

## Professor Floran Vila Acad.

Elected 2008

Floran Vila is a distinguished Albanian physicist and Academician with a career spanning more than six decades. He is recognized for his significant contributions to electricity, polymer physics, and atmospheric physics, as well as to scientific research and university education in Albania, and his interaction with European universities and research centers, through joint projects. He completed his studies in Physics at the University of Tirana (1960–1964). He later earned his PhD (1981) and was awarded the academic titles of Docent (1986) and Professor (1994) by the High Commission of Attestation and the Scientific Qualification Commission. Among his distinctions are the Order Naim Frashëri, awarded by the Presidium of the People's Assembly in Tirana in 1979, and the Honor Award, conferred by the Balkan Physical Union in



### Professional position

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- Head of the General and Experimental Physics Department from 1994 to 2007
- Head of the Commission for Physics and Chemistry since 2023.

### Research Expertise

- **Electricity & Electrostatics:** He has conducted extensive research into **static electricity**, focusing on its elimination in industrial settings like the textile industry through air ionization and changing fiber conductivity.
- **Polymer Physics:** His work includes studying the **electrical properties of polymers**, surface modification under corona discharge, and the effects of electron-beam irradiation on dielectric materials.
- **Atmospheric Physics:** He has led research on the **electrification of the atmosphere**, aerosol measurement methodologies, and the impact of air pollutants on the environment.
- **Gas-dynamics:** He served as a leader for research evaluating the immobilizing effects of conventional and nuclear ammunitions through gas-dynamics and nuclear physics.

### Key Publications

University Textbooks: Co-authoring foundational books including Mechanics (1990), Electromagnetism (2005), and Modern Physics (2009), and authored Fundamentals of Optics (2024).

Teaching Experience: Lecturer of Electromagnetism, Modern Physics, Optics, and Atmospheric Physics across all three cycles of university education.

Scientific Articles: Publications in international journals such as the *Journal of Electrostatics*, *IEEE Transactions on Dielectric and Electrical Insulation*, and the *Albanian Journal of Natural and Technical Sciences*.

**Vila F, Mandija F. 2009.** The altitude profile of air ion concentration, and the determination of the recombination and attachment coefficients in the suburbs areas. *Journal of Electrostatics*, V. 67, p. 492-495, 2009.

**Lukaj E, Vila F, Mandija F. 2016.** Impact of radon gas concentration in the aerosols profile," *AIP (American Institute of Physics) Proceedings*, 1722, 270005.

**Vila F, Sessler GM. 2001.** Influence of Electron Beam Irradiation on Electric Parameters of Dielectric materials. *Journal of Electrostatics*, 51&52, 146-152.

**Vila F, Sessler GM, Sykja H. 2005.** The influence of electron beam irradiation on the volume resistivity of polyethylene and kapton. *Journal of Electrostatics*, V. 63, Issues 6–10, 749.

**Vila F, Dhima P, Mandija F. 2013.** The influence of temperature on the electrical resistivity of the cellular polypropylene and effect of activation energy. *SpringerPlus*, 2, 472.

**Vila F. 2002.** General theory to determine the Critical Charge Density. *IEEE Transactions on Dielectrics and Electrical Insulation*, Vol. 9, No. 2, 300-307.

**Vila F, Touchard G. 1997.** Computation of charge and field in a metallic sphere dielectric flat plate configuration. *Journal of Electrostatics*, 40&41, 121-126.