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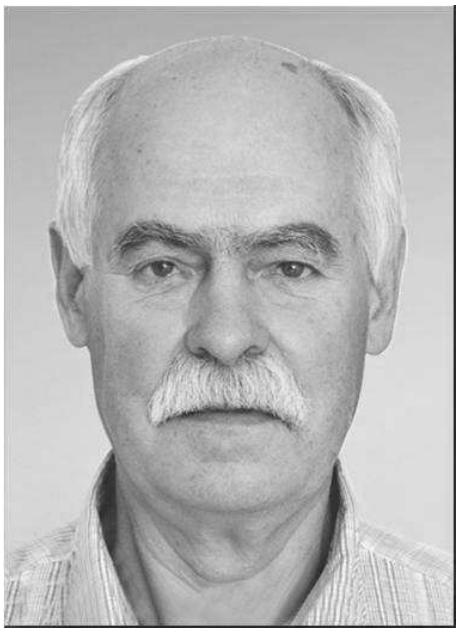
VOLODYMYR DMYTROVYCH KOSHMANENKO
(to 75th birthday anniversary)



Volodymyr Dmytrovych Koshmanenko is a famous Ukrainian mathematician. He was born on July 28, 1943 in Dnipropetrovsk (today, Dnipro) in Ukraine.

Young years V. D. Koshmanenko have passed at the Physics department of the Dnipropetrovsky State University. But he chose mathematics as his preferable job. The physics education gave him a deeper understanding of mathematical objects and processes in his later life, on the one hand, and this enriched physics with a thorough mathematical content, on the other.

The main scientific activity of V. D. Koshmanenko in the years of graduate school was conducted under a supervision of Academician Yu. M. Berezansky at the Institute of Mathematics of the National Academy of Sciences of Ukraine. It was dedicated to axiomatic field theory in terms of operator Jacobi matrices,

Mathematical works of V. D. Koshmanenko include 5 monographs and about 130 papers which are of high level and quality. Some of them make a starting point for certain directions. Among them there are the following books: Singular bilinear forms in perturbations theory of selfadjoint operators, Naukova Dumka, Kiev 1993; Singular quadratic forms in perturbation theory, Springer, 2012; The Method of Rigged Spaces in Singular Perturbation Theory of Self-Adjoint (with Dudkin M.E.) Institute of Mathematics NAS Ukraine 2013 and Birkhäuser 2016; Spectral theory of dynamic conflict systems Naukova Dumka, Kiev 2016.

V. D. Koshmanenko is also known to a large mathematical community. Together with S. Albeverio, he investigated singular rank one perturbations of self-adjoint operators and Krein theory of self-adjoint extensions; the problem of the right Hamiltonian under

singular form-sum perturbations; Schrödinger operators perturbed by fractal potentials; rigged Hilbert spaces approach in singular perturbation theory; singular continuous spectra of $\mathcal{H}_{-2}$-class rank one perturbations, some remarks on the Gesztesy-Simon version of rank one perturbations.

Together with J. F. Brasche and H. Neidhardt, he investigated aspects of Krein's extension theory; Lippmann-Schwinger equation in the singular perturbation theory.

Together with W. Karwowski, he investigated square powers of singularly perturbed operators; Schrödinger operator perturbed by operators related to null sets; negative eigenvalues of generalized Laplace operators; singular quadratic forms: regularization by restriction; Schrödinger operator perturbed by dynamics of lower dimension; generalized Laplace operator in $L_2(R^n)$; regular restrictions of singular quadratic forms; additive regularization of singular bilinear forms; Schrödinger operator perturbed by operators related to null-sets.

And his many independent individual studies are very popular, including perturbations of self-adjoint operators by singular bilinear forms; singular operator as a parameter of self-adjoint extensions; inverse negative eigenvalues problem in singular perturbation theory; singular perturbations with an infinite coupling; singular perturbations defined by forms; regularized approximations of singular perturbations from the H_2-class; singular bilinear forms in connection with self-adjoint extensions of symmetric operators; scattering theory with different state spaces of perturbed and free system; theory of scattering in terms of bilinear functionals; wave operators in Haag-Ruelle scattering theory and conditions for the S-matrix in the Haag-Ruelle scattering theory; singularly perturbed operators of type $-\Delta + \lambda\delta$; spectral decompositions in the problem of scattering with singular perturbation; the structure of a general solution for the inverse scattering problem in abstract statement.

V.D. Koshmanenko has initiated an outstanding research on conflict interactions. His results include a theorem of conflicts for a pair of probability measures; spectral properties of image measures under the infinite conflict interaction; a Q-representation of real numbers and fractal probability distributions; dynamics of conflict interaction between systems with internal structure; invariant points of a dynamical system of conflict in the space of piecewise-uniformly distributed measures; conflict triad dynamical system; infinite direct products of probability measures and structural similarity; properties of the limit states of a dynamical conflict system; Hahn-Jordan Decomposition as an Equilibrium State in the Conflict System; problem of optimal strategy in the models of conflict redistribution of the resource space. All these are results of either an individual research or a collective work with numerous colleagues and students including T. Karataeva, N. Kharchenko, S. Petrenko, M. Pratsiovytyi, G. Torbin, I. Verigina and many others.

He is not only a remarkable scientist but also an excellent pedagogue. He gives various lecture courses to students and young researchers at the "Kyiv-Mohyla academy" each year.

For his mathematical works, V. D. Koshmanenko was awarded with the Yu. O. Mitropol'sky prize from the National Academy of Science of Ukraine in 2012.

V. D. Koshmanenko embodies the best human qualities and high professionalism of a scientist and a teacher.

His talks at conferences and seminars are very popular and give a positive push for young researchers.

V. D. Koshmanenko is a principled, honest, and at the same time a responsive, kind person.

With his tireless work ability, energy and persistence in achieving the goal, he always inspires his colleagues to conquer new creative heights and builds for himself ambitious plans for the future.

Colleagues and students always appreciate him for his life's wisdom, humanity, extraordinary decency, broad erudition and deep knowledge.

V. D. Koshmanenko has every time a big interest to his country Ukraine, especially its sovereignty, history and culture, folk art and language. In the everyday life, he employs the best national traditions.

We sincerely wish him good health for many fruitful happy and enjoyable years of life and the implementation of new ideas.

Editorial Board