The most famous Hungarian Scientists

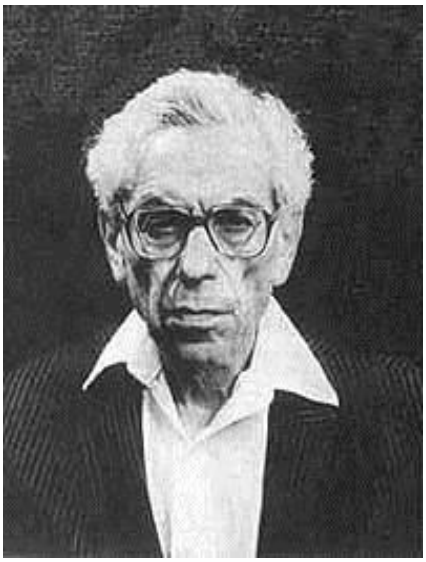
Mathematicians

Bólyai Farkas
(February 9, 1775 - November 20, 1856)

Farkas Bolyai was a Hungarian mathematician, mainly known for his work in geometry. His main interests were the foundations of geometry and the parallel axiom. His main work, the ***Tentamen*** was an attempt at a rigorous and systematic foundation of geometry, arithmetic, algebra and analysis. In this work, he gave iterative procedures to solve equations which he then proved convergent by showing them to be monotonically increasing and bounded above.

Bólyai János
(December 15, 1802 – January 27, 1860)

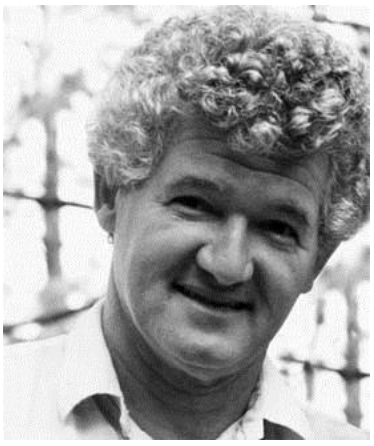
Up to the present day, he is the greatest Hungarian mathematician, the creator of absolute geometry. The genius of the Hungarian people is embodied at the highest level in János Bolyai in the field of science. Between 1820 and 1824, he developed his new non-Euclidean geometry coming from the solution of the problem of parallels. In addition to his work in the geometry, Bolyai developed a rigorous geometric concept of complex numbers as ordered pairs of real numbers. Although he never published more than the 24 pages of the Appendix, he left more than 20,000 pages of mathematical manuscripts when he died.



Erdős Pál

(26 March 1913 – 20 September 1996)

He maybe was not Einstein but pretty close, probably with worse PR or a harder to remember name. Paul Erős was a Jewish mathematician this lucky gene pool allowed him to shine early on as a child prodigy. Erdos was very funny and famously eccentric Hungarian mathematician which sums up most Hungarians in case it was needed.
Erdős was one of the most prolific publishers of papers in mathematical history, second only to Leonhard Euler; Erdős published more papers, while Euler published more pages. He wrote around 1,475 mathematical articles in his lifetime, mostly with co-authors. He strongly believed in and practiced mathematics as a social activity, having 511 different collaborators in his lifetime.



Lax Péter

(1 May 1926 in Budapest, Hungary)

Peter Lax is a mathematician working in the areas of pure and applied mathematics. He has made important contributions to integrable systems, fluid dynamics and shock waves, solitonic physics, hyperbolic conservation laws, and mathematical and scientific computing, among other fields. Lax is listed as an ISI highly cited researcher.
He is a member of the National Academy of Sciences, USA. He was awarded the National Medal of Science in 1986, the Wolf Prize in 1987 and the Abel Prize in 2005.

Neumann János

(December 28, 1903 – February 8, 1957)

János Neumann was a Hungarian American mathematician who made major contributions to a vast range of fields, including set theory, functional analysis, quantum mechanics, ergodic theory, continuous geometry, economics and game theory, computer science, numerical analysis, hydrodynamics (of explosions), and statistics, as well as many other mathematical fields. Von Neumann was a pioneer of the application of operator theory to quantum mechanics, in the development of functional analysis, a principal member of the Manhattan Project and the Institute for Advanced Study in Princeton (as one of the few originally appointed), and a key figure in the development of game theory and the concepts of cellular automata and the universal constructor. Along with Ede Teller and Stanislaw Ulam, von Neumann worked out key steps in the nuclear physics involved in thermonuclear reactions and the hydrogen bomb.

