

## Vladimir Fedorovich Demyanov (18.08.1938–18.04.2014)

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Professor Vladimir Fedorovich Demyanov from St. Petersburg State University passed away on April 18, 2014. He was born in Dnepropetrovsk in August 18, 1938. His whole life was linked to the University of Leningrad (now St. Petersburg). In 1960, he graduated from the University of Leningrad from the Department of Computational Mathematics organized by the Nobel Prize Winner L. V. Kantorovich in early 1950s. In 1964, he was awarded his Ph.D. and he got the habilitation for full professor in 1972. Since 1988 and until the end of his days he served as Chair of the Department of Mathematical Theory of Systems of Control at the same university. He also worked at the University of Syktyvkar (1973–1975) as President of the Faculty of Physics and Mathematics and during the years 1983–1985 he worked at the International Institute for Applied Systems Analysis (IIASA) being an international research organization located in Laxenburg, near Vienna, in Austria.

Vladimir Fedorovich is regarded as having been one of the founders of nonsmooth analysis, whose results he wanted to be “constructive”, that is easily transformable in implementable and applicable methods. From the very beginning of his career he did consider nonsmoothness as a natural challenge to be faced in view of enhancing mathematics ability to model complex processes. His seminal papers on minmax and minmaxmin date back to the second half of the sixties of past century. In 1967–1968, during his stage at the University of South California, Los Angeles, with L. W. Neustadt he has written the paper *V. F. Demyanov, Algorithms for some minimax problems, J. Computer and System Sciences 2, no. 4 (1968), 342–380* that has indicated the direction of his scientific interests for decades. He has reached an international recognition with publishing the monograph *V. F. Demyanov, V. N. Malozemov, Introduction to Minimax, Nauka, Moscow (1972). English translation: John Wiley and Sons (1974). Second Edition by Dover, New York (1990)* that became one of the important texts in non-differentiable optimization. In more recent years his main achievements were in definition of classes of nonsmooth functions (quasidifferentiable and codifferentiable ones) which can be approximated by resorting to couples of convex sets.

His list of publications contains more than 200 items (among them 9 books in Russian, English and other languages). He served as a member of editorial boards of such international journals as *Journal of Global Optimization; Journal of Convex Analysis; Numerical Functional Analysis and Optimization; Computational Optimization and Applications; Optimization: Methods and Software*. He was a generous scholar, mainly to the young scientists who had the chance of working under his supervision (he was supervisor of 40 Ph.D. dissertations, among his former students we find A. V. Pevniy, L. N. Polyakova, and L. V. Vasiliev). He was also Chairman of three international congresses and many times delivered plenary lectures at prestigious international conferences.

His restless and enthusiastic activity was highly influential for many mathematicians all over the world. Professor Demyanov was gentle and wise. He had the special gift of putting people at ease. All of us remember his well-known hobby—making pictures of optimizers. In 2012, in the occasion of the International Conference “Constructive Nonsmooth Analysis and Related Topics” that he organized in St. Petersburg he has published the book of photographs from his archive “Optimization places and faces: A journey to Endolandia” that is a unique illustration to the more than 50 years of the development of optimization in the world.

We will miss wisdom, humanity, and friendship of Vladimir Fedorovich.