



Paul Erdős 1913–1996

Paul Erdős, one of the greatest mathematicians of all time and the Honorary Editor-in-Chief of our journal, died of heart attack on September 20, 1996 in Warsaw, Poland.

Erdős was born in Budapest, Hungary on March 26, 1913. He obtained his Ph. D. from the Péter Pázmány University in Budapest in 1934. Subsequently he spent four years at Manchester on a fellowship of the Royal Society. In 1938, at the advent of World War 2, he moved to the U. S. where he spent 10 years at Princeton and a number of other places. He received his first and last secure academic job in 1952 at Notre Dame University but at the height of McCarthyism in 1954 the US denied his reentry permit and Erdős could not return to the US for nine years. Never again did he settle in one place for more than a few weeks; he was constantly on the move from conference to conference and from university to university around the globe.

Erdős received numerous honors and awards, including the Wolf Prize in 1984. However, these awards cannot convey the true magnitude of Erdős's impact on today's mathematics. His work has been fundamental in diverse areas of mathematics, including number theory, combinatorics, set theory, approximation theory. A combinatorial way of thinking was one of the trademarks of his mathematics. Erdős was a chief architect of the fields of combinatorial number theory, combinatorial geometry, and combinatorial set theory (transfinite combinatorics).

Within combinatorics proper, Erdős created entire new branches, including Ramsey theory, extremal graph theory, the theory of extremal set systems, the theory of random graphs. The probabilistic method developed by Erdős has become one of the most powerful tools in discrete mathematics.

More than anyone else, Erdős viewed mathematics as a community venture. He communicated new results, conjectures, and ideas freely and generously all over the world, and collaborated with more mathematicians than anyone else.

Erdős was the unchallenged champion of posing new problems; he prized a good conjecture as much as a good result. Generations of young mathematicians grew up working on his problems.

While he devoted his life entirely to mathematics, he was a person of broad interests, and a warm and caring friend to many of us. His work, his conjectures, and his liberal style of doing mathematics will stay with us for a long time.

In spite of warning signs, the world of mathematics was not prepared for Erdős's passing. The shock and pain many of us felt is reflected in the personal reaction attached below.

COMBINATORICA will dedicate several subsequent issues to the memory of Paul Erdős*.

Editors

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We stare in disbelief at the computer screen that brings the news.

The grief is numbing. Yesterday's jokes ring hollow. The work remains unfinished. His work, yours, and mine. The question you talked about with him when you last saw him at Balatonlelle or Kalamazoo, his frail figure seated in a conference lobby, his mind available to anyone interested in discussing a mathematical problem.

His last struggle with the S. F. began in the solitude of a Warsaw hotel room. A workshop at the Banach Center drawing to a close, Paul was preparing to move on to the next one, in Lithuania. He lectured on graph theory in Warsaw; the subject would be number theory on his next stop.

The friends in Vilnius waited for him in vain. No more mesmerizing "Problems and results" lectures, no more wry jokes about old age and stupidity.

He left empires for us to explore, and we must now continue without his guidance.

May he have a happy journey through the pages of the Book, in the company of those he most wanted to meet: Euclid, Leibniz, Euler

László Babai
Montreal, September 22, 1996

* A recent biography entitled "In and Out of Hungary: Paul Erdős, his Friends, and Times," by L. Babai, appears in *Combinatorics: Paul Erdős is Eighty* (Volume 2), J. Bolyai Mathematical Society, Budapest 1996, pp. 7–95. The volume is available in Europe from the Bolyai Society and outside Europe from the American Mathematical Society