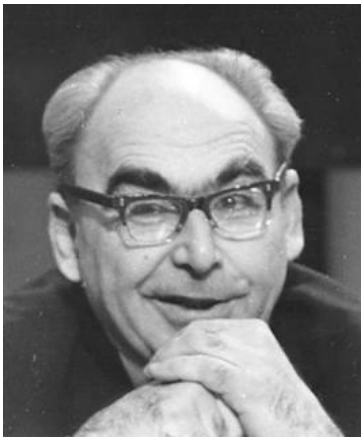
Lovász László

(March 9, 1948 in Budapest, Hungary)

László Lovász is a mathematician, best known for his work in combinatorics, for which he was awarded the Wolf Prize and the Knuth Prize in 1999.
Lovász was a professor at Yale University during the 1990s and was a collaborative member of the Microsoft Research Center until 2006. Now he has returned to Eötvös Loránd University, Budapest, where he is the director of the Mathematical Institute.

Péter Rózsa
(17 February 1905–16 February 1977)

Rózsa Péter was a Hungarian mathematician. She is best known for her work with recursion theory. She was very active in enhancement of teaching of mathematics in primary and secondary schools, as well as that of education of students in mathematics. She was greatly interested in poetry, and cinematic and dramatic arts.



Rényi Alfréd
(20 March 1921 – 1 February 1970)

Alfréd Rényi was a Hungarian mathematician who made contributions in combinatorics, graph theory, number theory but mostly in probability theory. He proved, using the large sieve, that there is a number K such that every even number is the sum of a prime number and a number that can be written as the product of at most K primes. He is also famous for having said, "If I feel unhappy, I do mathematics to become happy. If I am happy, I do mathematics to keep happy."

T. Sós Vera
(Sept. 11, 1930 in Budapest -)

Vera T. Sós is a Hungarian mathematician, specializing in number theory and combinatorics. She was a student and close collaborator of both Paul Erdős and Alfred Rényi. One of her results is the Kővári–Sós–Turán theorem concerning the maximum possible number of edges in a bipartite graph that does not contain certain complete subgraphs. Another is the following so-called friendship theorem proved with Paul Erdõs and Alfréd Rényi: if, in a finite graph, any two vertices have exactly one common neighbour, then some vertex is joined to all others. In number theory, Sós proved the three distance theorem, conjectured by Hugo Steinhaus.

Turán Pál

(18 August 1910–26 September 1976)

Paul Turán was a Hungarian mathematician who worked primarily in number theory. He had a long collaboration with fellow Hungarian mathematician Paul Erdős, lasting 46 years and resulting in 28 joint papers. Much of Turán's work in analysis was tied to his number theory work. Outside of this he proved Turán's inequalities relating the values of the Legendre polynomials for different indices. Turán's best-known result in this area is Turán's Graph Theorem, that gives an upper bound on the number of edges in a graph that does not contain the complete graph K_r as a subgraph. He invented the Turán graph, a generalization of the complete bipartite graph, to prove his theorem.

Fejér Lipót

(February 9, 1880, Pécs – October 15, 1959, Budapest)

Lipót Fejér was a Hungarian mathematician. Fejér's main work was in harmonic analysis. He worked on power series and on potential theory. Much of his work is on Fourier series and their singularities but he also contributed to approximation theory.

Physicists

Bay Zoltán

Gyulavári, 1900. July 24. - Washington, 1992. October 4.

He made significant results in analyzing discharges in nitrogen gas and demonstrating the presence of atomic nitrogen.
Zoltán Bay was appointed professor at the Department of Nuclear Physics in the Technical University of Budapest.
He measured the velocity and frequency of light by a previously unknown measurement method. His most important achievement was to finish work on development of the electron multiplier.

Békésy György

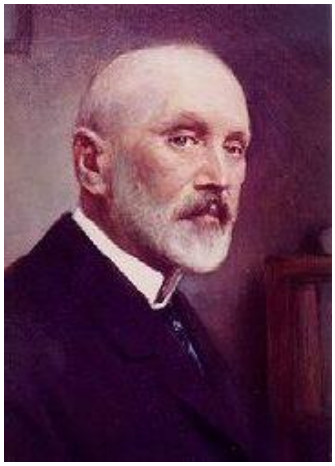
Budapest, 1899. June 3. - Honolulu, 1972. June 13.

