

Acad. Solomon Marcus at 85 Years (A Selective Bio-bibliography)

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Professor Solomon Marcus is one of the *seniors* of the Romanian science and culture, with a tremendously diverse and intensive activity, with numerous, fundamental, and many times pioneering contributions to mathematics, mathematical linguistics, formal language theory, semiotics, education, and to other areas, with an impressive internal and international impact and recognition, since several decades very actively involved in the scientific and cultural life – and still as active as ever at his age. That is why the short presentation below is by no means complete, it is only a way to pay our homage to him at his 85th birthday anniversary.

We are honored and we thank to professor Solomon Marcus for having the kindness to publish, in the first issue of this journal, an article occasioned by the Moisil centenary¹.

1 Biography and General Data

Born at March 1, 1925, in Bacău, Romania. Elementary school and high school in Bacău, classified the first at the school-leaving examination (“bacalaureat”), in 1944. Faculty of Science, Mathematics, University of Bucharest, 1945-1949. Assistant professor since 1950, lecturer since 1955, associate professor since 1964, and professor since 1966. Professor Emeritus since 1991, when he retired. All positions held in the Faculty of Mathematics, University of Bucharest. PhD in Mathematics in 1956 (with the thesis about “Monotonous functions of two variables”), State Doctor in Sciences in 1968, both at the University of Bucharest. Corresponding Member of Romanian Academy since April 1993, and Full Member of the Romanian Academy (Academician) since December 2001.

¹Grigore C. Moisil: A Life Becoming a Myth, International Journal of Computers, Communications & Control, 1(1),73-79, 2006

Research and teaching in the fields of mathematical analysis, theoretical computer science, measure theory, general topology, linguistics, history and philosophy of mathematics, poetics, semiotics, applications of mathematics to natural and social sciences.

Has published over 50 books, as single author or in collaboration, and over 400 research articles, as well as several hundreds of articles on various cultural topics. Has edited over 40 collective volumes.

More than 250 invited lectures at various universities from Europe, Americas, and Asia.

In his papers and books has solved many open problems in mathematical analysis and has formulated a still larger number of problems and research topics, has introduced new ideas, notions and models, which were addressed and continued by a large number of researchers. Just an example: the contextual grammars he has introduced in 1967-68 are now called *Marcus contextual grammars* and were subject of many papers and PhD theses, as well as of two monographs.

Many students and collaborators, a really "contagious" professor and researcher.

Cited and followed by thousand of authors, from Romania and abroad.

His books were reviewed and commented by many personalities, among whom, we mention a few: Emanuel Vasiliu, Mike Holcombe, Sheng Yu, Yehosua Bar-Hillel, Maurice Gross, L. Nebesky, Michel Janot, I.I. Revzin, Ferenc Kiefer, H.P. Edmundson, Ju.A. Sreider, Jacob L. Mey, Carlo Tagliavini, Gr.C. Moisil, Matei Călinescu, Nicolae Manolescu, Sorin Stati, K. Sgallova, P. Sgall, Gabriela Melinescu, Jean-Marie Klinkenberg, Virgil Nemoianu, Adrian Marino, Miron Nicolescu, Alexandru Ivasiuc, Wladimir Kryszinski, Mircea Mihăieș, Șerban Cioculescu, Eugen Simion, Constantin Negoită, Tudor Octavian, Dinu Flamând, Stelian Tănase, Alin Teodorescu, Mircea Scarlat, Smaranda Vultur, Cristian Calude, Gheorghe Păun, Tudorel Urian, Paul Cernat, Irina Mavrodin, Rosa del Conte, Jean-Pierre Descles, Umberto Eco, Marius Iosifescu, Roman Jakobson, Gheorghe Mihoc, Octav Onicescu, Cesare Segre, Gheorghe Tomozei, Iorgu Iordan, Constanța Buzea, Cornel Ungureanu, Bogdan Suceavă, Basarab Nicolescu, Alexandru T. Balaban, Mihai Zamfir, and many others.

Member of the editorial board of over three dozens of professional journals.

