

Vladimir M. Tikhomirov

This year our teacher, colleague and friend Vladimir Tikhomirov is 70.

Everyone who has the good fortune to know him is aware of his broad interests, fountain energy and extreme diligence. Alongside his research work in mathematics, he does a great deal for high school and university education, studies the history of mathematics, and is involved in diverse social activities. He is on the Editorial Board of Russian Mathematical Surveys, Mathematical Sbornik, Problems of Information Transmission, Journal of Approximation Theory, Convex Analysis, he is the Editor-in-Chief of *Matematicheskoe Prosveshchenie*, Deputy Editor-in-Chief of *Quant*, he is a member of



the Moscow Mathematical Society Administrative Board, mathematics section President of the Central House of Scientists, board member of the Moscow Centre for Continuous Mathematical Education, one of the “founding fathers” of the Independent University of Moscow, board member of the Methodology Counsel for Mathematics of the Ministry of Education.

V. M. Tikhomirov is one of the best students of A. N. Kolmogorov. His main research interests lie in the theory of extremal problems, approximation theory and convex analysis. His books on these subjects have been translated into many languages and have long become classics. Numerous papers on extremal and approximation theory have been significantly influenced by his ideas.

Vladimir Mikhailovich has developed methods of exact solution of approximation theory problems based on general principles of functional analysis and extremal theory. He has introduced a number of parameters characterizing the massivity of a set and its approximative ability. This had a decisive influence on the development of the theory and on its applications to other branches of mathematics. Together with his students, he has succeeded in obtaining final results in many problems concerning the interaction of smoothness and function approximation.

Tikhomirov’s works on extremal theory problems have had a great impact on the development of the theory. His modern point of view has done a great deal to advance these studies. His unique approach to the investigation of all extremal problems based on the Lagrange principle, being applied together with convex analysis methods not only leads to many new achievements in different problems of analysis, approximation and optimal restitution, but also opens new vistas for the study of such problems.

One of the main features of Tikhomirov’s style in mathematics is that, in any question he is interested in, he tries to reach the very core, to uncover the situa-

tion to a state in which either the problem disappears, or it becomes clear that it is already solved, perhaps in other terms and for other reasons, or it stands out so naked that the difficulties to overcome are evident. Such preparation of the problem leads immediately to new horizons, possible generalizations, and clarifies its relationship to other problems. Many a mathematician contacting Vladimir Mikhailovich has been inspired by this approach to perform further work.

More than half a century Tikhomirov's mathematical life is intertwined with that of the mech-math department of Moscow State University, where, for the last fifteen years formally, and for thirty in fact, he leads the chair of Control Theory. He played the leading role in establishing the fundamental course in the *Calculus of Variations and Control*. More than fifty students of his have obtained their PhD's, more than ten the State Doctor degree. He is a Distinguished Professor of Moscow State University.

Vladimir Mikhailovich is not only one of the founders of the Independent University of Moscow, he has taught and continues to teach many courses at the IUM. Here he has carried through the long cherished idea of creating a geometry course covering its development from the very sources to its most recent ideas. The result is the remarkable book *Geometry*; that he co-authored with V. Prasolov.

It was his and V. Vassiliev's idea to re-start the edition of the *Mathematical Education*; collection, which popularizes modern research achievements among the wide audience of amateurs of mathematics. Its success is due to his efforts as its Editor-in-Chief, to the level and style that he established in his own marvellous booklets, and to his active search of other talented authors.

Vladimir Mikhailovich has an extremely cordial, generous, exemplarily intellectual personality. Today he is full of energy, has a lot of new ideas and projects. We wish him health and the strength of spirit needed to carry out all of them, and we will be happy to help him.

Many happy returns of the day!

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