György Békésy developed a method for dissecting the inner ear of human cadavers while leaving the cochlea partly intact.
He concluded that his observations showed how different sound wave frequencies are locally dispersed before exciting different nerve fibres that lead from the cochlea to the brain.
In 1961, he was awarded the Nobel Prize in Physiology or Medicine for his research.

Bródy Imre

Gyula, 1891. December 23. - Mühldorf, 1944. December 20.

Bródy in 1930 filled lamps with krypton gas in lieu of argon (krypton electric bulb). Since the new gas was expensive, he developed a process with his colleagues to obtain krypton from air. The invention was the most economic bulb in the age, a real sensation at the time, which for decades was one of the most successful export products of Hungary.



Eötvös Loránd

Buda, 1848. July 27. - Budapest, 1919. April 8.

He is remembered today largely for his work on gravitation and surface tension. The Torsion or Eötvös balance, designed by Hungarian Baron Loránd Eötvös, is a sensitive instrument for measuring the density of underlying rock strata. The device measures not only the direction of force of gravity, but the change in the force of gravity's extent in horizontal plane. It determines the distribution of masses in the Earth's crust. The Eötvös torsion balance, an important instrument of geodesy and geophysics throughout the whole world, studies the Earth's physical properties. It is used for mine exploration, and also in the search for minerals, such as oil, coal and ores.

Farkas Gyula

Sárosd, 1847. March 28. - Pestszentlőrinc, 1930. December 27.

The Hungarian Academy of Science elected him corresponding member May 6, 1898.
His principal writings are embodied in the reports of the Academy of Science of Paris:

- the "*Archiv der Mathematik und Physik*"
- the "*Journal des Mathematiques*"

Fényes Imre

Kötegyán, 1917. July 29. - Budapest, 1977. November 13.

Imre Fényes was studying the quantum-theory, quantum physics, microphysics, thermostatics and he was the first physicist who tried to explain the problems exactingly because in this way we can solve the problems more easily.

Gábor Dénes

Budapest, 1900. June 5. – London, 1979. February 9.

Gábor Dénes was a Hungarian electrical engineer and inventor, most notable for inventing holography, for which he later received the Nobel Prize in Physics. At the start of his career, he analyzed the properties of high voltage electric transmission lines by using cathode-beam oscillographs, which led to his interest in electron optics. Studying the fundamental processes of the oscillograph, Gabor was led to other electron-beam devices such as electron microscopes and TV tubes. He eventually wrote his Ph.D. thesis concerning the cathode ray tube in 1927, and worked on plasma lamps. Gabor's research focused on electron inputs and outputs, which led him to the invention of re-holography. The basic idea was that for perfect optical imaging, the total of all the information has to be used; not only the amplitude, as in usual optical imaging, but also the phase.

Hell Miksa

Selmecbánya, 1720. May 15. - Bécs, 1792. April 14.

He was a Hungarian astronomer and an ordained Jesuit priest from the Kingdom of Hungary. The crater Hell on the Moon is named after him.
Miksa Hell had an interest in magnet therapy (the alleged healing power of magnets).

Kármán Tódor

Budapest, 1881. May 11. - Aachen, 1963. May 7.

He was a Hungarian engineer and physicist who was active primarily in the fields of aeronautics and astronautics. He is responsible for many key advances in aerodynamics, notably his work on supersonic and hypersonic airflow characterization.

Jedlik Ányos István

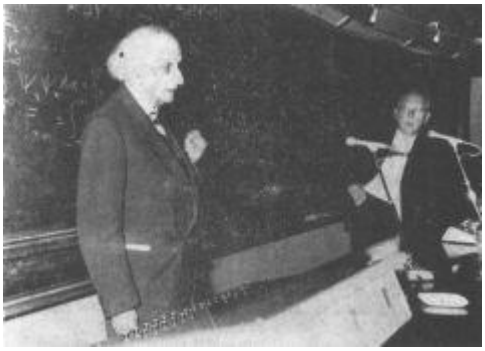
Szimő, 1800. January 11. - Győr, 1895. December 13.

