

**Valerii Volodymyrovych Buldygin**



It is with great sorrow that we inform you about the death of our colleague and friend, member of the Editorial Board of this journal, Professor Valerii Volodymyrovych Buldygin on April 17, 2012 from a painful disease.

Valerii Volodymyrovych Buldygin was born on November 5, 1946 in Tbilisi. In 1965, he entered Taras Shevchenko Kiev National University and graduated from the Faculty for Mechanics and Mathematics in 1970. He was granted the gold medal of the Ministry of Education of the Soviet Union for his graduation theses.

After obtaining his Ph.D. in 1973 from the Department of Probability Theory and Mathematical Statistics of Taras Shevchenko Kiev National University, he joined the Institute of Mathematics of the National Academy of Science of Ukraine and worked under the supervision of Anatolii Volodymyrovich Skorokhod till 1986. In 1982, he obtained the degree of Doctor in Physics and Mathematics (equivalent of Dr. hab.). Valerii Buldygin was appointed as the Head of the Department of Mathematical Analysis and Probability Theory of the National Technical University of Ukraine “Kyiv Polytechnic Institute” in 1986 and guided this department till his death. He was promoted to Professor in 1987. Jointly with his colleagues, he won the State Prize of Ukraine in the field of Science and Technology in 2003 for a number of monographs “*Analytic and asymptotic methods of investigation of stochastic systems and their applications*”. He was awarded the title of the Honored Man of Science and Technology of Ukraine in 2009.

The field of his mathematical investigations was very broad. In the 1980th, his scientific interests, as a researcher of Institute of Mathematics, were concentrated on the convergence of random elements in linear spaces. Well known are his results on the sums of independent random elements in Banach spaces (a generalization of the Lévy inequality,

comparison principle for series of independent terms, contraction principle for Gaussian random variables, etc). His Doctoral dissertation “*Convergence of Random Elements in Topological Spaces*” was published in 1980 by Publishing House “Naukova Dumka,” Kiev. In 1985, he coauthored another monograph “*The Brunn–Minkowski inequality and its applications*” (written jointly with A. Kharazishvili). The latter monograph was later translated into English by Kluwer Academic Publishers in 2000.

In the 1970s, he started to study the concept of sub-Gaussian distributions. His results on this topic are summarized in the monograph “*Metric characterization of random variables and random processes*” written jointly with Yu. V. Kozachenko (Russian edition is published by TBiMC in 1998, and the English edition appeared in 2000 via AMS). Simultaneously, he developed the methods for studying the oscillatory properties of Gaussian sequences and the limit theorems for sums of independent random terms with operator normalizations. These results were included in his monograph “*Functional methods in problems of the summation of random variables*” written jointly with S. A. Solntsev (Russian edition appeared in 1989; it was translated into English in 1997 by Kluwer Academic Publishers).

In the 1990s, he studied the statistical properties of the estimators for correlation functions of stationary Gaussian stochastic processes and random fields, asymptotic behavior of solutions of stochastic difference equations, exponential estimates for the distributions of maxima of stochastic processes. Other fields of his interests covered, in particular, the statistical estimates of impulse transfer functions for linear systems, properties of empirical correlograms, and the Lévy–Baxter theorems for shot-noise processes.

In the last decade, his interests switched to studying the so-called generalized renewal processes and the corresponding classes of functions. He introduced the so-called functions with a group of regular points and proved an analog of Karamatas representation theorems for them. His last monograph “*The pseudo-regularly varying functions and generalized renewal processes*” (TBiMC, 2012) written jointly with K. -H. Indlekofer, O. I. Klesov, and J. G. Steinebach appeared soon after his death.

Valerii Volodymyrovych gave all his life to the development of mathematical science and the upbringing of young scientists. He authored more than 10 monographs dealing with important problems in probability theory, theory of stochastic processes, and function theory. His scientific heritage consists of 250 papers and contains many teaching and methodological materials. There are 3 full professors and 14 Ph.D.’s among his disciples.

It is difficult to write in the past about Valerii Volodymyrovych Buldygin, who was a bright outstanding personality full of energy and plans for future. We sympathize with his wife Natasha and all members of his family in their sorrow and share the mourning of all friends and colleagues, all Ukrainian mathematical community, and those colleagues all over the world who knew and loved Valerii Buldygin and worked with him.

*Editorial Board*