

MIHAI DRĂGĂNESCU – THE PROMOTER OF THE INFORMATION REVOLUTION IN ROMANIA

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Abstract. *The author of this paper has had the honour to work together with academician Mihai Drăgănescu more than fourteen years. In this paper, after a short introduction, the author tries to tell us what he has learned about academician and he presents Mihai Drăgănescu as pioneer and promoter of the informatics' revolution in Romania. In the last part of the paper, the author pointed out which is the role of Mihai Drăgănescu for the present and the future as an example of the one high scientific personality who has been conscious of the aspirations of the epoch of his life and through a creative, competent and responsible activity conceived scientific and managerial works which are examples for us and for our followers.*

Keywords: technical progress, informatics' revolution in Romania, technological evolution

1. Introduction

The history of technology of the computing machine development is unique. No other technology has been making such rapid progress after its invention. From John Napier, Blaise Pascal, Gottfried Wilhelm Leibniz to Alan Turing and Bill Gates a lot of creative techniques have contributed to the design and development of computing machine, now reaching levels of development unthinkable a few years ago.

Computers have influenced and influence our daily life ever more intense. They are everywhere now: in the office, at home stations, banks, schools, hospitals, amusement parks. Comparison of the first electronic computer (ENIAC) with the most modern computers nowadays fully confirms the anterior statement. A generation ago there were no CDs, there were no TV cables or automatic banks or PCs. Computers were, at best, some machines the size of refrigerators and had to work in conditioned space.

On the 25th anniversary of the first human landings, a documentary television (CNN) said that the lunar module used by Apollo astronauts, was carrying less computing capacity than one that was installed in 1994 on board of a vehicle with electronic control of the operation.

Ubiquity of computers and the rapid pace of technological development are the most significant aspects of the current information revolution.

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Progress of human society is only possible through creative contribution of special people. Through their contribution, technical progress evolves; science reached new heights, new aspects of public life cultivating morality. One of these men was certainly distinguished academician Mihai Drăgănescu, who on May 29, 2010 after suffering heavy, passed away. Qualitative distinction between a person and personality is creativity, initiative, embodied in innovative activity and a retrospective on the life and work of Academician Mihai Drăgănescu reveals a personality dedicated to finding novel solutions in action, appropriate to the changes that occur in the environment technical and social environment. Assumed the task of talking about the quality of pioneer and promoter of the computer revolution professor Mihai Drăgănescu is neither simple nor easy, but I meet a such task with joy and feeling of satisfaction that I give them certainty that they meet not only a duty, remembering lived realities, along with academician Mihai Drăgănescu both as a former expert (1968-1971) of the Permanent Secretariat of the Government Commission for endowment economy with modern computing equipment and automatic data processing, as well as scientific secretary of the Section of Science and Information Technology of the Romanian Academy (from 1992 to the date of his death), but respond and inner pulse, to help highlight once more the merits teacher, recognized in fact by the vast majority of domestic and international scientific community. It gives me great pleasure to point out, in this article, the contribution of academician Mihai Drăgănescu, creator of the Romanian school of semiconductor devices and microelectronics, the leader of the single program of computerization of the national economy, he has been conducting for 13 years (1967 to 1971 and 1976-1985) directly Romanian informatics, developing concepts, publishing theoretical works on information, developing during 1980-1985 and a new theory of information on a structural-phenomenological and conceptual information society in Romania. He created a philosophy of science, original in Romanian culture and not only, he was, also, the leader and creator of social opinion which located at the forefront of the Romanian revolution of December 1989. He was vice president of the first government post-December and in May 1990 initiated and led the revival of the Romanian Academy (1990-1994). He developed the concept of knowledge society and promoted the concept of consciousness society (St. Iancu, 1995).

2. Mihai Drăgănescu - professor and scientist

Student, assistant and PhD student of the founder of the Romanian school-teacher of the electronic-Tudor Tănăsescu, Mihai Drăgănescu has completed university studies in 1951 and began to work under his teacher, Tudor Tănăsescu, continuing its work developing and creating a Romanian school semiconductor devices and microelectronics, the original papers that have elucidated in the electronics unclear issues in its work by November contributions to the theory of electronic devices.

