

PROFESSOR EMERITUS AUREL NANU, PhD, DOCTOR OF SCIENCE, DHC, AT 95 YEARS

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ABSTRACT: Professor Aurel Nanu has reached the beautiful age of 95. He dedicated more than 60 years to technologies in general and to nonconventional technologies in particular, which is why he is rightfully acknowledged as the father of nonconventional technologies in Romania. Over the years, several achievements were connected to his name: developing a series of nonconventional technologies, creating machines for nonconventional processing, initiating and coordinating the study specialization of Nonconventional Technologies and Equipment, guiding a large number of PhD students to research this field, initiating and promoting national and international nonconventional conferences, editing the nonconventional technologies journal, writing the 12-volume treaty on nonconventional technologies, founding the Romanian Association for Nonconventional Technologies, which he led as a president and where he is now an honorific president. For everything he meant, still does, and shall continue to mean for nonconventional technologies and not only, it is a great moment of joy to celebrate professor Aurel Nanu at 95.

KEY WORDS: Aurel Nanu, professor, promoter, technologies, nonconventional technologies

Professor *Aurel Carol NANU*, a personality in the field of engineering sciences, was born on the 23rd of May 1921 in Turda.

After high school graduation, due to the fame that the Polytechnic School in Timișoara had, he joins it. He follows the classes of the Electromechanical Faculty and then, together with Felicia Petrovici, who is to become his wife, he also follows, at the same time, the Faculty of Mathematics.

The young university graduate is assigned to Reșița, where he completes his engineering education through direct contact with technological practice, in the Welding Department of the Electrical Engines Factory from the *Uzinele și Domeniile Reșița* Enterprise.

To better be aware of the problems of production, he gets qualified in the specific trades of the department he leads: machinist, electrician and welder.

At the end of 1945 he transfers to the Telecommunications Service (Timișoara) of the Romanian Railways, where he stays until 1947.

His excellent technical savvy as well as acquiring the practical skills for production made it possible for him to have a didactical activity at the Electrical Engineering Professional School. It was during this time that he realizes that his great calling is to be a teacher. Therefore, starting with the 1st of October 1946, the young engineer becomes associated assistant in the Mathematics Department of the Electrical Engineering Faculty of the “Politehnica” School of Timișoara. This is the big step of his life,

by which he dedicates himself completely and for good to education, to developing education, to blend it with the scientific research.

At the advice of Professor Plauțiș Andronescu, he takes a turn regarding his didactic profile in 1947, by giving up mathematics for engineering and switching, as an assistant, to the Department of Basic Electrical Engineering. In 1950, he becomes a lecturer at the Electrical Engineering Faculty.

During this time, the professional activity of Mr. Aurel Nanu follows two fundamental directions: education and research.

He was engaged with the systematization of some electrical engineering problems for seminars; he made a series of equipment work, he built new machines, he created working instructions for them, all these to ensure proper conditions for the practical classes. He succeeded, through remarkable work, to create the proper material base for both didactic activities and experimental research needed by the industry.

As a young teacher he collaborates with: Combinatul Siderurgic and Uzinele de Construcții de Mașini from Reșița, Întreprinderea Electromotor and Întreprinderea Regională de Electricitate from Timișoara, Întreprinderea Electroputere from Craiova, Întreprinderea Electroizolantului București, Șantierul Navale Turnu Severin, Uzinele “Steagul Roșu” Brașov, Întreprinderea de Strunguri Arad, Întreprinderea de Mase Plastice Vasiova, solving, through experimental trials, a series of problems that the industry of the time was dealing with.

As a result of the accumulated experience, he writes and defends his doctoral thesis *Theoretical and experimental research on the technology of isolating the stator bars from the CMR Turbogenerators*, under the guidance of academician Corneliu Miclosy. He obtains the title of Doctor in Technical Sciences in 1962.

He then transfers, together with the subjects he teaches, from the Electrical Engineering Faculty to the Mechanical Engineering Faculty, the Department of Mechanical Technology. The department head, Professor Coloman Bakony had just retired, so Aurel Nanu becomes the new department head and the course holder for *Materials' Technology*.

A first rank personality in the world of science, unmistakable nationally and internationally, Professor Aurel Nanu is a reference name for materials' technology (fig. 1).



Figure 1. Professor Aurel NANU

Continuing the tradition started in 1924, that the Materials' Technology course be based on the Timișoara school of technology, of course, by taking on the particularities of each stage and university center, the teaching of this class is based on Professor Aurel Nanu's course after 1965. He imprinted a new phenomenological concept to materials technology and contributed decisively to raising it to a science status. His treaties on materials technology, followed by those specific to nonconventional technologies, are reference writings in this field.

In 1964, he becomes a scientific coordinator for the title of doctor in technical sciences, for the specialization of "Materials technology". He coordinated over 70 doctoral theses for authors who became doctors in technical sciences.

In 1966, he is given the title of university professor and in 1972, docent doctor in technical sciences.

In parallel with his didactical and scientific activity, Professor Aurel Nanu holds also administrative and managerial positions:

1952-1953: technical advisor for the Ministry of Electrical Engineering;

1954: head of the Electrical Engineering Research Institute, Timișoara Base, as part of the Ministry of Electrical Engineering;

1966-1968: vice rector of the Polytechnic Institute of Timișoara;

1981-1995: member of the Superior Degree Commission of the Education Ministry;

1994-1999: the first rector of the "Tibiscus" University of Timișoara. But his most cherished administrative position is the one he held for more than four decades, as head of the Mechanical Technology Department, also called "Nanu's Department".

