I. K. Daugavet
His Life and Mathematics
1932-2022

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Igor Karlovich Daugavet is a known specialist in the approximation of real variable functions and operators. He is the author of about forty papers and several books in this area. From his 1963 results are derived the concepts of "Daugavet equation" and "Daugavet property", which are still actively cited and used.

Daugavet entered the Department of Mathematics and Mechanics of Leningrad University in 1949. During his studies he had his first contact with approximation theory when he took a special course on Constructive Function Theory given by I. P. Natanson. He graduated in 1954 and became a Ph.D. student under the supervision of L. V. Kantorovich. At the same time he started his research activity in the Leningrad Department of the Steklov Institute of Mathematics. At the end of his postgraduate studies he had the opportunity to choose his place of work, and he chose the Chair of Computational Mathematics at the Department of Mathematics and Mechanics. In 1959 he defended his Ph.D., where he had applied variation methods for solving problems of mathematical physics. In parallel with his scientific work, Daugavet gave lectures on computational methods, taught a number of special courses for students,and worked with Ph.D. students.

During almost all his life Daugavet was a permanent and active participant of the seminar "Constructive Function Theory" organized by I. P. and G. I. Natanson. In 1977 he published his book "Introduction to the Theory of Approximation of Functions". The second edition, entitled "Introduction to the Classical Theory of Approximation of Functions" was published in 2011. In 1986 he published the book "Approximate Solutions of Linear Functional Equations", related to the current state of the topic on general functional schemes of approximation methods that was initiated by L. V. Kantorovichi and M. K. Gavurin. In 1989 Daugavet defended his D.Sc. thesis titled "Questions on the theory of approximate methods and some applied problems of constructive theory of functions", and obtained the position of full professor. In 1991 Daugavet was awarded the prize of second degree for scientific work by the university. His monograph "Some Problems of Approximation of Operators" (2003) is devoted to engineering problems of signal processing. A general scheme for studying the convergence and stability of approximate methods for solving linear functional equations, projection methods, methods of finite elements and the grid method are described in his book "The Theory of Approximation Methods. Linear Equations" published in 2006.

For his impeccable work at the university for more than 50 years, and for his great contribution to the development of approximation theory and computational methods, the medal of St. Petersburg State University was awarded to Daugavet in 2007.