

IN MEMORIAM**PROF. DR. ENG. DHC FLOREA DUDIȚĂ (1934 – 2025)**

Professor Florea Dudiță was a distinguished professor at the Transilvania University of Brașov and an eminent personality in technical higher education and engineering scientific research in Romania and worldwide.

He was born in 1934 in Dejești, Olt County, Romania. He pursued his university studies at the Polytechnic Institute of Brașov and the Institute of Automobiles and Tractors in Moscow, graduating in 1958 with honors. He was assigned to the Truck Manufacturing Company in Brașov and, in 1959 he transferred by public competition to the Polytechnic Institute of Brașov, Department of Mechanisms and Machine Components.

In 1964, he enrolled in a PhD program at the Polytechnic Institute of Bucharest, specializing in Applied Mechanics under the supervision of Acad. Prof. Radu Voinea. In 1966, he earned his PhD in Engineering with the thesis titled: *Contributions to the Theory of Polycardanic Transmissions*.

Between 1971 and 1991, he was a fellow of the Alexander von Humboldt Foundation, completing two specialization stages in Germany—the former in Braunschweig (1972), and the latter in Berlin (1991).

He followed an exceptional academic and scientific career, progressing through all the stages of a university career up to full professor. Prof. Dudiță achieved international recognition for his pioneering work in applied mechanisms and robotics. His original contributions to the structural synthesis and modeling of Cardan transmissions—published in Romanian, German, French, English and Russian—are considered landmark references in the field.

In recognition of his scientific contributions, he became the first Romanian engineer elected as a corresponding member of the Association of German Engineers (VDI) in 1995. He was a founding member of IFToMM (International Federation for the Promotion of Mechanism and Machine Science) and played an important role in the establishment of the modern Romanian School of Mechanism and Machine Theory.

In 2004, he was elected an honorary member of the Romanian Academy of Technical Sciences (ASTR), and since 2006 he has served as Honorary President of the Romanian Mechanism and Machine Science Association (ARoTMM).

Prof. Dudiță also received the Ministry of Education Award in 1966 and was awarded the Medal of the Automobile Engineers Society (SIA) in Paris in 1969. In 1971, he was elected a member of the Mechanisms Commission of the Association of German Engineers (VDI). In 1986 and 1989, he was elected chairman of the IFToMM Technical Committee for Linkages and Cams, and in 2009, he received the IFToMM Certificate of Merit.

He was a founding and honorary member of the Romanian Robotics Society (SRR), founder and coordinator of the Robotics School at Transilvania University of Brașov, focusing especially on diversifying and optimizing mechanisms for industrial robots. In recognition of his academic legacy, the Technical University of Cluj-Napoca awarded him the title of Doctor Honoris Causa in 2004.

Prof. Dudiță's more than 40-year career in scientific research was marked by passion and competence. The results of this work were reflected in numerous publications: over 150 published articles, 57 patents (earning him the title of Elite Inventor from the Romanian Inventors Society and the Inventics Commission of the Romanian Academy), and over 30 scientific research contracts. Appointed PhD advisor in 1976 in the fields of Mechanisms and Industrial Robots, he mentored 35 doctoral students.

He also published a wide range of academic courses on the theory and practice of general mechanisms and industrial robots mechanisms, as well as 10 monographs, including: *Cardan Transmissions* (1966; *Kardangelenkgetriebe* (VDI-Verlag, Düsseldorf, 1973 – Germany), for which he received the Aurel Vlaicu Prize of the Romanian Academy *Transmissions par cardan* (1973 – France); *Structure and Kinematics of Mobile Coupling Mechanisms: Homokinetics* (1974); *Structural Optimization of Mechanisms* (1987 – also awarded the Aurel Vlaicu Prize); *Articulated Mechanisms: Inventics and Kinematics in a Phylogenetic Approach* (1989); *Articulated Mobile Couplings* (2001); *Podomorphic Mobile Couplings* (2001); *Cardan Transmissions* (2003).

A man of great spirit and intellect, Prof. Florea Dudiță published several volumes of aphorisms, focused particularly on academic life and beyond, which were and continue to be very well received.

Professor Dudiță combined a long-standing career as a scientist and inventor with managerial roles. He served as Vice-Rector (1972–1974) and Rector (1974–1984) of the University of Brașov, and as Head of the Department of Machine Components, Mechanisms and Technical Drawing (1984–1990). His commitment to post-communist Romanian society led to roles such as Senator in Romania's first Parliament, Chairman of the Senate Foreign Affairs Committee, and Romanian Ambassador to Germany (1993-1997). In 2019, on his 85th anniversary, the leadership of Transilvania University of Brașov awarded him the title of "Professor Emeritus" for his outstanding contribution to the University's development.

Professor Florea Dudiță was a remarkable example of scientific rigor, creative spirit, and determination. The passion and dedication with which he devoted himself to the study of mechanisms and robotics have inspired and continue to inspire many generations of students and professors. He was an exceptional man and a remarkable professional, esteemed and respected by all who knew him—colleagues and students alike.

Prof. Dr. Eng. Codruța Jaliu
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