janos Galambos	1 September 1940	Zirc, Hungary	19 December 2019	Willow Grove, US	61
*Tibor Gallai	15 July 1912	Budapest, Hungary	2 January 1992	Budapest, Hungary	16
David P. Galvin	1973+	Los Angeles, US			110
Frederick William Galvin	1936+	Saint Paul, US			51
László Gerencsér	1946+	Zalaegerszeg, Hungary			75
*Joseph Gillis	3 August 1911	Sunderland, UK	18 November 1993	Rehovot, Israel	15
*Leonard E. Gillman	8 January 1917	Cleveland, US	7 April 2009	Austin, US	22
John Gordon Gimbel	1954	Los Angeles, US			97
*Abraham Ginzburg	1 August 1926	Navahrudak, Belarus	30 December 2020	Tel Aviv, Israel	34
Wayne Dean Goddard					124
Christopher David Godsil	1949+	Bendigo, Australia	44.5.1		83
*Mark K. Goldberg	18 December 1940	W 11 G	11 February 2023	T 1' TIG	61
*Michael Golomb	3 May 1909	Munich, Germany	9 April 2008	Indiana, US	12
*Adolph Winkler Goodman	20 July 1915	Doltimora IIC	30 July 2004	California IIC	20
*Basil Gordon	23 December 1931	Baltimore, US	12 January 2012	California, US	44 97
Ronald James Gould *Ronald Lewis Graham	1950+	Dunkirk, US Taft, US	6 July 2020	San Diego, US	87 50
Sidney West Graham	31 October 1935 1950+	Oklahoma, US	0 July 2020	San Diego, US	88
Andrew James Granville	1930+ 1962+	London, UK			105
Daniel Grieser	1964+	Berlin, Germany			103
Karl Grill	22011	Zorini, Cormany			118
*Peter Manfred Gruber	28 August 1941	Klagenfurt, Austria	7 March 2017	Vienna, Austria	63
*Branko Grünbaum	2 October 1929	Osijek, Croatia	14 September 2018	Seattle, US	40
*Géza Grünwald	18 October 1910	Budapest, Hungary	1942 or 1943	Ukraine	14
David Shane Gunderson	1955				98
*Hansraj Gupta	9 October 1902	Rawalpindi, Pakistan	23 November 1988		7
¥ .					

Michael J. T. Guy	1943+				67
*Richard Kenneth Guy	30 September 1916	Nuneaton, UK	9 March 2020	Calgary, Canada	22
András Gyárfás	1945+	Gyula, Hungary	) With the 2020	Cargary, Canada	73
Ervin Győri	1954+	Kaposvár, Hungary			95
Kálmán Győry	1940+	Ózd, Hungary			59
*András Hajnal	13 May 1931	Budapest, Hungary	30 July 2016	Budapest, Hungary	43
Gábor Halász	1941+	Budapest, Hungary	30 July 2010	Budapest, Hungary	64
*Richard R. Hall	1940	Budapest, Hungary	25 October 2024		61
Péter Hamburger	1945+	Mexico City, Mexico	23 October 2024		72
Joseph Hammer	19431	Mexico City, Mexico			121
*Haim Hanani	11 September 1912	Słupca, Poland	8 April 1991		17
Denis Hanson	11 September 1912	Siapea, i ciaira	0 1 pin 1991		112
*Frank Harary	11 March 1921	New York City, US	4 January 2005	Las Cruces, US	28
Gergely Harcos	1973+	Budapest, Hungary	1 surroury 2003	Eus Cruces, OB	109
*George Eugene Hardy	October 1950	Edmonton, Canada	11 February 2015		88
*William Ray Hare, Jr.	29 June 1936	Murfreesboro, US	27 December 2020	Clemson, US	51
Charles C. Harner	_, , , , , , , , , , , , , , , , , , ,		_,	,	111
*Stanisław Hartman	2 August 1914	Warsaw, Poland	11 November 1992	Wrocław, Poland	19
*Erich Härtter	20 December 1928		12 December 2015	,	38
*Egbert Harzheim	11 February 1932	Cologne, Germany	14 December 2012		44
Johannes Hendrik Hattingh	1110014411 1702	corogne, cermany	1 · B c c c m c c i 2 c i 2		123
*Stephen H. Hechler	7 June 1939		26 September 2018		57
