

**DMITRII S. SILVESTROV**  
**(ON THE OCCASION OF 70TH BIRTHDAY)**

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Dmitrii Silvestrov graduated with distinction from Kiev University (Faculty of Mechanics and Mathematics) in 1968 and became a postgraduate student at the Department of Theory of Probability and Mathematical Statistics, under supervision of Professor M. Yadrenko. In 1969, D. Silvestrov defended the Candidate of Science (Ph.D. equivalent) dissertation [1], devoted to limit theorems for semi-Markov processes. In 1973, he has got the Doctor of Science degree in the area of theory of probability and mathematical statistics. In the second dissertation, [2], Dmitrii Silvestrov developed an advanced theory of limit theorems for randomly stopped processes, which gives effective general conditions for weak convergence and convergence in topologies U and J for compositions of càdlàg processes.

In 1973, D. Silvestrov was awarded the Prize of the Moscow Mathematical Society on the recommendation of Academician A. Kolmogorov, who was at that time the President of this society, and, in 1977, the Ukrainian Ostrovsky Prize, for works on stochastic processes. The extended variant of the theory of limit theorems for randomly stopped stochastic processes is presented in the book [8].

In 1974, Dmitrii Silvestrov has got a professor position at the Department of Theory of Probability and Mathematical Statistics at Kiev University. In the end of 70th, the research interests of Professor D. Silvestrov shifted to the renewal theory and ergodic theorems for perturbed stochastic processes. The main results of this period are connected with a generalization of the classical renewal theorem to the model of perturbed renewal equations and the exact coupling and ergodic theorems for perturbed regenerative and semi-Markov type processes. Partly, the results in this area are presented in the books [4, 9]. Also, the book [3], containing the largest collection of probability problems, was published during these years.

In 80th, Dmitrii Silvestrov was also involved in an applied statistical research in cooperation with industry and development of statistical software. His interests in this area are partly reflected in books [5, 6]. One of his projects in the area of applied statistics connected with the database of statistical terminology attracted interest of Professor G. Kulldorff, who was at that time the President of International Statistical Institute. In 1991, he invited Professor D. Silvestrov to continue this work at Umeå University. The comprehensive Elsevier's dictionary of statistical terminology, [7], was published in 1995. Dmitrii Silvestrov began and then continued his work at Umeå University and Luleå Technical University and, also, as a visiting professor at the Hebrew University of Jerusalem (1993) and the University of Turku (1998).

The cooperation with Ukrainian colleagues was continued in the frame of four European Tempus projects, which have been coordinated by Professor D. Silvestrov and promoted creation and development of a specialty of Statistics at Kiev and Uzhhorod universities, creation of a training center for actuaries and financial analysts at Kiev University and opening of a new specialty Educational Measurements at several Ukrainian universities as well as co-organization of three Scandinavian-Ukrainian conferences in mathematical statistics and 11 international summer schools in financial and insurance mathematics. Dmitrii Silvestrov is also a long-term member in the Editorial Boards of international journals Theory of Probability and Mathematical Statistics and Theory of Stochastic Processes.

In the beginning of 90th, Professor M. Gyllenberg attracted interest of D. Silvestrov to studies of quasi-stationary phenomena in perturbed stochastic systems with random lifetimes. The core of this phenomenon is that one can observe something that resembles a stationary behavior of the system before its lifetime goes to the end. The results of

these research studies, in particular new types of exponential asymptotic expansions for perturbed regenerative, semi-Markov and risk processes are presented in the book [9].

In 1999, Dmitrii Silvestrov have got a professor position at the Mälardalen University (Västerås). Here, he initiated new advanced bachelor and master programs in the area of financial engineering and began an intensive research in the area of stochastic approximation methods for modulated price processes and American-type options. The recent two volumes monograph [11, 12] represents the main his results in this area.

In 2009, Dmitrii Silvestrov have got a prestigious Cramér professor position at the Department of Mathematics, Stockholm University. In 2013, the International Cramér Symposium on Insurance Mathematics was initiated by Professor D. Silvestrov and held at Stockholm University, selected papers presented at the symposium are collected in [10]. Areas of the current D. Silvestrov's research are represented in [11, 12] and in the recent paper [13], which is the base for a new book on asymptotic expansions for singularly perturbed nonlinear semi-Markov processes.

A pedagogical work is an important part of academic work. During his long carrier Professor Dmitrii Silvestrov delivered more than 40 different courses on theory of probability, stochastic processes, statistical software, financial and insurance mathematics, etc. He supervised more than 60 diploma works; 22 postgraduate students supervised by D. Silvestrov obtained Ph.D. equivalent degrees; 13 at Kiev University (three of them, N. Kartashov, V. Masol and Yu. Mishura, became later professors), 2 at Umeå University, 5 at Mälardalen University and 2 at Stockholm University.

During the 50 years of intensive research work Dmitrii Silvestrov published 10 books, more than 150 research papers, and co-edited 13 collective works in the area of stochastic processes. A more detailed account of Professor Silvestrov's academic activities can be found at his web-page: <http://www.su.se/profiles/dsilv/>.

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