

Obituary

On April 5, 2018, after a severe and prolonged illness, the habilitated doctor of physics, Professor Yuri Shunin, passed away.

Yuri Shunin was born on March 6, 1951 in Riga. In 1968 he successfully graduated from Riga secondary school No.1 with a physical and mathematical bias and in the same year entered the Moscow Physical-Technical Institute (faculty of aerophysics and space research). He graduated in 1974 with a degree in "aerodynamics and thermodynamics." In the same year, he started working at the Riga Institute of Civil Aviation Engineers (as a senior engineer, junior research assistant, and assistant professor). The Institute was later transformed into the Riga Aviation University. In 1982 he defended his thesis for the degree of Candidate of Physical and Mathematical Sciences at the Institute of Physics of the Latvian Academy of Sciences. Since that time, he joined the teaching activity (as a senior lecturer, associate professor, professor) developing and successfully implementing educational programs in semiconductor physics and electronics, information systems and technologies, programming, computer modelling of the ideal and disordered structure of solids, *etc.* At the same time, he conducted an active research work: together with his scientific supervisor Professor Kurt Schwartz, he adapted the theory of scattering to the simulation of the electronic structure of semiconductors.

In 1992, Yuri Shunin defended his thesis for the degree of Doctor of Physical and Mathematical Sciences at the St. Petersburg A. Ioffe Physico-Technical Institute of the Russian Academy of Sciences. In 1993, this degree was nostrified, and he became Habilitated Doctor of Physics of the Republic of Latvia. In 1995, he became a professor at the Riga Aviation University, where he supervised the Department of General and Applied Physics since 1998. Since 1999, Yuri Shunin headed the Department of Fundamental and Social Sciences of the Institute of Transport and Telecommunications. Later, he headed the Department of Natural Sciences and Computer Technologies at the Institute of Information Systems Management (ISMA), where he was elected Vice-Rector on Innovation issues in 2003. Since 2006, Professor Shunin has been approved as the state Professor of the Republic of Latvia. He was the Director of ten educational programs as well as an expert of the Latvian Council of Science. He was the Coordinator and participant of a number of international scientific programs, including the Latvian-Belarusian project "Correlation of electromagnetic, mechanical and heat properties of aerogels and polymer composites with nanocarbon inclusions" (2014-2015). In addition, he regularly maintained scientific contacts with the staff of universities and research institutes in Germany, Italy, Finland, Lithuania, Israel, Ukraine, Russia and Kazakhstan.

Professor Shunin was the organizer of a number of international conferences, including annual "Information Technologies and Management" (since 2003, Riga), as well as NATO Advanced Research Workshop: Nanomaterials and Nanodevices for Ecological Security (2012, Jurmala). He was an editor of several scientific journals, including Computer Modeling and New Technologies (since 1999) and an author of 77 articles published in the international scientific journals. Latest scientific book prepared by him (Yu. Shunin, S. Bellucci, A. Gruodis, T. Lobanova-Shunina, "Nonregular Nanosystems: Theory and Applications", Cham, Switzerland, Springer, 406 p.) has been published in January 2018.

From the beginning of 2000s, Professor Shunin was actively involved in the research work at the Institute of Solid State Physics of the University of Latvia. Particularly, he was energetically engaged in the development and implementation of two international scientific projects approved by the European Commission: CATHERINE (Carbon nAnotube Technology for High-speed nExt-geneRation nanoInterconNEcts), 2008-2010 (in close cooperation with 10 groups from five EU countries), and CACOMEL (Nano-carbon based

components and materials for high frequency electronics), 2011-2014 (in cooperation with groups from three EU countries, as well as Russia and Belarus). He essentially contributed to preparation of 37 joint articles with us in the international scientific periodicals and more than 100 presentations in scientific conferences. Moreover, four of his former students are successfully working now at the Institute of Solid State Physics (ISSP), three of them have obtained a doctoral degree in German universities. Thanks to substantial development of joint scientific activity Professor Shunin officially became a staff member of the ISSP Laboratory of Computer Modeling of the Electronic Structure of Solids since the beginning of 2012.

The bright image of Professor Yuri Shunin and his work will forever remain in the hearts and memories of his students, colleagues and all who were lucky to work with him.