Through his textbook he is regarded as one of the establishers of Hungarian vocabulary in physics.
Ányos Jedlik's best known invention is the principle of dynamo self-excitation. In 1827, Jedlik started experimenting with electromagnetic rotating devices which he called electromagnetic self-rotors.
From 1858 he was a corresponding member of the Hungarian Academy of Sciences and from 1873 an honorary member.
He preceded his contemporaries in his scientific work, but he did not speak about his most important invention, his prototype dynamo, until 1856; it was not until 1861 that he mentioned it in writing in a list of inventory of the university.

Kempelen Farkas

Pozsony, 1734. January 23. - Bécs, 1804. March 26.

He studied law and philosophy in his birthplace, and then in Győr, in Vienna and in later Rome, but mathematics and physics also interested him. He was most famous for his construction of The Turk, a chess-playing automaton later revealed to be a hoax.
He also created a manually operated speaking machine, which was a genuine pioneering step in experimental phonetics.



Lánczos Kornél

Székesfehérvár, 1893. February 2. - Budapest, 1974. June 25.

Lanczos' Ph.D. thesis (1921) was on relativity theory. In 1924 he discovered an exact solution of the Einstein field equation which represents a cylindrically symmetric rigidly rotating configuration of dust particles. It is one of the simplest known exact solutions in general relativity and regarded as an important example, in part because it exhibits closed time like curves.
Lanczos served as assistant to Albert Einstein during the period 1928–29.

Lénárd Fülöp

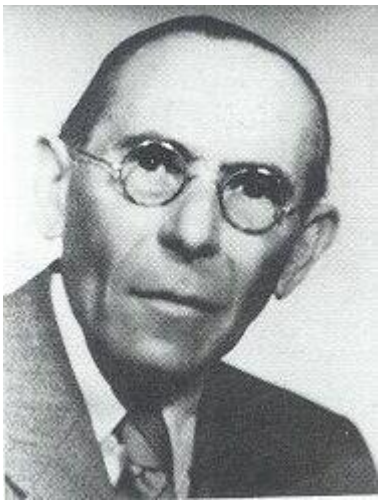
Pozsony, 1862. June 7. – Messelhausen, 1947. May 20**.**

He was a Hungarian physicist and the winner of the Nobel Prize for Physics in 1905 for his research on cathode rays and the discovery of many of their properties. As a physicist, Lenard's major contributions were in the study of cathode rays, which he began in 1888. Prior to his work, cathode rays were produced in primitive tubes which are partially evacuated glass tubes that have metallic electrodes in them, across which a high voltage can be placed. Cathode rays were difficult to study because they were inside sealed glass tubes, difficult to access, and because the rays were in the presence of air molecules. Lenard overcame these problems by devising a method of making small metallic windows in the glass that were thick enough to be able to withstand the pressure differences, but thin enough to allow passage of the rays.

Segner János András

Pozsony, 1704. October 9. - Halle, 1777. October 5.

In 1735 Segner became the first professor of mathematics, a position created for him, at the University of Göttingen. In 1755 he became a professor at Halle, where he established an observatory.
One of the best-known scientists of his age, Segner was a member of the academies of Berlin, London, and Saint Petersburg.
Segner was the first mathematician to demonstrate the sign convention of Descartes. The lunar crater Segner is named after him, as is asteroid 28878 Segner.



Selényi Pál

Dunaadony, 1884. November 17. - Budapest, 1954. March 21.

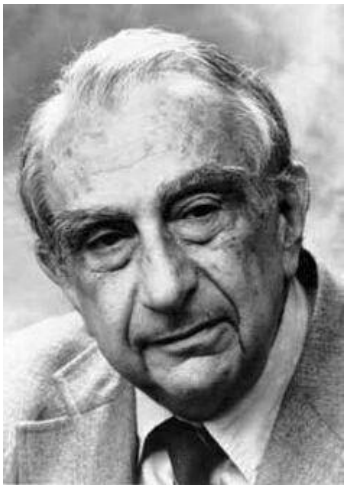
He invested in a big effort to develop xerography. That may be the reason why Selenyi was known as the "father of xerography" by some people. Selényi was engaged in studying the nature of light. One well-known result of this period is Selényi's wide-angle interference experiment whose foundations go back to the discovery of the photoeffect (photo-electric effect), by Albert Einstein, and Hertz's experiments on the reflection of radio waves.

Szilárd Leó

Budapest, 1898. February 11. - La Jolla, 1964. May 30.

