



### To the memory of Vladimir Vasilenko, 1947–2001

Vladimir Vasilenko died on June 21, 2001, at the age of 54. Prof. Vasilenko was senior researcher at the Institute of Computational Mathematics and Mathematical Geophysics (ICM&MG), Siberian Branch of Russian Academy of Sciences (SB RAS), Doctor of Physical-Mathematical Sciences, Professor, Deputy Editor-in-Chief of the Bulletin of the Novosibirsk Computer Center and the Siberian Journal of Numerical Mathematics.

Vladimir Vasilenko was a graduate of Novosibirsk State University, a talented disciple of Academician Gury Marchuk. He has become a well-known specialist in the field of computational mathematics and applied software in our country and abroad. All his life, Vladimir Vasilenko worked at the Computing Center (now, the Institute of Computational Mathematics and Mathematical Geophysics, SB RAS). Vladimir Vasilenko published 59 scientific papers and 5 books.

Main directions of his research were approximation methods of functions and problems of processing of experimental data with the use of modern variational theory of splines and its applications to various types of multi-dimensional approximation problems on irregular grids. He obtained fundamental results in the field of convergence and methods for obtaining estimates of errors of such splines. He developed a theory of finite-dimensional analogs of abstract splines. Also, he created and realized, in the form of program libraries, algorithms for the construction of multi-dimensional spline approximations on regular and chaotic grids.

Another direction of activity of Vladimir Vasilenko was concerned with problems of digital filtration of signals and images. He developed algorithms for the decomposition of complex digital filters into parallel-conveyor lines of simplest filters that can be realized in hardware. In the last few years, Prof. Vasilenko was dealing with problems of compression of experimental information, factor analysis of color images, and construction of applied fractal bases. He proposed original algorithms for data compression based on the so-called  $\Sigma\Pi$ -approximations with the use of continuous or discrete splines.

He also contributed greatly to the creation of software and hardware for the approximation of multidimensional data on chaotic grids and digital filtration of signals and images. Several generations of the library of programs called LIDA are widely used in our country and abroad.

Prof. Vasilenko was greatly interested in the training of scientific specialists. He devoted much of his time to the work with students and post-graduate students. For 27 years, he was lecturer at the Chair of Computational Mathematics of Novosibirsk State University. There are six PhDs among his disciples.

Vladimir Vasilenko permanently chaired the Editorial Board of ICM&MG, SB RAS. Also, he founded and headed the Editorial Board of the Bulletin of Novosibirsk Computing Center (NCC Publisher), published in series reflecting the main directions of research in the institute. Besides, Prof. Vasilenko was Deputy Editor-in-Chief of this journal, which owed its origin mainly to his enthusiasm.

Vladimir Vasilenko died in the height of his life. This is a great loss to all of us, and also to the School of Computational Mathematics. Vladimir Vasilenko will always remain in the memory of his friends, colleagues, and disciples.

*Editorial Board*