

DORIN PAVEL,  
INITIATOR OF THE ROMANIAN HYDROPOWER  
– 100 YEARS FROM HIS BIRTH –

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Usually, in the memory of a nation or of the entire humanity, persist especially the artists, the writers and those who make the history. But I consider that, in some way, we have to honour with gratitude those who, through their discoveries and technical achievements, have contributed to the progress of our civilization.

Among them a praiseworthy place has got *Dorin Pavel*, born on May 31, 1900, in Sebeș – Alba, the son of the teacher-inspector Ion Pavel and of Letiția – the elder sister of the world-known poet and philosopher *Lucian Blaga*. He attended the primary school and the German school in his native town, the high school in Orăștie and Brașov, graduating in 1918.

Fascinated since a child by the waters of the Sebeș river on the Valea Frumoasei (Beauty Valley), Dorin Pavel was attracted by the mirage of how to control and use the huge forces of the waters, which made him decide to attend the Polytechnic School in Zurich – Switzerland, where he got his diploma as an electromechanic engineer in 1923, and the title of master in technical sciences in 1925.

Dorin Pavel confirmed in a letter dated 1970 and addressed to my father (a very good friend from his childhood) that: “It is true that I was offered a chair in Zurich, where I had been known since 1922, when, in a contest, I was the only laureate of the “Studio Labory” prize, honoured with a diploma, a medal and 500 golden francs, for the book “Mechanical adjustment of the water turbines – estimation and critical analysis” (published in German).

After being part of the teaching staff at the Swiss Polytechnic, stimulated by an irresistible desire to be useful to his country, he returned to Romania, but was only admitted to teach at the Polytechnic School in Bucharest in 1935, following a contest, so that for 10 years he taught at the Romanian Aeronautical School and at the Electrotechnical Institute of the University in Bucharest.

After delivering, for 10 years, courses of hydraulic, hydraulic machines, aerodynamic and aircraft, starting 1935 till 1970, Dorin Pavel taught water falls and hydraulic machines at the Bucharest Polytechnic, hydraulic, machines and hydroelectrical power stations at the Electromechanical Faculty; hydraulic

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machines at the Faculty of Mechanics; hydroenergetics, hydraulic machines, network hydraulic transports at the Faculty of Energetics; he was also the author of 22 courses and text books, of over 150 works and papers in the following fields: mechanics of the fluids, hydraulics, hydraulic machines and hydroenergetics, totalizing over 11,000 pages with plates and drawings. Moreover Dorin Pavel was interested in newspapers and magazines focusing on scientific aspects in all the fields, as well as in public conferences or radio and television broadcastings.

Dorin Pavel's theoretical activity was sustained in practice through the development of academician Vâlcovici's laboratory, the initiation of a hydraulics laboratory and, later on, within the Romanian Academy by academician D. Dumitrescu. Followed the participation on the field in the building sites both with students and with specialists, engaging during the decades in projects of hydroenergetical equipment of water courses on the Romanian territory.

The professor engineer Dorin Pavel represented the Romanian science and technique not only in conferences and reunions in the country, but also in foreign cities like Berlin, Washington, Belgrade, Stockholm, Moscow, Ljubljana, and some of the results of his researches have been quoted by specialists from Switzerland, Austria, Germany, Czechoslovakia, Bulgaria, Hungary, etc.

For Dorin Pavel, the didactic activity was "a vital necessity, a great passion (...) I was born in a schoolmaster's family (...). All my life I've spoken freely, avoiding resorting to the very convenient solution of reading the course or the epitomes, as long as I pretend from all my students at the exams to answer by their memory." The teacher Dorin Pavel knew how to cultivate in his disciples the love for the profession of a hydroenergetician, harmonizing cleverly the courses, the plan and the effective work on the building sites. He considered the tendency of some teachers of favoring the exclusive theoretical exposes as a prejudice to the work of research and for a proper practice.

He worked hard for almost 40 years on the building sites and over 50 years at the University department, being very proud of his contribution to the training of specialists whom he considered "really first-rate engineers, teachers and researches for higher technical education."