Among the numerous honors received, we recall: Doctor Honoris Causa of the Universities of Bacău, Constanța, and Craiova. Vice President of the International Association for Semiotic Studies (1989-1999). Honorary President of the Balkan Semiotic Society (since 2001). Member of the Executive Committee of the International Association for Semiotic Studies. Honorary Member of the International Association for Visual Semiotics. Honorary Member of the Toronto Semiotic Circle, of Como (Italy) Semiotic Circle and of the Hungarian Semiotic Society. Honorary member of the Romanian Mathematical Society. Permanent Invited Professor, Sao Paulo Catholic University. Member of the Romanian National Mathematical Committee. Member of the leading Council of the Romanian Linguistic Society. Member of the Romanian Union of Writers and Member (1990-1995) of the leading Council of this Union. Vice-president of the Romanian Semiotic Society. Member of the Romanian Committee for the Club of Rome. Honorary member of the Society Eratosthene, Switzerland.

He has also received many prizes, in Romania and abroad.

With various occasions, special issue of journals and collective volumes were devoted to him. Here are some of them: *The International Journal of Computer Mathematics* (Great Britain) and *Revue Roumaine de Mathématiques Pures et Appliquées* devoted some of their issues in 1985 to his 60th anniversary, while two collective volumes were dedicated to his 70th anniversary, in 1995, *Mathematical Aspects of Natural and Formal Languages*, World Scientific, Singapore, 1994, and *Mathematical Linguistics and Related Topics*, Ed. Academiei, Bucharest, 1995. In the year 2000, two volumes were dedicated to his 75th anniversary: *Finite vs Infinite. An Eternal Dilemma*, Springer, London, and *Recent Topics in Mathematical and Computational Linguistics*, Ed. Academiei, Bucharest. In the year 2005, volume 64, numbers 1-4 of *Fundamenta Informaticae* were published as a "Special issue in Honor of the 80th Birthday of Professor Solomon Marcus", with papers by 70 authors from 16 countries.

2 Books, Authored or Co-authored

1. *Lingvistica matematică. Modele matematice în lingvistică*. Ed. Didactică și Pedagogică. București, 1963.
2. *Gramatici și automate finite*. Ed. Academiei, București, 1964.
3. *Analiza matematică*. Vol. I. Ed. Didactică și Pedagogică, București, 1st edition 1962, 2nd edition 1963, 3rd edition 1966, 4th edition 1971, 5th edition 1980 (in collab. with M. Nicolescu and N. Dinculeanu).
4. *Lingvistica matematică* (2nd edition, revised and completed with 4 new chapters). Ed. Didactică și Pedagogică, București, 1966.
5. *Introducere în lingvistica matematică*. Ed. Științifică, București, 1966 (in collab. with E. Nicolau and S. Stati)
6. *Noțiuni de analiză matematică. Originea, evoluția și semnificația lor*. Ed. Științifică, București, 1967.
7. *Limbaș, logică, filozofie*. Ed. Științifică, București, 1968 (in collab. with Al. Boboc, Gh. Enescu, C. Popa, and S. Stati).
8. *Analiza matematică*. Vol. II. Ed. Didactică și Pedagogică, București, 1st edition 1966, 2nd edition 1971, 3rd edition 1980 (in collab. with M. Nicolescu and N. Dinculeanu).
9. *Introduction mathématique a la linguistique structurale*. Dunod, Paris, 1967.
10. *Algebraic Linguistics; Analytical Models*. Academic Press, New York, 1967.
11. *Poetica matematică*. Ed. Academiei, București, 1970.
12. *Teoretiko-mnozestvennye modeli jazykov*. Ed. Nauka, Moscova, 1970 (translation of the first five chapters of book 10 and of the last chapter of book 9).
13. *Algebraické modely jazyka*. Ed. Academia, Prague, 1969 (translation in Czech of book 4, and of a part of book 2).
14. *Introduzione alla linguistica matematica*. Casa editrice Riccardo Patron, Bologna, 1970 (revised and completed translation of book 5; in collab. with E. Nicolau and S. Stati).
15. *Mathematische Poetik*. Ed. Academiei, București – Athenaum-Verlag, Frankfurt am Main, 1973 (revised and completed translation of book 11).
16. *Matematicka Poetika*. Ed. Nolit, Belgrad, 1974 (revised and completed Serbo-Croatian translation of book 11).
17. *Din gândirea matematică românească*. Ed. Științifică și Enciclopedică, București, 1975.
18. *Semiotica folclorului. Abordare lingvistico-matematică*. Ed. Academiei, București, 1975 (co-author).
19. *Matematicka analyza ctenu podruhe*. Ed. Academia, Prague, 1976 (revised and completed Czech translation of book 6).
20. *A nyelvi szerep matematikaja*. Ed. Gondolat, Budapest, 1977.
21. *Metode distribuționale algebrice în lingvistică*. Ed. Academiei, București, 1977 (coauthor).
22. *La semiotique formelle du folklore. Approche linguistico-mathématique*. Ed. Klincksieck, Paris – Ed. Academiei, București, 1978 (revised and completed translation of book 18; co-author).
23. *Introducción en la linguística matemática*. Ed. Teide. Barcelona, 1978 (revised and completed Spanish translation of book 5).
24. *Semne despre semne*. Ed. Științifică și Enciclopedică, București, 1979.