Professor Mihai Drăgănescu had the following professional development teaching at the Polytechnic University of Bucharest: Assistant Professor in 1951, lecturer in 1956, associate professor in 1958, professor in 1965 and a consulting professor in 1992. In the period 1963-1985, he was the chair devices, circuits and electronic devices, in 1985-1990 the chair of electronic and microelectronic technology, and during 1962-1966 Vice Dean and Dean of the Electronics and Telecommunications Faculty in the Bucharest Polytechnic Institute.

School of electronic and microelectronic devices has been developed by Professor Mihai Drăgănescu in a time of great creative effervescence in the Bucharest Polytechnic Institute. Schools powerful mechanical, aviation, chemistry and electronics, based on creative thinking, develop, foreshadowing industrial Romania. The year 1953 marks the establishment in the Polytechnic Institute of Bucharest, the Faculty of Electronics and Telecommunications, yet eloquent proof of the Romanian education guidance on areas of great scientific interest and technical. In this faculty, courses presented by Professor Mihai Drăgănescu were heard by hundreds of students from their transient form "tubes, transistors and electronic circuits" to the modern form of "functional Electronics".

Reference books such as "Electronic processes in semiconductor circuit structures" or "Solid State Electronics", written by Professor Mihai Drăgănescu, were the basis for preparing the area for many generations. Among the graduates of the Faculty of Electronics and Telecommunications from Bucharest, where they could be heard in these fields, Professor formed a strong department in "devices, circuits and electronic devices." All the same source and have developed strong research groups in the Enterprise wireless and semiconductor parts (IPRS), Băneasa and Research Institute for Electronic Components. The school PhD in electronic devices and microelectronics, headed by Academician Mihai Drăgănescu, has trained over 30 doctors, specialists of great value, too their pioneers (St. Iancu., 2004).

Professor Mihai Drăgănescu developed original scientific papers in electronics:

- ♣ In the field of electronic tubes (1956-1962) first explained thoroughly by the capacitance, electrostatic capacity of different electronic tubes in operation in the presence of electron flow.
- ♣ Original contributions to the theory of nonlinear oscillations of electronic circuits (1956-1962), the influence of the nonlinearity electronic oscillator ability of electronic devices, greater influence of nonlinearity of reactive elements (as opposed to resistive). A generalized formula of Barkhausen for electronic oscillators taking into account nonlinearity, equivalent linearization method, putting into this framework analytical results obtained previously by Professor Tudor Tănăsescu and Professor Gh. Cartianu.

♣ Original contributions to the theory of semiconductor devices and transistors at high injection levels (1962-1969) and a series of fundamental works on semiconductor devices: a theory of transistor at high injection levels (called theory Drăgănescu-Matz), effects inductive in semiconductor devices, highlighting the difference between diffusion capacity, film semiconductor junctions, greatly simplifying the theory of dielectric diode by a method then used in the literature. Professor Mihai Drăgănescu studies published during 1962-1988, communications and programs on microelectronics and volumes following fundamental school for formation of semiconductor devices: Volume "transistor circuits" (co) 1961;

♣ "Monograph scientific, electronic processes in semiconductor circuit devices" (1962), one of the first books in the world in the theory of semiconductor devices, with contributions and original chapters. State Prize, 1964.

♣ The book "Solid State Electronics" (1972), the second volume reference Romanian school of semiconductor devices, used primarily for doctoral internships.

♣ The book "Functional Electronics" (lead author), 1991 (M. Drăgănescu, 1991). Professor original scientific papers, lectures, his books have played an important role in the evolution of the Romanian school of electronics. The teacher also contributed to the development of the electronics in our country by the large number of specialists who trained and promoted to Professor and Head of Computer Department of University "Politehnica" of Bucharest (UPB), through taught courses for the first time in Romania at the Faculty of Electronics of UPB. In stage microelectronics, for example, created a new discipline original: Electronics functional, developing new concepts that students taught first. Now this discipline is in a permanent development process in the UPB. During its devices and circuits, this was one of the courses that had the greatest influence on education in electronics and the formation of Romanian scientists and specialists in electronics. Computer Development, the most dynamic branch of the current revolution in science and technology would not be possible without the exceptional discoveries in the fields of solid state physics.