Stephen Travis Hedetniemi	1939+	Washington, US	F		57
*Zdeněk Hedrlín	1933	Prague, Czech Republic	22 April 2018	Prague, Czech Republic	47
Norbert Hegyvári	1954+	Budapest, Hungary		g,	94
*Hans Arnold Heilbronn	8 October 1908	Berlin, Germany	28 April 1975	Toronto, Canada	11
Pavol Hell		,,			121
*Robert Louis Hemminger	1931	Rushsylvania, US	28 July 2024	Nashville, US	44
Michael Anthony Henning		,,,			123
*Melvin Henriksen	23 February 1927	New York City, US	14 October 2009		36
*Fritz Herzog	6 December 1902	, , , , , , , , , , , , , , , , , , ,	21 November 2001	East Lansing, US	7
Marcel Herzog	1935+	Kraków, Poland		<i>G</i> ,	49
Dean Robert Hickerson					120
*Denis Arthur Higgs	6 May 1932	England, UK	25 February 2011	Toronto, Canada	45
Adolf Hildebrand, Jr.	1956+	Leutkirch, Germany		,	101
Neil Bruce Hindman	1943+	Waukon, US			67
*Arthur Marmaduke Hobbs	19 June 1940	Washington, US	25 October 2020		60
*Alan Jerome Hoffman	30 May 1924	New York City, US	18 January 2021		31
*Verner Emil Hoggatt Jr.	26 June 1921	, , , , , , , , , , , , , , , , , , ,	11 August 1980		29
Derek Allan Holton	1941+	Chesham, UK	. <b>.</b>		62
Ron Holzman	1954+	Bucharest, Romania			96
Peter Horák	1951+	Prešov, Slovakia			89
Miklós Horváth	1960+	Budapest, Hungary			103
Edward Howorka	1953+	1 , 2 ,			92
Derbiau Frank Hsu	1948+				80
*Gilbert Agnew Hunt	4 March 1916	Washinton, US	30 May 2008	Princeton, US	21
*Jun Shung Hwang		,	,	,	115
Karl-Heinz Indlekofer	1943+	Wertheim, Germany			66
*Albert Edward Ingham	3 April 1900	Northampton, UK	6 September 1967	Switzerland	6
*Aleksandar Ivić	6 March 1949	Belgrade, Serbia	27 December 2020	Belgrade, Serbia	83
*Eri Jabotinsky	26 December 1910	Odessa, Ukraine	6 June 1969	Haifa, Israel	14
Stephen Craig Jackson					124
Michael S. Jacobson					118
Aron Kumar Jagota					126
Svante Janson	1955+	Uppsala, Sweden			97
*Vojtěch Jarník	22 December 1897	Prague, Czech Republic	22 September 1970	Prague, Czech Republic	5
Guoping Jin	1962+	- i		_ 1	104
Fred B. Jones					117
*István Joó	19 September 1948	Sárvár, Hungary	8 December 1998	Budaörs, Hungary	82
Miklós István Joó	1975+	Budapest, Hungary		, <u>5</u> ,	110
*Mark Kac	3 August 1914	Kremenec, Ukraine	26 October 1984	California, US	19
Paul Chester Kainen	1943+	Washington, US		•	67
*Shizuo Kakutani	28 August 1911	Osaka, Japan	17 August 2004	New Haven, US	15
	-		~		

	22.14.4045	m	27.7		22
*Irving Kaplansky	22 March 1917	Toronto, Canada	25 June 2006	Los Angeles, US	23
*Jovan Karamata	1 February 1902	Zagreb, Croatia	14 August 1967	Geneva, Switzerland	6
Imre Kátai	1938+	Kiskunlacháza, Hungary			55
*Paul Joseph Kelly	26 June 1915	Riverside, US	15 July 1995	Santa Barbara, US	20
John William Kennedy					119
*Hyman Kestelman	18 March 1908	London, UK	20 January 1983		10
*Satgur Prasad Khare		Sagar, India	30 April 2021	Raipur, India	114
Henry Andrew Kierstead	1951+	Providence, US			89
*Péter Kiss	5 March 1937	Nagyréde, Hungary	5 March 2002		53
*Murray Seymour Klamkin	5 March 1921	Brooklyn, US	6 August 2004		28
Maria Margaret Klawe	1951+	Toronto, Canada			90
Daniel J. Kleitman	1934+	Brooklyn, US			48
