

Obituary



Solomon Marcus, 1925–2016

The renowned Romanian mathematician and theoretical computer scientist, one of the initiators of mathematical linguistics and mathematical poetics, passed away in Bucharest on March 17, 2016. “Solomon Marcus’ Heritage” Memorial Symposium was organised as part of the [DCFS2016 Conference](#) on 5 July 2016.

Solomon Marcus was born on March 1, 1925 in the city of Bacău, Romania, the youngest of the eight children of Sima and Alter Marcus.

In 1944 he graduated from Ferdinand I High School in Bacău. Marcus high school results were rather fluctuant: he had to repeat one year, ironically, because he failed to fully recite a poem, but was classified first at “Bacalaureat” (the Romanian school-leaving exam) in Moldavia county. “Ironically”, because literature, especially poetry and theatre, have been his lasting passions; till the very end of his life he was able to recite many poems, in Romanian, French and German.

His exposé on non-Euclidean geometries in 1944 stimulated his life-long interest for mathematics. He completed his studies in mathematics at the University of Bucharest: BSc (with Merit) in 1949, PhD in 1956 (with the Thesis

Monotonous Functions of Two Variables under the supervision of [M. Nicolescu](#)) and State Doctor in Sciences in 1968.

Marcus started his academic career at the University of Bucharest – an institution he was affiliated with for more than 70 years – as a lecturer in 1955; he continued as professor in 1966 and emeritus professor from 1991.

Marcus has important contributions to pure mathematics. In the first ten years of his research career he published almost 100 papers in mathematical analysis, set theory, measure and integration theory and topology, including the joint paper with P. Erdős, *Sur la décomposition de l'espace Euclidien en ensembles homogènes*, *Acta Mathematica Academiae Scientiarum Hungaricae* vol. 8, nr. 3–4 (1957), 443–452.

From 1964 he published many papers and books in theoretical computer science, linguistics, poetics and theory of literature, semiotics, cultural anthropology, biology, history and philosophy of science, and education. In these fields he published more than 45 books in Romanian, English, French, German, Italian, Spanish, Russian, Greek, Hungarian, Czech, Serbo-Croatian, and more than 300 research articles. His book *Grammars and Finite Automata*, Ed. Academiei, Bucharest, 1964 (in Romanian) is arguably the first monograph devoted to regular languages. He authored three pioneering books in mathematical linguistics and poetics: *Introduction mathématique à la linguistique structurale*, Dunod, Paris, 1967, *Algebraic Linguistics; Analytical Models*, Academic Press, New York, 1967, and *Mathematische Poetik*, Ed. Academiei & Athenäum Verlag, 1973. The book S. Marcus, *Words and Languages Everywhere*, Polimetrica, Milano, 2007, includes a collection of his papers in language theories.

Writing was a passion for Marcus. We have to add to the above impressive list more than a hundred hand-written (mostly mathematical) notebooks and hundreds of articles and interviews, scattered in various magazines and newspapers, on a variety of topics, from science, art and education to teaching, philosophy and sport.

He is cited by more than a thousand authors, including mathematicians, computer scientists, linguists, literary researchers, semioticians, anthropologists and philosophers. Complementary, but still partial, information can be found on his websites at the [Institute of Mathematics](#) of the Romanian Academy and the [University of Bucharest](#).

Marcus is featured in the books *People and Ideas in Theoretical Computer Science*, Springer, Singapore, 1998 and *The Human Face of Computing*, Imperial College Press, London, 2015 (edited by C. Calude). The 1500-page book dedicated to his 85th birthday, *Meetings with Solomon Marcus*, Spandugino House, Bucharest, 2010 (edited by L. Spandonide and G. Păun) includes his autobiography and articles by several hundred people. His 90th birthday celebrations at the University of Bucharest and Romanian Academy have been national academic

events in 2015.

Marcus was elected a member of the Romanian Academy in 2001; he received many prizes including the *Royal Decoration of Nihil Sine Deo* (2011) and the *Star of Romania* in the rank of officer, awarded by the Romanian President (2015).

He was never bored, he never felt the need of a proper vacation: in our last telephonic conversation, when he was in hospital, his strongest desire was to continue to work. Unfortunately, he left behind many unfinished projects.

In his long career he inspired, stimulated, encouraged and advised many students, undergraduate and graduate, in Romania and abroad, to do research; his 16 PhD students form just a part of this group. I was extremely privileged to be his undergraduate student (real analysis in 1972–3 and mathematical linguistics in 1974–5) and graduate student (PhD, 1976), collaborator and friend. He was for me an inspiration and a role model. Nobody else had more influence on my scientific career than Professor Marcus. In the last 24 years we have been separated by more than 18,000 Km, but this distance didn't alter our close relation and collaboration.

He will be sadly missed and never forgotten.

Cristian S. Calude
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