In these circumstances it seems almost natural that he, who founded the Romanian school of electronic engineering and microelectronics, who held an important theoretical and practical technical work in Romania for manufacture of integrated circuits and electronic calculators from third generation and the phase transition of our country to silicon, and so I nominated Professor Mihai Drăgănescu, be and founder and promoter computer revolution in Romania. To understand this better, is required to meditate at the beginning and to remember those who have had the wisdom, ability to promote scientific and moral strength in our country science

and information technology, launching its first action in this respect in a time when cybernetics as a science was still denied by some circles of the party and state power in those years and about one year before the French Academy to give first scientific definition of IT (April 20, 1967).

Difficulties realistically assessing the field of information, since 1967, the establishment of the Government Commission for endowment economy with modern computing equipment and automatic data processing, Professor Mihai Drăgănescu promoted several principles and guidelines which allow ideas to concepts to create a system-wide unit of society. Among these are mentioned:

- ♣ Fundamental idea that a national uniform information cannot be created at once, but only gradually, evolutionary stages by covering the computing experience is acquired through successive improvements and retouching; ensuring compatibility information subsystems;
- ♣ Training of users, including administrative leadership at all levels in all phases of system development;
- ♣ Creating a data transmission system using both existing telecommunication lines and using, also the installation of specialized data lines.

Ideas which have guided Mihai Drăgănescu were reprinted in volumes "System and Civilization" (1976), "2nd Industrial Revolution". "Microelectronics, automation, computing determinants "(1980)," Informatics and Society "(1987) and others, were published previously in periodicals, between years 1970-1985. Innovative concepts and how society, social and human civilization, definition of future periods of computer science and artificial intelligence determined bioelectronics marked a period of intellectual ferment, at least in space technology professionals and economy has had since 1970^s vision of an information society designed to include not only state structures, but also citizens, for which satisfaction has predicted that, in parallel with the operation of economic and social system and a system to work toward individual citizen. In a study published in 1973, Mihai Drăgănescu wrote "This process, which began in the second half of the twentieth century, society tends to create a unified information technology structure, which ultimately serves;

- ♣ Every citizen, with computing power and memory aids for self-education his relations with society structures of economic, cultural, medical, legal, social, etc. Man will find not only a new social and ecological environment, but also in a computer environment that will change your life;
- ♣ Each organizational unit, both in its internal operation and in the collaborations with external relations organizations;
- ♣ Society and economy as a whole, for their leadership in order to achieve objectives.

Romanian experience in computer science started from the requirements of an existing company and crystallized, under Professor Mihai Drăgănescu, around the concept of national information system whose building, according to its design, engineering was not an ordinary type, but a "Macrosistem" company that develops with almost biological in nature. Concept of institutionalization of the national information, presented by Professor Mihai Drăgănescu, in works published after 1967, has outlined the theoretical and practical aspect leading to management, informatics development in Romania. All who know the "e-Europe", Council of Europe recommendations for implementing this program, the new concept of information society and knowledge to operate computer teacher I cannot find ideas and concepts actuality Mihai Drăgănescu building in Romania of a modern society. His concept of computerization of Romanian economy and society can find practical application today. Existence of Romanian concept for achieving computerization, developed by the Professor Mihai Drăgănescu, is a contributing factor to facilitate integration in European and global process of building a global knowledge-based society. Professor Mihai Drăgănescu the set and concepts not only occurred as a result of social needs. Clarification of the concept of knowledge society since 1986 and company awareness in 2001 gave rise to confusion, the question marks (Drăgănescu Mihai, 1986). Although the concept of knowledge society was revived in Europe since 2000, resumed this concept in Romania was met with resistance.

In "United Nations Commission Report Science and Technology Development", published in 1998, the notion of knowledge society is presented as follows: „Recent term Society knowledge was used to emphasize that the role of information and communications technology (ICT) was changed by changing technological tool in a tool that offers new potential in combining the information embedded in ICT systems with the creative potential of people to develop their knowledge. "

Now, as the knowledge society is used worldwide, it is an abbreviation of the term knowledge society (Knowledge-based Society). Academician Drăgănescu considered the following knowledge society requires (Drăgănescu Mihai, 2003):

- ♣ an extension and deepening of scientific knowledge and truth about life;
- ♣ use and management of existing knowledge as technological and organizational knowledge;
- ♣ production of new technological knowledge through innovation;
- ♣ an unprecedented dissemination of knowledge by all members of society, new media, using mainly the Internet, electronic books and learning through electronic methods (e-learning);