Michael Richard Klugerman					124
Jonathan Charles Knappenberger	1966+	Philadelphia, US			108
*Chao Ko	12 April 1910	Wenling, China	8 November 2002		13
László Á. Kóczy	1976+	Budapest, Hungary			110
Yoshiharu Kohayakawa	1963+	Marília, Brazil			107
*Jurjen Ferdinand Koksma	21 April 1904	Schoterland, Netherlands	17 December 1964	Amsterdam, Netherlands	8
Grigori Abramovich Kolesnik	211pm 150.	Sonotonana, 1 temeriana	17 2000111001 1701	Timotorum, Troutorumus	127
Péter Komjáth	1953+	Budapest, Hungary			91
János Komlós	1942+	Budapest, Hungary Budapest, Hungary			65
Vilmos Komornik	1954+				95
Israel Koren	1934+	Budapest, Hungary			
					120
Aleksandr V. Kostochka	10.4 11.1020	D 1	10.0 . 1 2010		122
*Thomas Kövári	10 April 1930	Budapest, Hungary	12 September 2010		41
Steven George Krantz	1951+	San Francisco, US			88
*Dieter Kratsch	1959	Altenburg, Germany	18 October 2020	Jena, Germany	103
*Michael M. Krieger	19 December 1941	Los Angeles, US	25 October 2024		63
Michael Krivelevich	1966+	Kaliningrad, Russia			108
András Kroó	1954+	Uzhrorod, Ukraine			96
Ewa Maria Kubicka					121
Grzegorz M. Kubicki	1955				99
*Herbert Kenneth Kunen	2 August 1943	New York City, US	14 August 2020		68
*Carole Baker Lacampagne	12 September 1933		5 August 2021		47
Peter Che Bor Lam					126
Jean Ann Larson					115
*Renu Chakravarti Laskar	8 August 1932	Bihar, India	17 September 2024		45
Hanno Lefmann					124
Jenő Lehel	1945+	Balassagyarmat, Hungary			73
*Joseph Lehner	29 October 1912	New York City, US	5 August 2013	Haverford, US	17
*Adalbert Béla Lengyel	5 October 1910	Budapest, Hungary	31 October 2002	Irvine, US	14
Vsevolod F. Lev	1962+	Moscow, Russia			105
*William Judson LeVeque	9 August 1923	Boulder, US	1 December 2007		31
*Mordechai Lewin	1921		1998		29
Wen-Ching Winnie Li	1948+	Chiayi, Taiwan			82
Don Raymond Lick	1934	2			49
Nathan Linial	1953+	Haifa, Israel			91
Jiuqiang Liu	1)331	Harra, Israel			123
Martin Loebl	1963+	Prague, Czech Republic			106
*George Gunter Lorentz		St. Petersburg, Russia	1 January 2006	Chica HC	
e e	25 February 1910	O.	1 January 2006	Chico, US	12
László Lovász	1948+	Budapest, Hungary			80
John H. Loxton	1000.	C.1.C.D.			116
Florian Luca	1969+	Galați, Romania			109
Tomasz Łuczak	1963+	Poznań, Poland	4.4	a:	106
*Archibald James Macintyre	3 July 1908	Sheffield, UK	4 August 1967	Cincinnati, US	11
Menachem Magidor	1946+	Petah Tikva, Israel			74
*Kurt Mahler	26 July 1903	Krefeld, Germany	25 February 1988	Canberra, Australia	7
Helmut Maier	1953+	Geislingen, Germany			93
Endre Makai, Jr.	1947+	Budapest, Hungary			77
Michael Makkai	1939+	Budapest, Hungary			58
Paresh Malde,					119
Janice L. Malouf	1957+				101
*Solomon Marcus	1 March 1925	Bacău, Romania	17 March 2016	Bucharest, Romania	33

Attila Máté	1946+	Szeged, Hungary			76
*Christian Mauduit	10 November 1959	Marseille, France	13 August 2019	Marseille, France	103
R. Daniel Mauldin	1943		C		69
*Thomas Maxsein	1953		2004		94
Michael Ellsworth Mays					120
Joseph Edward McCanna					123
*Robert James McEliece	21 May 1942	Washington, US	8 May 2019	Pasadena, US	65
Brendan Damien McKay	1951+	Melbourne, Australia			90
