S. M. Ulam

Born April 13, 1909, Lwów, Poland; died May 13, 1984, Santa Fe, N.M.; colleague of John von Neumann and collaborator in the development of innovative programs for early computers and the solution of problems related to atomic energy.

Education: MA and DSc, mathematics, Polytechnic Institute, Lwów, 1933; subsequent postdoctoral studies in Vienna, Zurich, and Cambridge.

Professional Experience: Institute for Advanced Studies, Princeton University, 1935; junior fellow, Harvard Society of Fellows, lecturer, mathematics, Harvard University, 1936-1940; assistant professor, University of Wisconsin, 1941-1943; Los Alamos Scientific Laboratory: staff member, 1944-1967, consultant, 1967-1984; professor and chairman, Department of Mathematics, University of Colorado, Boulder, 1965-1977; visiting professor, MIT, 1972; visiting professor, University of Paris, 1972; graduate research professor, University of Florida, Gainesville, 1974-1984; professor, biomathematics, University of Colorado Medical School, Denver, 1979-1984; visiting professor, University of California, Davis, 1982.

Honors and Awards: member, American Academy of Arts and Sciences; member, National Academy of Sciences; DSc (Hon.), University of New Mexico, 1965; DSc (Hon.), University of Wisconsin, 1978; DSc (Hon.), University of Pittsburgh, 1978; Polish Millenium Award, Jurzykowski Foundation; Polish Heritage Award.

Goldstine (1974, p. 295) has attributed the concept of the Monte Carlo method to Ulam: "One of the most important projects [at IAS] was the development of the now well-known Monte Carlo Method, which was apparently first suggested by Ulam to von Neumann."

QUOTATION

Regarding his arrival at Los Alamos in 1943: 'When I arrived ... the blackboard was filled with very complicated equations.... This sight scared me out of my wits; looking at these I felt that I should never be able to contribute even an epsilon to the solution of any of them." (Ulam 1980)

BIBLIOGRAPHY

Biographical

Goldstein, Herman H., *The Computer from Pascal to von Neumann,* Princeton Univ. Press, Princeton, NJ., 1972, p. 295.

Ulam, S.M., *Adventures of a Mathematician,* Charles Scribner's Sons, New York, 1976.

Ulam, S.M., "Von Neumann: The Interaction of Mathematics and Computing," in Metropolis, N., J. Howlett, and Gian-Carlo Rota, *A History of Computing in the Twentieth Century,* Academic Press, New York, 1980, pp. 93-99.

Significant Contributions

Bednarek, A.R., and Francoise Ulam, eds., *Analogies between Analogies: The Mathematical Reports of S.M. Ulam and His Los Alamos Collaborators,* Univ. of California Press, Berkeley, 1990.

UPDATES

Portrait added (MRW, 2013)