

**PROFESSOR C. V. NEGOITA - IMPORTANT CONTRIBUTIONS TO  
THE CYBERNETIC SCIENCES**

**DOCTOR HONORIS CAUSA OF THE BUCHAREST ACADEMY  
OF ECONOMIC STUDIES**

Recently, at the suggestion of the Council of the Cybernetics Statistics and Economic Informatics Faculty, the Academy of Economic Studies Senate decided to award the scientific title of DHC to Professor C. V. Negoita, a researcher of Romanian origin, acknowledging his outstanding contributions to research and practice in systems theory and cybernetic sciences, his professional and human prestige enjoyed in the scientific and academic community, and his dedication to higher education.

Member of the prestigious **THE INTERNATIONAL ACADEMY FOR SYSTEMS AND CYBERNETIC SCIENCES**, Professor Negoita began his professional education at the Polytechnic Institute of Bucharest at the Faculty of Automation, where he had the great opportunity to join the most prestigious members of the school and practice of system theory.

Together with other Romanian scientists who taught at the Faculty of Economic Cybernetics, i.e. Professor Edmond Nicolau and Professor Nicolae Racoveanu (Deans of the faculty), Professor Alexandru Popoviciu, Professor Paul Constantinescu and other Professors from the University of Bucharest or Polytechnic, Professor C. V. Negoita quickly became a true leader of school in the newly established Economic Cybernetics faculty.

Born February 3, 1936, Professor C.V. Negoita is one of the first researchers to work on the concepts and theories of fuzzy sets, introduced in 1965 by L.A. Zadeh. In this field, he led a seminar initially held at the Cybernetics Faculty

and later at the Central Institute of Computer Science, where Professor Negoita led the Mathematical Models for Management Systems Lab.

At his school, unfortunately abolished after departure to the United States, a plethora of brilliant minds have been formed that have successfully carried forward the ideas of their teacher during the brief period of intellectual "thawing" between 1965 and 1975.

Additionally, he has organized the most renowned research group in the field of fuzzy sets and he has invited to Romania, the world's best performing researchers in the world to present their research. In all those years, his attitude was open, bright and optimistic, facilitating the exchange of experience between Romanian and international researchers.

As Associate Professor at the Economic Cybernetics Department of the Bucharest Academy of Economic Studies, he taught courses on: Optimal Control Theory and Economic Cybernetics.

He was one of the main organizers together with J. Rose and others, of the third World Congress of Cybernetics and Systems in Bucharest in 1975, which took place in the Academy of Economic Studies,.

After arriving to New York in 1982, Professor Negoita began his academic career at the Hunter College Computer Science Department, one of the best colleges of the City University of New York (CUNY). When he retired in 2009, C.V. Negoita was awarded the title of Professor Emeritus

Since it is difficult to encompass a personality like that of Professor Constantin Virgil Negoita in a brief presentation, we will select only a few significant milestones of his vast academic endeavor:

1. C.V. Negoita, together with Dan Radulescu, published in 1974 one of the first manuals in Romanian on the applications of fuzzy sets and analysis of

fuzzy systems. This book was subsequently translated in 1975 into English and in 1978, with K. Asai into Japanese.

2. His first book modeling of economic systems called MANAGEMENT APPLICATIONS OF SYSTEM THEORY was published in 1978 in Switzerland by Birkhauser Verlag, in English, and in 1982 it was translated into Russian.

3. In 1985, C.V. Negoita was the author of the first book on fuzzy systems applications to artificial intelligence systems entitled "Expert Systems and Fuzzy Systems". This book, along with other original writings, were awarded the "IEEE Prize for New Technical Concepts" by the IEEE in the same year.

4. He was one of the founders of the Fuzzy Sets and Systems Magazine

5. C.V. Negoita wrote innovative papers on fuzzy systems theory and their applications to computer science and human system management. He realized that while feedback was the main concept for the sequential structure of control systems theory, in knowledge engineering, to describe the synthesis of knowledge, one needs the fuzzy concept: Pullback. Negoita's 1981 book "Fuzzy Systems" presents in detail the role of pullback in the theoretical approach of fuzzy systems

6. In the economics, the extension of the models in the fuzzy space has made it possible to more accurately describe the vague arguments, the performance criteria and the fuzzy formulated restrictions, making it possible to approach linear programming problems with the coefficients of the restriction variables and the free term as fuzzy sets. By developing flexible methods of optimization, Professor C.V. Negoita and his research team have made it possible to solve linear optimization models of large size, contributing to overcoming the difficulties caused by the incompatibilities between the limitations of the large linear models. This would be a good time to highlight his achievements in the field of optimizations with several fuzzy objective functions as well as the

development of the dynamic optimization models for the software systems for the programming of the production.

7. In the early 2000s, C.V. Negoita became interested in how fuzzy sets and systems fit into the wider framework of postmodernism and "postmodern change" in science. Postmodernism in science marks a shift from determinism, certainty, and order to indeterminism, uncertainty and chaos. In this context, C.V. Negoita in collaboration with another Romanian researcher Burstein, developed the fundamentals of a postmodern theory of systems and cybernetics, based on Kabbalaha leading to the development of prestigious works devoted especially to ontological knowledge, engineering, system modeling Complex, cybernetics, behavioral economics and finance.

In addition to extraordinary scientific work, Professor C.V. Negoita is also an acclaimed writer, publishing novels and essays and actively participating in the cultural life of the Romanian community in the USA

Although he lived much of his life in the United States, Professor C.V. Negoita has always kept close ties with his country of birth, supporting and encouraging the scientific activity in Romania after 1989 in order to recover in the shortest time the gap research between Romania and the West.

With the immediate support of Professor C. V. Negoita, in 2007, ISI Thomson's classification of the Economic Computation and Economic Cybernetics Studies and Research journal published by the Faculty of Cybernetics, Statistics and Economic Informatics, was obtained.

Throughout his activity, Professor C.V. NEGOITA proved dedication, abnegation and a distinctive spiritual distinction of a world-class intellectual, consistently pursuing the strengthening of the academic spirit in all the environments he worked in, combining the tact with politeness, professionalism and excellence with respect for the true values of mankind. He has built over time profound, professional and warm relations with the Bucharest Academy of Economic Studies.

In 2001, on C.V. Negoita 75<sup>th</sup> birthday, the Bucharest Academy of Economic Studies awarded GOLD MEDAL OF SCIENTIFIC RESEARCH for the special merits of the scientific research of Professor C. V. Negoita.

On the occasion of over 8 decades of life, we have the moral duty, the joy and the honor to express our appreciation and gratitude to Professor C.V. Negoita for the support offered both during his time in the country and abroad in order to stimulate the scientific progress of Romania, as well as for the contribution made to the creation and development of one of the most valuable universities in Romania, the Faculty of Cybernetics, Statistics and Economic Informatics of the Bucharest Academy of Economic Studies.

The ceremony of awarding the title of DHC to Professor C. V. Negoita, will take place on 20<sup>th</sup> of June a.c. in the Bucharest Academy of Economic Studies Hall at 15.30.

**Professor Marin ANDREICA, PhD**  
**The Bucharest Academy of Economic Studies**