♣ knowledge society includes a new economy in the process of innovation (the ability to assimilate and convert new knowledge to create new services and products) is crucial and that, unlike the old economy where tangible first count in the new economy primarily intangible assets, intangible, hard to describe, especially to quantify and measure but have value and enhance value;

♣ knowledge society is fundamentally necessary to ensure a society of ecologically sustainable because no scientific knowledge, technological knowledge and their management will not produce those goods, organization and technological changes (perhaps even biological) and the necessary economic save the world from ecological disaster in the twenty-first century;

Knowledge is information with meaning and operating information. Therefore, staff considers that the knowledge society would not be possible if not grafted on the information society and cannot be separated from it. Meanwhile, the major role is information - knowledge in society, the future knowledge society will be more than the information society. The best understood of the knowledge society would be in case that we use the title "Information Society - Knowledge Society". If in 1993-1994, Academician Drăgănescu made general references to a possible potential Conscience Society, the 30th June, 2001, in an conference held at the Romanian Athenaeum during a national event organized by Foundation "Henri Coandă" to support gifted children, he said very clearly that "it came at a time really fascinating that the information society are extended in a knowledge society, and the latter, I believe and hope, in a Conscience Society." In the statement made in the General Assembly of the Romanian Committee for History and Philosophy of Science and Technology in 2007, Academician Mihai Drăgănescu hold up the existence of consciousness is a reality that the man realizes that his own experimental and speaking, consciousness is mental, ensuring in this way using ortophysics meanings. Linguistic consciousness is where objects that have a brain (central nervous system) equipped with a language processor. But in this case is reached ortophysics ways that are not linguistic. Linguistic content of such a mind and conscience can write, for example, on paper. Neither the text, nor the way the paper does not get one because they ortophysics appropriate text language processor. Social consciousness through her written text presents such a situation. Consciousness is stored, inactive, so long as it does not interferes taking mind-consciousness provided by the language processor, whether they are individuals or networks made up of diverse origins. In the same conference, stated that "For many years tends to the establishment of a science of consciousness. Such knowledge can only be a science of mind and consciousness, and these two cannot be separated. There remain many unsolved fundamental problems considered mysterious. The science of mind and consciousness that is so far up on solid. The key issue is the mystery of subjective experience (The Hard Problem, by Chalmers) which was not

explained and it is believed that no one knows how to be treated. Denying the problem, how often, does not lead to a science of mind and conscience released of mystery, because there is no reasonable explanation of the experience that defies science persists. Ortophysics model that were proposed and refined in the last 30 years, could provide models for the science of mind and consciousness as described in the foregoing sections of reflections. Consciousness is the most prized, being required to know, to seek truth, and pursue good. Science of mind and consciousness may teach us, with great power of persuasion, such things (Drăgănescu Mihai, 2007). In studies conducted by the late Academician Mihai Drăgănescu, between 2003-2007 (Spirituality-2004, Fundamental natural conscience of society-2005, 2007-Consciousness Society;), there is an evolution, a natural research, from initial ideas for achieving consciousness of society, the idea that nuanced realities imposed by the realization that company. Human intelligence has deciphered the genome of its species, is already cloning, we evaluated that could be done when Big Bang picture, is exploring the solar system but fails to know his own planet, to make known the origin and destiny of man in the universe. Academician Mihai Drăgănescu considered in this context, the company said that achieving consciousness as a fact, not consistent with reality. In the preface to the book "Consciousness Society", published in December 2007, Professor Mihai Drăgănescu distinct states that "in terms of philosophy, society and consciousness remains an absolutely fundamental concept. On achieving a society of conscience remains to be seen whether it can be accomplished with current biological man. The current biological man could get only a society of "society of the foreshadowing conscience". Vasile Stănescu, honor member of the Romanian Academy, published in 2009 volume: "Globalization to a new stage of civilization" in that he sustained that human destiny is unity, one world consciousness. A fundamental idea, knowledge, likely to cause profound changes in tomorrow's world, a Society that will build consciousness. Human social system on a worldwide basis through social consciousness, it requires legislative institution and at the same time, binding the individual conscience. Personally, I think more realistic point of view expressed by Academician Mihai Drăgănescu as:

A. Now conscience is extremely difficult to define scientifically because the views expressed so far are wholly subjective. For this reason, the study of consciousness has long belonged to philosophy and religion. Recently, biologists have entered the debate, especially neurobiologists. Some of them hope that brain imaging and reading electrical signals the brain to disclose, neural correlation of consciousness", and even make progress in this field.

