

## IN MEMORIAM

**BORIS VLADIMIROVICH GNEDENKO**

(January 1, 1912 - December 27, 1995)

**IGOR N. KOVALENKO**

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It is with great sadness that we report the recent passing of Boris Vladimirovich Gnedenko. Professor Gnedenko was a distinguished scientist in the area of probability. He was Head of the Probability Department of Moscow State University and Academician of the Ukrainian National Academy of Sciences. Science has been deprived of one of its brightest scholars who was active from the mid-1930's until the last days of his life. Just two weeks before his death he finished dictating his last paper for the journal *Mathematics in Schools*. He was a student of A. Khinchin. Among his notable collaborators were A. Kolmogorov, Yu. Linnik, N. Smirnov, and I. Gikhman.

He gained his renown in science through his outstanding contribution to the theory of limit theorems for sums of independent random variables. He also contributed to mathematical statistics through his original investigations on distribution-free tests. He was involved in applied statistics through contacts with researchers and engineers in a wide range of disciplines. He developed a world-wide reputation as an authority in the area of queueing theory and reliability theory. His works on complex systems reliability in a triangular limit scheme laid the foundation for an important branch of modern mathematical reliability theory.

In the mid-1930's, following suggestions by Khinchin, he started his research in queueing theory, but very soon his original ideas led his investigations. His first results on queueing theory solved a practical problem, of interest to the textile industry, which involved several repairmen.

During two post-war decades he was a member of the Academy of Sciences of the Ukraine; he worked in Lvov and then in Kiev. He was the Director of the Mathematical Institute of the Academy of Sciences and Head of the Probability Department of Kiev State University at the same time. Members of his teams included distinguished probabilists Gikhman, Korolyuk, Skorokhod, and Yadrenko as well as many able researchers of younger generations.

In Kiev he initiated far-reaching investigations on non-traditional queueing systems and complex systems reliability. His scientific interests also included cybernetics. He initiated the foundation of the Institute of Cybernetics in Kiev. He contributed to computer assistance; with V.S. Korolyuk and E.L. Yushchenko, he invented an approach based upon address programming.

From 1961 until his death he worked at Moscow University. He led seminars on queueing and reliability theory; supervised many postgraduate students, both Russian and foreign; wrote books, papers, and popular brochures; and consulted with many engineers, economists, and biologists. He was among a small group of Moscow scientists who organized the Statistical Laboratory at Moscow State University. Although very ill, he organized a new educational specialty-actuarial mathematics-at the University.

He was also a prominent historian of mathematics. In the last edition of his *Course of Probability Theory*, one can find new information and views of the early history of probability concepts. Problems of teaching of mathematics as well as those of pastoral care of the youth and general problems of culture and society concerned him all his life.

He was a talented professor and author. His outstanding textbook *Course of Probability Theory* and many other didactic books for students and teachers carry his specific living language and inexhaustible wit as well as mathematical rigor and conciseness. For example, to illustrate the importance of a correct approach to a research problem, he recounted that he had the opportunity to watch the work of Australia's sheepshearing champion. It was necessary to turn a sheep from side to side, and the massive animal was turned with surprising ease. The sheepshearer explained, "I do not apply any force. But I know which nerve centers of the sheep must be pressed, and she immediately turns herself."

Those who had the great happiness to know Boris Vladimirovich, especially those who knew him as a mentor or collaborator, will remember him as an excellent scientist and a wonderful person. He was an all-round developed, tactful, and democratic man as well.