Leó Szilárd was a Hungarian physicist who conceived the nuclear chain reaction in 1933, patented the idea of a nuclear reactor with Enrico Fermi, and in late 1939 wrote the letter for Albert Einstein's signature that resulted in the Manhattan Project, and the atomic bomb. He worked on numerous technical inventions:
1928 German patent application on the linear accelerator,
1929 German patent application on the cyclotron,
since 1926 work with Einstein on the construction of a refrigerator without moving parts.

Teller Ede



Budapest, 1908. January 15. - Stanford, 2003. September 9.

Edward Teller was a Hungarian theoretical physicist, known colloquially as "the father of the hydrogen bomb," even though he did not care for the title. Teller emigrated to the United States in the 1930s, and was an early member of the Manhattan Project charged with developing the first atomic bombs. During this time he made a serious push to develop the first fusion-based weapons as well, but these were deferred until after World War II. Teller became ostracized from much of the scientific community. He continued to find support from the U.S. government and military research establishment, particularly for his advocacy for nuclear energy development, a strong nuclear arsenal, and a vigorous nuclear testing program.

Wigner Jenő

Budapest, 1902. November 17. - Princeton, 1995. January 1.

Jenő Wigner was a Hungarian physicist and mathematician. He received the Nobel Prize in Physics in 1963 "for his contributions to the theory of the atomic nucleus and the elementary particles, particularly through the discovery and application of fundamental symmetry principles". Some contemporaries referred to Wigner as *the Silent Genius* and some even considered him the intellectual equal to Albert Einstein, though without his prominence. Wigner is important for having laid the foundation for the theory of symmetries in quantum mechanics as well as for his research into the structure of the atomic nucleus, and for his several mathematical theorems.

Chemists

Bruckner Győző

(Késmárk, Today Slovakia, November 1, 1900 - Budapest, March 8, 1980.)

He explored organic chemistry and created a shop which was a chemical and scientific shop. He won two prices of Kossuth. Once in 1949 and then in 1955. He discovered a lot in diensintesy so in 1947 a Sweden chemical company gave him the Scheele-medal.

Joó Ferenc

(Tótkomlós, January 6, 1949. -)

He got Széchenyi – Price of physics – chemistry. He taught at a university. He was a member of the Hungarian Scientific Academy. He explored the reactionkinetics, homogenous and perodtransfer catalyse. He was the assistant director of the education at the university in Debrecen from 2004 to 2007.

In 1980 he won a price of Buzágh Aladár. Then in 1997 he won the price of Apáczai Csere János and then he got a price of Széchenyi.

Kiss Árpád

(Sárospatak, September 16, 1889. - Szeged, November 10, 1968)

A Kossuth price was given to him, he was a chemist, botanist, the significance of his physical and chemical researches was outstanding expanded on several of the areas of the reaction kinetics, electrochemistry and spectroscopy.

Kőrös Endre

(Győr, September 18, 1927 - Budapest, February 18., 2002.)

He is a Széchenyi prize owner chemist, doctor of the chemical science, a regular member of the Hungarian Scientific Academy. A momentous person of the analytical chemistry, in the 20st century, his main project was the analytic of the complex compounds and the reaction kinetics examining of the chemical process' length in time.

Lengyel Béla

(Kőrösladány, January 4, 1844 -Buapest, March 11, 1913.)

He was a Chemist, member of the Scientific Academy, professor. His most successful field was analytical and inorganic chemistry. He discovered carbon-subsulfid (C_3S_2) and he produced pure Calcium first time.

Irinyi János

(May 17, 1817 – December 17, 1895);

He was the inventor of the noiseless and non-explosive match. He achieved this by mixing the phosphorus with lead dioxide instead of the potassium chlorate used previously.
He was one of the most famous Hungarian chemists.
Irinyi also took part in the Hungarian Revolution of 1848.

Oláh György

(May 22,1927,Budapest -)

American chemist with Hungarian ancestry. He got a chemistry Nobel Prize in 1994 for his work with the carbon cations. The direct methanol combustible cell inducing the big interest offers a solution to the problem of the global warming elaborating.

Polányi János

(January 23, 1929, Berlin -)

He was born as Hungarian Jewish parents' child in Berlin. He was awarded chemistry Nobel-Prize for his related discoveries with the dynamics of the elemental chemistry processes in 1986.