*Amram Meir	16 July 1929	Hajdúdorog, Hungary	3 January 2019	Toronto, Canada	39
Giuseppe Melfi	1967+	Uznach, Switzerland			108
Anja Gabriele Meyer					126
George Harlow Mills					116
*Eric Charles Milner	17 May 1928	London, UK	20 July 1997	Calgary, Canada	38
*Henryk Minc	12 November 1919	Łódź, Poland	15 July 2013		25
*Leon Mirsky	19 December 1918		1 December 1983	Sheffield, UK	24
Michael Sean O'Brien Molloy	1967+	Ottawa, Canada			108
Hugh Lowell Montgomery	1944+	Muncie, US			70
*Peter Lawrence Montgomery	25 September 1947	San Francisco, US	18 February 2020	Pong, Thailand	78
John Wesley Moon	1940+	Hornell, US			59
Shlomo Moran	1947	Haifa, Israel			79
Richard Patrick Morton	11 4 11 1001	¥7' A '	0.5.1 1050	F1 . C 1	117
*Leo Moser	11 April 1921	Vienna, Austria	9 February 1970	Edmonton, Canada	28
Ronald Cleveland Mullin	1936	Constant In 41:			52
Maruti Ram Pedaprolu Murty	1953+ 1956+	Guntur, India Guntur, India			93 100
Vijaya Kumar Murty Melvyn Bernard Nathanson	1930+ 1944+				70
Jaroslav Nešetřil	1944+ 1946+	Philadelphia, US Brno, Czech Republic			70 74
*Elisha Netanyahu	21 December 1912	Warsaw, Poland	3 April 1986	Jerusalem, Israel	18
*Jacques Jean-Pierre Neveu	14 November 1932	Brussels, Belgium	17 May 2016	Paris, France	46
*Donald Joseph Newman	27 July 1930	Brooklyn, US	28 March 2007	Philadelphia, US	41
Peter E. Ney	1930+	Brno, Czech Republic	20 March 2007	i imadeipina, es	41
Jean-Louis Nicolas	1942+	Orleans, France			64
*Ivan Morton Niven	25 October 1915	Vancouver, Canada	9 May 1999	Eugene, US	21
*Donald Alan Norton	15 March 1920	Mount Kisco, US	1 January 1992	Eugene, es	26
*Patrick Eugene O'Neil	1942	Mineola, US	20 September 2019	Cambridge, US	66
*Richárd Obláth	11 June 1882	Vršac, Serbia	18 June 1959	Budapest, Hungary	4
Andrew Michael Odlyzko	1949+	Tarnów, Poland		<i> </i>	84
Ortrud R. Oellermann		Vryheid, South Africa			119
*Albert Cyril Offord	9 June 1906	London, UK	4 June 2000	Oxford, UK	9
Edward Thorne Ordman	1944+	Norfolk, US			70
*John C. Oxtoby	14 September 1910	Saginaw, US	2 January 1991		14
János Pach	1954+	Budapest, Hungary			95
Péter Pál Pálfy	1955+	Debrecen, Hungary			97
Zbigniew J. Palka	1951+	Poznań, Poland			89
*Edgar Milan Palmer	17 May 1934	Hartford, US	17 April 2015		47
*Zoltán Papp	14 January 1935	Tarnivtsi, Ukraine	May 2008	Canyonlands, US	49
*Torrence Douglas Parsons	7 March 1941	Pennsylvania, US	2 April 1987	Butte County, US	62
*Charles Payan	11 April 1940	Montréal, Canada	23 July 2024	Tullins, France	59
*David Emory Penney, III			3 June 2014		115
Kevin Thomas Phelps	1948	New York, US			82
Allan Mark Pinkus	1946+	Montreal, Canada			76
Raymond Elmer Pippert	1938+	Lawrence, US			55
*George Piranian	2 May 1914	Thalwil, Switzerland	31 August 2009	Ann Arbor, US	18
*Richard M. Pollack	25 January 1935	New York City, US	18 September 2018	Montclair, US	49
*Harry Pollard	28 February 1919	Boston, US	20 November 1985		24
Carl Bernard Pomerance	1944	Joplin, US			71
Lajos Pósa	1947+	Budapest, Hungary	27 N- 1 1001	V: A	79 24
*Karl Prachar	29 October 1925	Vienna, Austria	27 November 1994	Vienna, Austria	34
