

*IN MEMORIAM*



**ADELINA GEORGESCU  
(1942-2010)**

**The founder and first President of the  
Romanian Society of Applied and Industrial Mathematics – ROMAI  
passed away on May 1<sup>st</sup>, 2010, at the age of 68**



Adelina Georgescu was born in Drobeta Turnu-Severin on April 25, 1942 in a family of intellectuals (her mother, Maria Berindei, was a teacher of history and geography and her father, Constantin Georgescu, was a lawyer). She finished the high school with excellent results and in 1960 she began the university studies, at the Faculty of Mathematics and Mechanics of the University of Bucharest.

In 1965 she successfully defended her graduation thesis of the bachelor degree. After graduation she started to work at the Institute of Fluid Mechanics and Aerospace Constructions of the Romanian Academy.

The theory of hydrodynamic stability was her first domain of research. This theory is mainly known to engineers, meteorologists, hydrologists, physicists, due to its relevance for practical applications.

In 1970, Adelina Georgescu defended at the Institute of Mathematics of the Romanian Academy, her PhD thesis on linear hydrodynamic stability under the supervision of the Academician Caius Iacob, one of the leaders of the Romanian School of Mechanics.

In 1976 she published the first Romanian monograph on hydrodynamic stability. In 1985 Kluwer issued its enlarged and improved English version, being a bridge between the classical theory, addressed mainly to engineers, and the pure mathematical one, belonging to applied functional analysis. This monograph was cited by many authors, since it was widely used as an university textbook and by researchers, being a pioneer work in this field.

After 1985, due to her interest in the still unsolved problem of the origin of turbulence – a topic related to the loss of stability – the spectrum of scientific work of Adelina Georgescu became very broad, including closely interrelated areas as: the stability and the multiparametric bifurcation in fluid dynamics, spectral problems for ODE in the hydrodynamic stability theory, dynamical systems associated with fluid flows, the transition to turbulence as a deterministic chaos, fractals, models of asymptotic approximation in fluid dynamics, synergetics, nonlinear dynamics.

Besides her research work, she devoted a lot of time to teaching. Since 1974 at the Faculty of Mathematics of Bucharest University she led courses devoted to the theory of Navier-Stokes equations, dynamics of rivers, boundary layer theory, turbulence in fluids, bifurcation theory (the first such course in Romania), analytical mechanics, mechanics of continua, nonlinear dynamics, synergetics.

During the communist regime, in spite of her non-proletarian origin rising many obstacles to her career, she did not join the communist party, giving up the opportunities of quick advancement her adhesion would have provided.

In 1990, as soon as the conditions following the fall of the communism allowed the affirmation of personal initiative in science, Adelina Georgescu became the initiator of the project of a new research institute – the Institute of Applied Mathematics of the Romanian Academy. The Institute was created in 1991 and Adelina Georgescu became its first director. Simultaneously, she initiated the foundation of the *Romanian Society of Applied and Industrial Mathematics* – ROMAI. Adelina Georgescu was President of ROMAI from the moment of the birth of this Society up to 2009.

In 1997 she enforced her the didactic activity as a professor of the University of Pitești, whose Department of Applied Mathematics she led between 1999 and 2005. At the Faculty of Mathematics of Pitești, Adelina Georgescu led the courses at the 3rd, 4th year and the master level in Analytical Mechanics, Mechanics of continua, Fluid dynamics, Dynamical systems, Bifurcation theory.

She also founded and led the "Victor Vâlcovici" scientific seminar for master students and PhD students. Adelina Georgescu was involved in the supervision of many master theses and of 19 PhD theses. Throughout the time spent at the University of Pitești, she enthusiastically encouraged the work of young researchers in her fields of interest and especially in dynamical systems and bifurcation theory. New fields as the application of bifurcation theory in the economy and the biology were explored by some of her PhD students with remarkable, internationally recognized results.

The results of Professor's Adelina Georgescu scientific activity were published in 18 books (some of them by well-known publishing houses as Kluwer, Chapman and Hall or World Scientific) and more than 200 scientific papers in prestigious journals of mathematics.)

A great energy and a lot of work were invested by Professor Adelina Georgescu in gathering the material and writing, with a few collaborators, two editions (2004 and 2006) of a Dictionary of Romanian Mathematicians, a precious tool in making a genuine image of the Romanian mathematical school. This was one of Professor's Adelina Georgescu many acts of patriotism.