25. *Contextual ambiguities in natural & artificial languages*. Vol. 1, *Communication and Cognition*, Ghent, Belgium, 1981 (revised and completed translation of a part of book 21).
26. *Snmeia gia ta snmeia*. Ed. Pneumatikos, Atena, 1981 (Greek translation of book 24).
27. *Metode matematice în problematica dezvoltării*. Ed. Academiei, București, 1982 (co-author).
28. *Gândirea algoritmică*. Ed. Tehnică, București, 1982.
29. *Semiotica matematică a artelor vizuale*. Ed. Științifică și Enciclopedică, București, 1982 (coordinator and co-author).
30. *Simion Stoilow*. Ed. Științifică și Enciclopedică, București, 1983 (in collab. with Cabiria Andreian Cazacu).
31. *Paradoxul*. Ed. Albatros, București, 1984.
32. *Timpul*. Ed. Albatros, București, 1985.
33. *Artă și știință*. Ed. Eminescu, București, 1986.
34. *Analiza matematică*. Vol. II, Univ. București, 1986 (co-author).
35. *To Paradocso*. Ed. Pneumatikos, Atena, 1986 (Greek version of book 31).
36. *Șocul matematicii*. Ed. Albatros, București, 1987.
37. *Moduri de gândire*. Colecția "Știința pentru toți", Ed. Științifică și Enciclopedică, București, 1987.
38. *Provocarea științei*. Seria "Idei contemporane", Ed. Politică, București, 1988.
39. *Invenție și descoperire*. Ed. Cartea Românească, 1989.
40. *Analiza matematică. Materiale pentru perfecționarea profesorilor de liceu III*. Universitatea din București, Facultatea de Matematică, București, 1989 (co-author).
41. *Dicționar de Analiză Matematică*. Ed. Științifică și Enciclopedică, București, 1989 (co-author).
42. *Controverse în știință și inginerie*. Ed. Tehnică, București, 1991.
43. *Language, Logic, Cognition and Communication; A Semiotic, Computational and Historical Approach*. Report 9/96. Grup de Recerca en Linguistica Matematica i Enginyeria del Llenguatge. Reports Universitat Rovira i Virgili, Tarragona, Spain, 1996.
44. *Matematica, manual pentru clasa a IX-a, licee teoretice specializarea filologie* (in colab. with Mihaela Singer). Ed. Sigma, București, 1999; 2nd edition, 2000.
45. *Matematica, manual pentru clasa a XII-a* (in colab. with P. Alexandrescu, M. Radulescu, S. Radulescu). Ed. Paralela 45, București – Pitești, 2002.
46. *Jocul ca libertate*. Ed. Scripta (Colecția ludică), București, 2003.
47. *Mathematics in Romania*. CUB Press 22, Baia Mare, 2004.
48. *Intâlnirea extremelor. Scriitori în orizontul științei*. Ed. Paralela 45, București – Pitești, 2005.
49. *Paradigme universale*. Ed. Paralela 45, Pitești – București, 2005.
50. *Paradigme universale II. Pornind de la un zâmbet*. Ed. Paralela 45, Pitești – București, 2006.
51. *Paradigme universale III. Jocul*. Ed. Paralela 45, Pitești – București, 2007.
52. *Words and Languages Everywhere*. Polimetrica Academic Publisher, Milano, 2007.
53. *Solomon Marcus (protagonist): Educația în spectacol*. Spandugino Publ. House., București, 2010.