During his life, Dorin Pavel conducted a huge activity, working even on Sundays and on holidays to draw up the schemes of 567 hydroelectrical power stations on all the rivers in Romania, with technical and economic data, thus contributing to the achievement of field projects involving the domestic energetic potential such as: the lakes system of Bucharest, the Dobrești power station, all the hydropower stations on the Bârzava, Bistrița, Sadu, Argeș, Lotru, Sebeș, Someș, Olt, Siret, Râul Mare, Drăgan and Porțile de Fier; solutions to the hydraulic components of the thermoelectrical power stations from Doicești, Sângeorgiu-de-Pădure, Paroșeni, Luduș, Craiova, Mintia-Deva, and, finally, regarding the irrigation systems in the meadows of the Siret and Jiu rivers.

At the same time, in different periods, Dorin Pavel was part of the technical staff of several companies and institutions such as: SAR Electrica, UC Bucharest, ISPH; in several ministries – the Ministry of Energy, Forest Economy, Machine Building, Metallurgy, the State Committee of waters, the Institutions of Energy within the Romanian Academy, the Romanian Yugoslav Committee for the Iron Gates (Porțile de Fier), the Romanian-Bulgarian Committee for Islaz, and Energetical Committee by the CMEA, etc.

Dorin Pavel was honoured with titles, distinctions and rewards: member of the Romanian Academy of Sciences (1934), professor emeritus (1964), State prize (1950 and 1952), Order of Labor (1960 and 1970), Order of the Romanian Star (1966), the Order of the Yugoslav Star.

A synthesis of Dorin Pavel's professional vision as a hydroelectric engineer, is his book printed in 1935: "Plan général d'aménagement des forces hydrauliques en Roumanie", a very complex writing including almost all the future hydrotechnical management of the Romanian waters.

Work was the creed of Dorin Pavel's life in a prodigious scientific career, sustained by a convinced sportsman's health, a passionate tourist, a skier and a swimmer endowed well balanced psychophysical system.

Dorin Pavel the teacher and the man was much loved and admired both by his students and his colleges. Here I quote just a few appreciation:

– "The engineer and teacher Dorin Pavel was indeed a very enthusiastic skilled person well trained for a hydrotechnician's profession which he loved starting from the Polytechnic School." (Prof. R. Prișcu)

– "Dorin Pavel formed, together with Dionisie Ghermani and Cristea Mateescu, the tripod on which the Romanian hydraulic School was built." (Acad. D. Dumitrescu)

– "Talking about the teacher, the engineer, the scientist Dorin Pavel, we can not avoid emphasizing his talent, his technical intuition, his analytical and novel spirit, his didactic, technical and scientific activity, his invaluable contribution to the development of Romanian hydrotechnics and the highest moral qualities of the man, his enthusiasms and his generosity, his persistent and huge working strength, his technical knowledge, his modesty, all of could which be a permanent example for all his assistants." (Prof. F. Iorgulescu)

– "He inspired us the love for the profession we chose, always pointing cut in front of its special beauty." (Engineer Mihaela N. Cornea, when a student)

Dorin Pavel finished this life on July 6, 1979, in Bucharest, and was buried near his parents and ancestors in his native Transylvanian village of Lancreăm.

He was above all a skilled technician, but also a great master, a man who loved nature, a never-failing patriot, but also a fine artist, a poet and not only an architect of the waters.

His biographical book “The architecture of the waters”, might look like Schubert’s Unfinished Symphony, a very sad but beautiful sunset. We are rather tempted to consider it as the masterpiece of the entire work of this notable representative man of culture and technique, engaged in a tireless endeavor for the good of our people.

To the memory of Dorin Pavel, in Sebeş, near the Electrical Power Station, his bust was raised, made by the sculptor Constantin Popovici; also a street in Sebeş and the Industrial School Group in Alba Iulia bear his name. As a posthumous homage, on the occasion of 750 years of certified existence of our city, Sebeş (1245–1995), Dorin Pavel was awarded the title of “Citizen of Honour”.