As a recognition of her scientific value, she was invited as visiting professor at foreign universities or research institutes, delivering a large number of conferences, leading doctoral courses and research seminars at the Politecnico di Bari (2000); Istituto per le Applicazioni del Calcolo, Roma (1997, 1996); University of Bari, (1991, 1992, 1993, 1994, 1995, 1996, 2004, 2005, 2006, 2007); Instituto Pluridisciplinar, University Complutense, Madrid (1996); Institut für Chemie und Dynamik der Geosphäre (ICG-4), KFA, Julich (1999, 1998, 1996, 1995); University of

Le Havre (1994); University of Paris VI (1994, 1995), Istituto per le Ricerche di Matematica Applicata (IRMA), Bari (1992,1994); University of Metz (1991); Polytechnical Institute of Poznan (1991); Institute of Mathematics and its Applications, Minneapolis (1990); Institut für Strömungslehre und Strömungsmechanik, Karlsruhe (1990); University of Catania (2002); University of Lecce (2001, 2002); University of Messina (2001, 2002, 2003, 2004, 2005, 2006, 2007); Institute of Mathematics, Belgrad (2003); CREATIS-INSA, Lyon (2003, 2004), University of Patras (2001, 2007).

In addition to her own scientific and didactic activity, Adelina Georgescu has brought a significant contribution to the developing of Romanian applied and industrial mathematics as a talented manager of sciences. She was one of the main organizers of the first (1990) and second (1992) Preparatory Conference for the International Congress of Romanian Mathematicians.

Since 1993 annually, ROMAI and some universities (of Pitești, of Oradea, Tiraspol State University) organized the already well-known *International Conferences on Applied and Industrial Mathematics – CAIM*, important forums of genuine debates and exchanges of ideas in mathematics and its applications. These conferences widened the traditional lines of Romanian mathematical research to recent topics developed by a large number of professionals, mainly from Romania and the Republic of Moldova, ranging from pure mathematics to engineering and high-school mathematics.

As President of ROMAI, Adelina Georgescu led a policy of constant support to the mathematical community of the Republic of Moldova. This represented another act of patriotism, which led to the creation of strong collaboration and friendship relations between the mathematical schools from the two sides of the Prut. Besides the participants from Romania and Republic of Moldova, mathematicians from countries like Canada, France, Greece, Italy, Russia, Slovakia, Ukraine, Uzbekistan, took part at the successive editions of CAIM.

From 1997 until 2004, the CAIM Proceedings were published mainly in the journal *Buletinul Științific al Universității din Pitești, (Seria Matematica și Informatica)* this bringing to this journal a good place in the CNCSIS classification of scientific journals (namely a category B journal). Adelina Georgescu was practically the Main Editor of this journal in the mentioned period (with the exception of vol. 5). Since 2005, ROMAI began to issue *ROMAI Journal* that publishes mainly papers presented at CAIM, but also other valuable mathematical papers and *Educational ROMAI Journal*, which is devoted to preuniversity mathematics. Adelina

Georgescu was Editor in Chief of *ROMAI Journal*. She was also a member of the editorial board of some scientific journals like *Int. J. Chaos Theory and Applications*, *Applied and Numerical Mathematics*, reviewer for *Math. Reviews*, *Zentralblatt für Mathematik.*, and peer-reviewer for *Rev. Roum. Math. Pures Appl.*, *Rev. Roum. Phys.*, *Rev. Roum. Sci. Tech.-Mec. Appl.*; *St. Cerc. Mat.*; *St.Cerc. Mec. Appl.*

As a Professor at the University of Pitești, Adelina Georgescu initiated the *Series of Applied and Industrial Mathematics* of the University of Pitești, a collection of books containing 29 titles up to now. Five among her former PhD students, are now teaching at this University. Her activity was devoted to the formation of a school of Dynamical Systems Theory at the University of Pitești, when no similar school existed in our country, as well as the permanent attempt of inducing high university standards at this University.

After her first visit to Chișinău in 1990, Adelina Georgescu played an important role in the mathematical life of the Republic of Moldova: she became an active participant to many mathematical forums organized in Moldova; she took part in the expert commissions in PhD dissertations; she supervised several moldavian PhD and masters theses. Her valuable and multilateral contribution to the progress of mathematics received a high recognition from the highest scientific entities of Moldova, by receiving the Diplom of Honour of the Academy and the title of Doctor Honoris Causa of the University of Tiraspol.

Other international signs of recognition of Professor Adelina Georgescu activity were her election as member of the Russian Academy of Nonlinear Sciences, of the Accademia Peloritana dei Pericolanti (Messina) and of the AOSR (Academia Oamenilor de Știință din România).

Her tremendous energy and will power, unyielding integrity and idealistic dedication to the aim of opening new research lines in the field of Romanian applied mathematics will remain for ever engraved in the memories and hearts of her many friends, collaborators and students.

Directory Committee of the  
Romanian Society of  
Applied and Industrial  
Mathematics – ROMAI