B. Consciousness we have today is the result of constant interaction, for millions of years of the tool (hand), thinking (the brain mind), communication (society) and individual cultural development of increasingly intense. It is now clear that

human consciousness is part of the natural world and made to reduce physical human evolution in favour of cultural evolution of man.

C. The human species is distinguished from other species and that it is the only species that has affected the natural environment. Human intelligence has deciphered its complete genome species, is already deciphering cloning or to create a picture of a supposed Big Bang moment, and to explore the solar system but, man fails to explore and know their own planet, to make known the origin and destiny man in the universe.

D. Mankind was able to manage our planet's natural environment. While many natural species are destroyed, biotechnology multiplies transgenic plants and animals. How far will this process go? Dispose of all that was designed over millions of years, the natural environment and be surrounded only by robots?

In these circumstances the company said that the realization of conscience would be certain, not consistent with reality.

This is fully supporting the claims of the late Academician Mihai Drăgănescu that we hope the current level of knowledge of human consciousness and given the stage of formation of social consciousness that will be possible only a Society of the premonition conscience. The research, by implementing into practice new scientific discoveries, new technologies should not fight against the natural world but created only from motion and energy of world powers, unnatural and hostile environment.

3. Mihai Drăgănescu – manager

In the '60^s years of the twentieth century has been given further attention to the development of high technology: nuclear technology, especially by building nuclear power plants, space technology through various missions in outer space, but High Tech has been, also a development of the special automatic electronic data processing. The invention of the integrated circuit and its use in the production of electronic computers, with important implications for the development of structures hardware/software performance of remarkable progress in miniaturization and reliability of computers, the design of more efficient operating systems have resulted, with the development of information storage peripherals and input/output speeds as performance computing. Thus the electronic computer became electronic data processing, which has been used extensively and intensively as a universal tool for various applications: scientific, technological, economic, commercial, education, etc. In this way, entered the age of informatics era in which the entire civilized world became aware that the electronic system of automatic data processing is not only an outstanding technological innovation but becomes an existential necessity.

Professor Mihai Drăgănescu, conscious of technological reality, together with academician Nicolae Teodorescu, in 1966, prepare and submit for approval a statement on the introduction and use of electronic computers in the Romanian economy and society, the proposals made in that statement, helping to launch the first program of computerization in Romania. Therefore, the following year (1967), Mihai Drăgănescu was commissioned to lead a team to develop "Program supplied the economy with modern computing equipment and data processing automation" (St. Iancu., 1995).

During 1967-1985, in Romania, under Professor Mihai Drăgănescu was achieved for more than 80-85%, the first national program, one of the largest programs in the country's technological fields of integrated circuits, computers and computer. The program was developed during 1966-1967 and 1967-1971 and 1976-1985 periods led by academician Mihai Drăgănescu.

In 1985 the Central Institute of Management and embedding in another computer in research meant you know, in fact, brutal braking developing a new field of great potential and building block in our country, a new computer company.

During 1967-1971, the position of Permanent Secretary with the Government Commission for endowment economy with modern computing equipment and automatic data processing, Professor Mihai Drăgănescu institutes led the establishment of electronic components for computers, information technology (as Director General of the Institute during the last 1976-1985), the Company for maintenance of computers (IIRUC), held talks with most developed countries in the world to manufacture integrated circuits and electronic computer-generation plant III, successfully concluded negotiations with France, laying the basis for professional electronics in Romania, initiated and led the construction of regional computer centres, computer schools, led the research leading in the field (artificial intelligence, robotics, computer industrial), forming a large number of frames. Through all this development founded computer in Romania.

The days that followed were not favourable but computer development in Romania, the potential scale so that our country or in that time have not been achieved and practical priorities for ICT development. Program approved in 1967 was the first program of informatization in Romania, which outlined the main directions of activities of computer science until 1985 and has seen some changes in 1971.