David Preiss *Goart Calab Ernet Prine	1947+ 26 February 1925	Ameterdam Nothanianda	Fahruary 1005	Datroit United States	77 33
*Geert Caleb Ernst Prins Paul Rozarlien Pudaite	26 February 1925 1959+	Amsterdam, Netherlands	February 1985	Detroit, United States	103
*Norman J. Pullman	1939+ 31 March 1931	St. Charles, US New York City, US	28 May 1999		43
*George B. Purdy	20 February 1944	San Francisco, US	30 December 2017	Cincinnati, US	70
Scorge D. Furdy	201001dary 1744	Juli I fullelisco, Ob	50 December 2017	omenman, og	70

László Pyber	1960+	Budapest, Hungary			103
*Richard Rado	28 April 1906	Berlin, Germany	23 December 1989	Reading, UK	9
*Kanakanahalli Ramachandra	18 August 1933	Mandya, India	17 January 2011	India	47
Siddani Bhaskara Rao	1943	•	·		69
*Gérard Rauzy	29 May 1938	Paris, France	4 May 2010	Marseille, France	55
A. R. Reddy					111
Talmage James Reid					125
*Alfréd Rényi	20 March 1921	Budapest, Hungary	1 February 1970	Budapest, Hungary	28
*Pál Révész	6 June 1934	Budapest, Hungary	14 November 2022		48
Bruce Reznick	1953+	New York City, US			91
*Ian Richards	1936		before 2019		52
L. Bruce Richmond	16.4 . 1001	D 11/2 1 C	22.1 2021		114
*Georg Johann Rieger	16 August 1931	Bad Kreuznach, Germany	23 June 2021		44
*Hans Ivar Riesel Robert William Robinson	28 May 1929	Stockholm, Sweden	21 December 2014		39 117
Vojtěch Rödl	1949+	Prague, Czech Republic			83
*Claude Ambrose Rogers	1 November 1920	Cambridge, UK	5 December 2005	London, UK	27
Alexander Rosa	1937+	Bratislava, Slovakia	3 December 2003	London, CTC	53
*Paul Charles Rosenbloom	31 March 1920	Portsmouth, US	2005		26
Moshe Rosenfeld		, , , , , , , , , , , , , , , , , , , ,			127
Bruce Lee Rothschild	1941+	Los Angeles, US			63
*Cecil Clyde Rousseau, Jr.	13 January 1938	Philadelphia, US	10 April 2020	Memphis, US	54
*Lee Albert Rubel	1 December 1928	New York City, US	25 March 1995		38
Arthur Leonard Rubin	1956+	Eugene, US			99
*Mary Ellen Rudin	7 December 1924	Hillsboro, US	18 March 2013	Madison, US	32
Miklós Ruszinkó	1963+	Uzhrorod, Ukraine			107
Imre Z. Ruzsa	1953+	Budapest, Hungary			92
Charles Ryavec					111
*Horst Sachs	27 March 1927	Magdeburg, Germany	25 April 2016	Ilmenau, Germany	36
Bahman Saffari					116
Eric Saias Michael Ezra Saks	1956+				125 100
Peter Salamon	1930+				120
*Tibor Šalát	13 May 1926	Vajka nad Žitavou, Slovakia	14 May 2005	Bratislava, Slovakia	34
Csaba Sándor	1972+	Budapest, Hungary	11 May 2003	Diansiava, Biovakia	109
Amites Sarkar	1973+	London, UK			109
András Sárközy	1941+	Budapest, Hungary			62
Gábor Naum Sárközy	1966+	Budapest, Hungary			108
Norbert W. Sauer					113
Jonathan Schaer					113
*Richard Herbert Schelp	21 April 1936	Kansas City, US	29 November 2010	Memphis, US	50
*Peter Scherk	2 September 1910	Berlin, Germany	6 June 1985		13
*Andrzej Schinzel	5 April 1937	Sandomierz, Poland	21 August 2021	Konstancin-Jeziorna, Poland	53
Eric Jonathan Schmutz	1958+	Wilmington, US	20.0 . 1 . 2005		102
*Franz Josef Schnitzer	14 July 1928	Leoben, Austria	20 October 2006		38
*Johanan Schönheim	28 July 1920 1963+	Timișoara, Romania	2013		27
