

**Sergey Leble (1945-2021)**  
a versatile and deep scientist, a wonderful teacher  
and a modest person



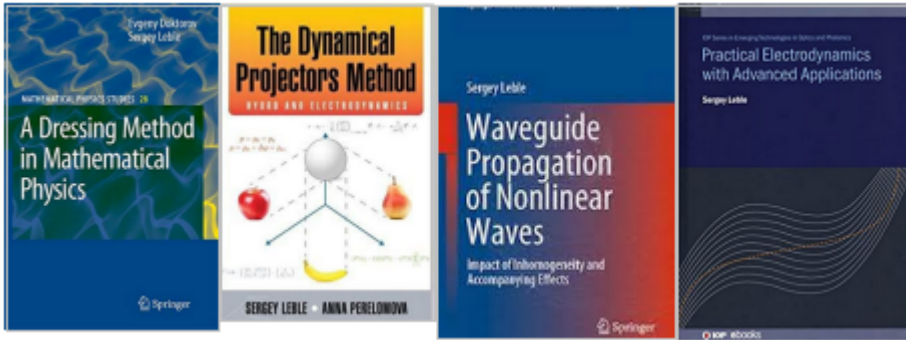
Sergey Leble was born in Sretensk, Russia in June, 1945. He graduated from the secondary school in Arkhangelsk in 1962 and from the Leningrad State University in 1968 with a specialty in theoretical physics. He conducted post-doctoral studies in the subdivision of nuclear theory and elementary particles at the Leningrad State University, where he completed his PhD thesis entitled *Theory of elementary particles in spaces with curvature* under the supervision of Igor Terentyev in 1974. His full PhD entitled *Waveguide propagation of nonlinear waves in layered media* received an award of the Leningrad State University in 1987. He worked as professor from 1988, and Head of the Theoretical Physics Department at the Kaliningrad State University from 1989. He was professor at the Gdansk University of Technology in Poland in 1995-2015. He was employed as professor at the Baltic Federal University. Sergey was a teacher by vocation and educated 14 PhDs and 5 professors.

I believe that no one would be able to objectively determine Sergey's contribution to the various areas of physics. He was a modern encyclopedist and worked productively in many fields of physics, including, but not limited to: elementary particles, quantum mechanics, quantum electrodynamics, electrodynamics, theory of waves, kinetic theory of gases, geophysics, and evidently high level mathematics adapted to these fields. In the last years of his life, he successfully dealt with magnetic materials.

It is his contribution to the theory of waves in relation to the mechanics of continuous media that deserves mentioning. He designed and applied a method to determine modes and derive and solve coupling equations for interacting modes in highly complex flows in waveguides and inhomogeneous media. This applies to flows of boundary layers with large gradients of background parameters and to the atmospheric gas motion.

Sergey taught general and special courses in all areas of theoretical physics. He also offered many courses bordering on theory, experiment and numerical modeling. He was an author of chapters in collective monographs and of approximately 200 scientific works in the field of theoretical and mathematical physics. Sergey's books include:

- (with Ivanov A.I.) Secondary quantization methods, Kaliningrad Univ. Press, 1981
- (with Zaitsev A.A.) Theory of nonlinear waves, Kaliningrad Univ. Press, 1984
- New methods in Nonlinear wave theory, Kaliningrad Univ. Press, 1987
- Waveguide propagation of nonlinear waves in stratified media, Leningrad University, 1988
- (with Shchekin A.K., Vereschagin D.A.) Introduction to physical kinetics of rarified gases, Kaliningrad Univ. Press, 1990
- (with Kshevetsky S.P.) Mathematical methods of theoretical physics, Kaliningrad Univ. Press, 1995
- Darboux transformations, Moutard transformations. In: Encyclopedia of Mathematics. Dordrecht: Kluwer, 2000, pp 148-150
- S. Leble, **Nonlinear Waves in Waveguides with Stratification**, Springer-Verlag, 1991
- E. V. Doktorov, S.B. Leble, **Dressing Method in Mathematical Physics**, Springer 2008
- S. Leble, A. Perelomova, **The Dynamical Projectors Method. Hydro and Electrodynamics**, CRC Press , 2018
- S. Leble, **Waveguide Propagation of Nonlinear Waves**, Springer-Verlag, 2019
- S. Leble, **Practical Electrodynamics with Advanced Applications**, IOP Publishing, Bristol, UK, 2021



The publications in the recent years were numerous: 2018-8; 2019-8; 2020-7; 2021-6. They address a variety of scientific topics. This would be absolutely amazing even if Sergey were 30 years younger.

Sergey retained a lively mind, efficiency, interest in science and life, working until the last day of his life. He paid much attention to his students and dedicated one of his books to his present and former students. He taught each and every student regardless of his or her level and abilities.

Let me quote Abraham Lincoln's words:

**“And in the end it's not the years in your life that count; it's the life in your years.”**

I believe there was a lot of life in all Sergey's years. He was a devoted friend, loving and beloved husband, brother and father of three children, grandfather of five grandchildren and great-grandfather of three great-grandchildren. He wrote amazing poetry, was a connoisseur of literature and art, loved fishing and long walks.

Anna Perelomova