Due to misunderstanding of the principles and ideas indicative value, set by Professor Mihai Drăgănescu, and real phenomenon sector development information, in 1971 the political decision-making power pole convinced that the national leadership of the Romanian state information should be achievable in a few years. Exacerbation achieves national system, to face the reality of

compromise, after '80^s, the idea of national information system and has provided no investment management domain information and has banned the import in hard currency including components for manufacturing.

Political changes of 1989 brought the scientist, teacher, manager and author Mihai Drăgănescu prestigious as deputy first minister of post-revolutionary government. The entire activity, the teacher knew how to be an example of ethical behaviour, good citizenship, acting with courage and stoicism to protect and promote the national interest, which he considers fundamental to economic and social development of the Romanian nation.

Mihai Drăgănescu since 1990 resulted in the establishment of the National Informatics government, government in 1990 the only Romanian government which had the priority program of computerization of Romanian economy and society. He helped set up advanced research centre for machine learning, natural language processing and automatic conceptual modelling, the current artificial intelligence research institute at the Romanian Academy and produced studies on Information Society. The company developed the concept of knowledge, its definition, proposing two classes of vectors of the company (technological and functional) to be pursued by Information Society.

Member of the Romanian Academy (from March 1, 1974) and member of Romanian Academy (from January 22, 1990), Professor Mihai Drăgănescu conducted extensive work in the highest scientific and cultural centre of the country, organizing scientific meetings on the latest issues raised by (micro) electronics, computer science, artificial intelligence, biology, mathematics, science and technology. During 1980-1985, he was president of the Romanian Academy Collective forecasting, and during 1978-1991 were Vice President and Chairman of the Romanian Academy for contemporary scientific and technical revolution.

President of the Romanian Academy initiated during 1990-1994 and led the revival of the Romanian Academy, founded the academic journal (1990) and was, until 1994, the first director of the magazine, the transmission obtained by the Romanian Academy House Academy House of Scientists, Căciulata Ghica Palace, the Academy has brought dozens of fundamental and advanced research institutes, research institutes reinstated the abolished by the totalitarian regime, was the main contributor to the choice of about 50 corresponding members, holders of posthumously honour and Academy, founded the Department of Science and Technology Information (1991) and initiated the establishment of the Department of Arts, Architecture and audio-visual, has reconstructed the history department of the Academy and relaunched Department of Philosophy, Theology, Psychology and Education, has exposed past values of Romanian science and culture, was the main contributor to the return to traditional spelling of Romanian.

Since 1983, the teacher is the member of the Romanian history and philosophy of science and technology (CRIFST) during 1991-1994 and 1998 - has now been elected president of this committee. Also during 1992-1994, 1998 - was and is now director Noesis magazine, newspaper CRIFST (Romanian Academy) in foreign languages since 2002 and director of the magazine NOEMIE, CRIFST publication in Romanian. In 1997 he founded and became president of the Information Society Forum of the Romanian Academy in 2000 as honorary president of the Forum, which changed its name to Knowledge Society Forum.

In 2001, Academician Mihai Drăgănescu again demonstrated foresight in supporting the implementation of the Romanian strategy of introducing the concept of knowledge society. Met, initially reluctant, even within the Romanian Academy, now, this concept in our country enjoys a growing recognition range, referring to him in speeches spoken at national or international president himself since.

Since 1999, academician Mihai Drăgănescu published papers on categories and functors in structural-phenomenological modeling and integrative philosophy of science. Is the author of works on the history of science and technology, helping to enhance the creation of ancestors: Augustin Maior, Stephen Odobleja, Aurel Avramescu, Tudor Tanasescu, My Community and others. In 2001-2003 he published papers on the knowledge society, providing since 1986 appearance of such companies.

In 1965, Academician Mihai Drăgănescu was elected to the Institute of Electrical and Electronic Engineers (IEEE), New York, in 1976, elected Senior Member, and during 1986-1990 elected president of the "Romanian IEEE Section in development".

Academician Mihai Drăgănescu received awards and national and international recognition including: Ministry of Education Prize for Scientific Research (1963), Order "Scientific Merit" (1966) and Order "Star of the Republic" (1971), Medal "Centenary Mihai Eminescu" (1989), Prize "Noica" (1996), Cultural Prize Channel Romania Romanian Radio Broadcasting Corporation (2000), Third Millennium Medal, conferred by the IEEE and was elected IEEE life. He was honoured with the "Commander of the Legion of Honour" (France, 1971), the Diploma "Merit Scholar" (1999) and Order "Star of Romania" in rank of Commander (2000).