Leonard J. Y. Schulman *Seymour Schuster	31 July 1926	Princeton, US Bronx, US	31 October 2020	Northfield, US	107 34
Allen John Carl Schwenk	1947+	Milwaukee, US	31 October 2020	Northineld, OB	77
*Sanford Leonard Segal	11 October 1937	Troy, US	7 May 2010		54
*Wladimir P. Seidel	21 December 1907	Odessa, Ukraine	12 January 1981	Detroit, US	10
*John Lewis Selfridge	17 February 1927	Ketchikan, US	31 October 2010	DeKalb, US	35
Stanley M. Selkow	J	,		,	116
*Ákos Seress	24 November 1958	Budapest, Hungary	12 February 2013	Columbus, US	102
Jeffrey Outlaw Shallit	1957+	Philadelphia, US			101
*Harold Nathaniel Shapiro	2 October 1922	Bronx, US	12 December 2013	Teaneck, US	30
*Harold Seymour Shapiro	2 April 1928	Brooklyn, US	5 March 2021	Stockholm, Sweden	37
*Ambikeshwar Sharma	2 July 1920	Rajasthan, India	22 December 2003	Edmonton, Canada	26
Saharon Shelah	1945+	Jerusalem, Israel			73
T. K. Sheng					113
*Allen Lowell Shields	7 May 1927	New York City, US	16 September 1989	Ann Arbor, US	36
*Oved Shisha	27 September 1932	Tel Aviv, Israel	17 April 1998	New York, US	46
Tarlok Nath Shorey	1945+	Patli, Punjab, India			73
		134			

Warren Eugene Shreve					127
Gabriel M. Silberman					121
*Ruth Silverman	1936 or 1937	Brooklyn, US	25 April 2011		52
Gustavus J. Simmons	1930+	West Virginia, US			42
Miklós Simonovits	1943+	Budapest, Hungary			68
Navin Madhavprasad Singhi	1949	Indore, India			86
Jozef Širáň	1954				96
*Tunekiti Sirao	1924		21 February 2017		32
Donald K. Skilton			•		118
*Brent Pendleton Smith	11 September 1949	Falfurrias, US	22 August 2006	Iliamna, US	85
Paul R. Smith		,	8	,	122
Alexander Soifer	1948+	Moscow, Russia			81
*Vera Turán Sós	11 September 1930	Budapest, Hungary	22 March 2023	Budapest, Hungary	42
*Ernst Paul Specker	11 February 1920	Zürich, Switzerland	10 December 2011	Zürich, Switzerland	25
Joel Spencer	1946+	New York, US	10 2000111001 2011	Zurion, Switzeriana	74
*Claudia Alison Spiro	4 March 1956	Altadena, US	4 January 2023		100
*William Alfred Staton, III	17 January 1948	Waco, US	13 November 2023		79
Alan H. Stein	17 January 1946	waco, os	13 November 2023		117
Sherman Kopald Stein	1926+	Minneapolis, US			35
Cameron Leigh Stewart	1949	Willineapons, OS			85
_		Coolel Coole			
Douglas Robert Stinson	1956+	Guelph, Canada	C A 2000		101
*Arthur Harold Stone	30 September 1916	London, UK	6 August 2000		22
Joseph H. Straight	25 F.1 1022	M : 1 G	10 1 1 1000	T 4 1 TIG	122
*Ernst Gabor Straus	25 February 1922	Munich, Germany	12 July 1983	Los Angeles, US	30
*Matukumalli Venkata Subbarao	4 May 1921	Yazali, India	15 February 2006	Edmonton, Canada	29
*Stephen Suen					125
Huicheng Sun					123
*János Surányi	29 May 1918	Budapest, Hungary	8 December 2006	Budapest, Hungary	24
*Hendrika Cornelia Scott Swart	1939		23 February 2016		58
József Szabados	1938+	Budapest, Hungary			56
Mihály Szalay	1947+	Budapest, Hungary			77
Mario Szegedy	1960+	Budapest, Hungary			104
*Gábor Szegő	20 January 1895	Kunhegyes, Hungary	7 August 1985	Palo Alto, US	5
László Aladár Székely	1955	Budapest, Hungary			97
*Esther Szekeres	20 February 1910	Budapest, Hungary	28 August 2005	Adelaide, Australia	12