By approaching the study of new technologies, initially called electrotechnologies and later renamed to nonconventional technologies, and by being a real pioneer in the country, Aurel Nanu becomes the father of nonconventional technologies in Romania.

As such, he organizes the first laboratory of electrotechnologies in Romania, in 1957-1958, at the Mechanical Technology Department, and in 1974, he becomes the head of the Research Center for Nonconventional Technologies, newly established by the Ministry of Education in the "Traian Vuia" Polytechnic Institute of Timișoara.

Due to the remarkable activity in this field, the Commission of Research for Nonconventional Technologies, Timișoara branch, is created in 1985, under the auspices of the RSR Academy. Professor Aurel Nanu becomes its president.

Upon the initiative of Professor Nanu, the Romanian Association for Nonconventional Technologies is created in 1993, with Professor Nanu as the elected president.

Due to the results obtained in this field, a nonconventional technologies specialization is created inside the Manufacturing Engineering specialization.

In 1980, it becomes one of the principal specializations of the Mechanical Faculty, the first of its kind in the country, with several others being established later on in the technical universities of Bucharest, Brașov, Iași, Sibiu, Oradea, Cluj, Suceava.

From his first steps in the didactical career and until 1993, when he retires, Professor Aurel Nanu delivered lectures and practical activities for several topics: at the Electrical Engineering Faculty, *The basics of electrical engineering, Electrotechnical materials, The technic of high voltage, transportation and distribution of electrical energy, Materials technology*; at the Physics Faculty, *Industrial knowledge*; at the Mechanical Faculty, *The technology of plastics, Materials technology, The theoretical bases of processing through nonconventional technologies, Climatic protection of industrial products*.

In his starting days, Professor Nanu was a solitary researcher, struggling to succeed. In full creative and working strength, he gave everything he could to education and science, until, thanks to his acquired experience, his performance, national and international recognition, from his position as both department head and doctoral coordinator, he no longer works alone. He trains his research colleagues, in the beginning collaborating with them for a topic and later on guiding them for their own research.

While training his colleagues for doing research, himself being an adept of symposia, scientific sessions and conferences, he “forced” them to materialize the results of their research by writing scientific papers to publish. He taught them to organize conferences, but he remained the brains behind all scientific manifestations of the department.

And, in his care as a spiritual father, he encouraged them to apply for doctoral studies. With a general overview of the problems in the industry, he guided the themes for the theses towards the needs of the industry, in order to resolve these problems through research. In this way, Professor Aurel Nanu had a decisive contribution in the scientific formation of his collaborators; he formed them as humans, and their words and thoughts can never be enough to thank him.

Together with his retirement, he becomes a consulting professor of the „Politehnica” University of Timișoara, continuing his activity in the department which is his second family (fig. 2). He now pays special attention to doctoral coordination and nonconventional technologies development.

He was awarded the title of *Professor Emeritus* in 2015.

For his impressive research and didactic activity, as well as for the remarkable cooperation with other

university centers, three of these award him with the title of *Doctor Honoris Causa*:

1995: *Doctor Honoris Causa of the “Lucian Blaga” University of Sibiu*;

1997: *Doctor Honoris Causa of the Technical University Cluj - Napoca*;

1998: *Doctor Honoris Causa of the University of Craiova*;

2007 *Doctor Honoris Causa of the “Gheorghe Asachi” Technical University of Iași*.

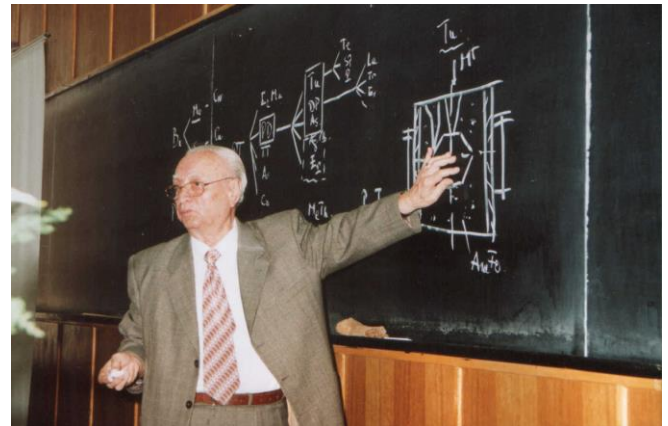


Figure 2. Displaying the research results

He was also awarded the title of Professor Honoris Cause of the „Tibiscus” University of Timișoara.

The remarkable accomplishments of his professional life were complemented by his sports activities: he excelled in athletics and ice-skating, where he stepped on the podium of various competitions. A special place in his life was fencing. He was the president of the Municipal Club “Speranța”, and in 1949 he started the *Fencing Section* of the Politehnica.

Next to the professional achievements, Professor Aurel Nanu fully lived the joy of family fulfilment (fig. 3).



Figure 3. Professor Aurel Nanu with his wife and two sons



Figure 4. Professor Aurel Nanu at 95

The *family* was and is the meaning of his life. He lived for his family and his family stood by him, especially his wife, Mrs. Felicia Nanu, a music and mathematics teacher.

At the beautiful age of 95, recently reached, Professor Aurel Nanu gladly remembers everything beautiful in his life, but he also suffers the loss, one by one, of his dearest ones: his son Șerban, his wife and then his son Dan. Now, his life is brightened by his grandchildren Bogdan and Cora and their children.

His second family includes the members of the Materials Technology Team from the Department of Mechanical Machines, Equipment and

Transportation of the Mechanical Faculty, Politehnica University Timișoara.

As a sign of exquisite appreciation and with great affection, at his 95th anniversary (fig. 4), we tell him:

Happy birthday, Professor!

REFERENCE

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