Professor at the chair and teacher every day, Professor Mihai Drăgănescu managed to mobilize employees to work efficiently, to develop fruitful and they all have their best. Everyone who had the honour to work under his direct guidance continually increased scientific value. They say do not grow in the shade of large trees than bushes. In the presence of a great man, as was the academician Mihai Drăgănescu, staff received continuous light. I feel very honoured that I was able to unfold a large part of my work under the direction of the scientist, a teacher, manager, human and citizen Mihai Drăgănescu.

In the last two three decades, our country, we witnessed a drastic change in scale values. Currently, there is ample need for education and promotion of the true values of culture, professionalism, competence and honesty, fairness, responsibility. One way to restore a climate of trust could be the experience in social work ancestors lived and treasured. We need models to follow and personality are presented in this article could be for us an example of a specialist who understood the aspirations of the age in which he lived and, through a creative activity, competent and responsible, took photographs and take place at work to be proud and be proud of our descendants. Strive to follow the behaviour and classification society of this pioneer and promoter of science and technology development in Romania.

One way to restore the climate of confidence in the country could be the experience in social work ancestors lived and treasured.

Strive to follow the behaviour and classification society of this pioneer and promoter of science and technology development in Romania. We, his former students, PhD students, collaborators, we will keep in my soul, Professor Mihai Drăgănescu eternal gratitude and send a grieving wife, Mrs. Nora Rebreanu sincere condolences. God rest his soul in peace.

REFERENCES

- [1] Drăgănescu Mihai, „*Tendencies of becoming*”, Romanian Review, no. 11/1986.
- [2] Drăgănescu Mihai, Gh. Ștefan, C. Burileanu, „*Electronica funcțională*”, (din care M. Drăgănescu a scris 2/3 din volumul de 484 pagini), București, Editura Tehnică, 1991.
- [3] Drăgănescu Mihai, „*Realizarea de calculatoare și rețele de calculatoare în România (1953-1985)*”, comunicare la Conferința *Calculatoare și rețele de calculatoare în România (1953-1985)*, Academia Română, 22 noiembrie 2001. Publicat în *Academica*, 2001, noiembrie-decembrie.
- [4] Drăgănescu Mihai, „*De la Societatea informațională la Societatea cunoașterii*”, Editura Tehnică, București, 2003.
- [5] Drăgănescu Mihai, „*Reflecții despre știința conștiinței*”, comunicare la Adunarea Generală a Comitetului Român pentru Istoria și Filosofia Științei și Tehnicii (CRIFST), 12 octombrie 2007.
- [6] Drăgănescu Mihai, „*Societatea Conștiinței*”, Volum editat de Institutul de Cercetări pentru Inteligență Artificială al Academiei Române, 2007.
- [7] Florin Gh. Filip, I. Popa, „*Evoluții și perspective în realizarea și în utilizarea rețelelor de calculatoare pentru cercetare-dezvoltare*”, *Academica*, Octombrie 1996.
- [8] Florin Gh. Filip Coord. „*Societatea informațională - Societatea cunoașterii. Concepte, soluții și strategii pentru România*”, Academia Română, 2002.
- [9] Iancu Șt. „*Pionier și promotor al revoluției informatice în România*”, *Revista Română de Informatică și Automatică*, vol. 5, nr. 3, 1995.
- [10] Iancu Ștefan, „*De la sisteme automate la sisteme inteligente*”, „*Revista Inventică și Economie*” Nr. 2-2003
- [11] Iancu Șt. „*Procesul de inovare în viața și opera academicianului Mihai Drăgănescu*”, în volumul „*Mihai Drăgănescu in medias res*”, Editura Academiei Române, București, 2004.
- [12] Iancu Șt. „*Ingineria de la roată la inteligență artificială. Locul ingineriei române în lume*”, Editura AGIR, 2009.
- [13] Stănescu Vasile, membru de onoare al Academiei Române, „*Globalizarea spre o nouă treaptă de civilizație*”, volum publicat în Editura Academiei Române, 2009.
- [14] Tecuci Gheorghe „*Mediul de dezvoltare a sistemelor expert instruibile pentru proiectarea asistată de calculator*”, Teza de doctorat, Institutul Politehnic București, 1988.