*George Szekeres	29 May 1911	Budapest, Hungary	28 August 2005	Adelaide, Australia	15
Endre Szemerédi	1940+	Budapest, Hungary			60
*Péter Szüsz	11 November 1924	Novi Sad, Serbia	16 February 2008	Boston, US	32
*Alfred Tarski	14 January 1901	Warsaw, Poland	26 October 1983	Berkeley, US	6
Alan Dana Taylor	1947+	Melrose, US			78
Herbert Taylor					111
*Samuel James Taylor	13 December 1929	Carrickfergus, UK	22 January 2020	Pemburi, UK	40
Gérald Tenenbaum	1952+	Nancy, France			90
Prasad Venkata Tetali		Visakhapatnam, India			122
Carsten Thomassen	1948+	Grindsted, Denmark			81
Robert Tijdeman	1943+	Oostzaan, Netherlands			67
János T. Tóth	1962+	Nové Zámky, Slovakia			104
Vilmos Totik	1954+	Mosonmagyaróvár, Hungary			94
Craig Aaron Tovey	1955+	Washington, US			98
William Thomas Trotter Jr.	1943+	Pine Bluff, US			68
*Pál Turán	18 August 1910	Budapest, Hungary	26 September 1976	Budapest, Hungary	13
*Jan Turk	1011484001710	Dudupesa, Hangary	20 September 1970	Budapesa, Hangary	117
*William Thomas Tutte	14 May 1917	Newmarket, UK	2 May 2002	Waterloo, Canada	23
Zsolt Tuza	1953+	Budapest, Hungary	2 May 2002	waterioo, Canada	92
*Stanisław Marcin Ulam	13 April 1909	Lviv, Ukraine	13 May 1984	Santa Fe, US	12
*Kazimierz Urbanik	5 February 1930	Kremenec, Ukraine	29 May 2005	Wrocław, Poland	40
	5 1 Columny 1950	Memonice, Ukranit	2) Iviay 2003	Wiociaw, I Olailu	
Jeffrey David Vaaler					119
Pavel Valtr	20 May 1000	Dansham Dal-i	11 Folomo 1042	Doltimore LIC	126
*Egbert Rudolf van Kampen	28 May 1908	Berchem, Belgium	11 February 1942	Baltimore, US	11
*Jacobus Hendricus van Lint	1 September 1932	Bandung, Indonesia	28 September 2004	Eindhoven, Netherlands	46
*Arun Kumar Varma	20 October 1934	Lucknow area, India	8 December 1994		48
Robert Charles Vaughan	1945+	Dudanast Human	12 November 2002	Canta Daga IIC	72 22
*Andrew Vázsonyi	4 November 1916	Budapest, Hungary	13 November 2003	Santa Rosa, US	22

*Péter Vértesi	12 July 1941	Budapest, Hungary	16 July 2024		63
Katalin Vesztergombi	1948+	Budapest, Hungary			81
Kaipillil Vijayan	1940+	Elankunnapuzha, India			60
*István Vincze	26 February 1912	Szeged, Hungary	18 April 1999	Budapest, Hungary	16
*Bodo Volkmann	16 April 1929	Berlin, Germany	18 August 2022	Möglingen, Germany	38
Samuel Standfield Wagstaff Jr.	1945+	New Bedford, US			72
Jianfang Wang					126
William Douglas Weakley					126
Gary Lynn Weiss	1946+				75
Douglas Brent West	953+	Queens, US			93
Alan Glynne Williamson	1949+	Bramhall, UK			84
Richard Michael Wilson	1945+	Gary, US			74
Robin James Wilson	1943+	London, UK			69
Peter Mann Winkler	1946				76
*Aurel Friedrich Wintner	8 April 1903	Budapest, Hungary	15 January 1958	Baltimore, US	7
Nicholas Charles Wormald	1953				94
Frances Foong Yao	1950+				87
Abraham Zaks					122
Shmuel Zaks	1949				86
Yechezkel Zalcstein					119
*Stanisław Krystyn Zaremba	15 August 1903	Cracow, Poland	14 January 1990	Aberystwyth, UK	8
Zhenxiang Zhang	1947+	Yancheng, China			78
*Abraham Ziv	6 March 1940	Avihayil, Israel	5 March 2013	Israel	59

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- [2] The Erdős Number Project
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