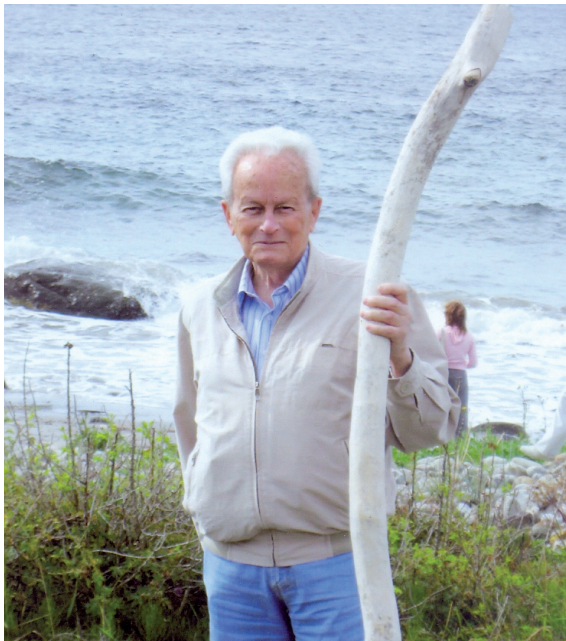


Lev Abramovich Rivlin



Doctor of Physicomathematical sciences, professor Lev Abramovich Rivlin, an outstanding physicist, a scientific head of the Laboratory of Applied Physics of Moscow State Institute of Radio Engineering, Electronics and Automation was 90 on 14 March 2012.

Lev Abramovich Rivlin was born in Khar'kov in 1922. He became absorbed in physics already in his youth, and at the age of 14 he was elected a president of M. Faraday City Junior Physicists' Society. During his school years, he met A.F. Ioffe, P.L. Kapitsa, Frederick and Irene Joliot-Curie.

L.A. Rivlin graduated with honours from the Leningrad Polytechnic Institute. It was written in his diploma: 'Date of entry – 1940, date of graduation – 1950'. At the age of 19, student Lev Rivlin joined the People's Volunteer Corps. He miraculously survived after a blast injury in 1941–1942 at the Leningrad front. He was nursed back to health by fellow soldiers, who gave him coniferous concoction to cure in trench shelters. From those wounded at the front and sent to blockaded Leningrad, virtually nobody survived. Lev Abramovich returned to duty, served in the reconnaissance corps till the end of the war and was awarded battle decorations. In 1946 he again became a student. After graduating from the Leningrad Polytechnic Institute, L.A. Rivlin began working at POB No. 17 (now, the Federal State Unitary Enterprise – Research and Production Corporation 'Istok'), where he defended the candidate's thesis and became the leading specialist in the field of microwave generators.

At the beginning of the laser era, in 1962 L.A. Rivlin accepted the proposal of M.F. Stel'makh and became one of the researchers at POB No. 2008 (now, the 'Polyus' Research and Development Institute). Even before it, in January 1961 he put forward the idea of a nuclear gamma-ray laser. This invention application is now accepted worldwide as a starting

point in the development of a new branch of physics, which was later termed by the author the 'quantum nucleonics'. In the last decades this direction, representing continuation and expansion of quantum electronics to the nuclear region and gamma-ray frequency range, has become the focus of scientific interest of L.A. Rivlin.

L.A. Rivlin and his co-workers were the pioneers in the study of ultrafast dynamics of semiconductor lasers. He proposed such concepts as suppression of amplified spontaneous noise with the help of saturable filters, generation of giant pulses using a phototropic filter, and the transmission of optical images in a single multimode fibre. Later, he put forward the idea to transmit quantum images using strongly cooled atoms. In a series of papers on the classical electrodynamics of nonplane physically realised waves, Lev Abramovich found subtle effects of the dispersion of waves in the free space of sub- and superlight propagation and also revealed the possibility of assigning the nonzero inertia and gravitational rest mass to photons of these waves. The electrodynamics of nonplane waves is another field of present scientific activity of L.A. Rivlin.

L.A. Rivlin is a permanent member of the Editorial Council of Kvantovaya Elektronika from the time of its foundation. He is a member of the American Physical Society and of the British Royal Society of Electric Engineers. The list of his scientific publications, published mainly without co-authors, includes more than 200 papers. Many of his pupils have become candidates and doctors of sciences, and his former students remember him as a brilliant and profound lecturer.

Outlining the scope of his scientific interests, the hero of the day – with his usual self-irony – once wrote: 'Along with three main blocks of my exercises, i.e., investigation of dynamics of laser radiation (in particular, semiconductor laser radiation), quantum nucleonics and nuclear gamma-ray lasers, electrodynamics of 'planeless' waves with a finite mass of rest of a photon, the list of my publications includes traces of single 'wild attacks' on the fields of physics that for some reasons suddenly aroused my interest and where I was a perfect ignoramus. They are about Cerenkov radiation, waveguide image transmission, collective coherent phenomena in beams of charged particles, some cosmological issues, test of frequency independence of a quantum of action, spectroscopy in a superstrong gravitational field, two-quantum photon–phonon laser, optical definition of infinity, gravitational self-confinement of photons, Bose–Einstein condensation, acceleration of ultracold neutrons, etc. Such 'pantophagy' is unacceptable for a serious scholar, but I have always been by nature a frivolous and addictive free-lancer!'

Lev Abramovich possesses a remarkable sense of humour, intelligence, great kindness, high culture, decency and invariable optimism. Personal contacts with him are always joyful and rewarding.

All who were lucky to work under the supervision of Lev Abramovich or to cooperate with him, as well as the Editorial Council, the Editorial Board, and the Editorial Office of Kvantovaya Elektronika sincerely wish the dear hero of the day good health, happiness, good spirits, and further creative successes.