https://doi.org/10.15407/ujpe68.7.503

MYKOLA PETROVYCH MALOMUZH (on his 75th birthday)

This year marks the 75th birthday of Mykola Petrovych Malomuzh, a famous physicist and Professor of the Odesa I.I. Mechnikov National University.

Mykola Malomuzh was born on July 21, 1948, in the city of Kropyvnytskyi (at that time Kirovograd). He was the first in his family to obtain a university education. Since childhood, he has been distinguished by his curiosity, originality of thought, and his own viewpoint. Such properties of a young fellow fitted excellently for his formation in physics.

Mykola Petrovych came to the Odesa University at a very good time, when Prof. Yosyp Zalmanovych Fisher was invited to head the Department of Theoretical Physics. It was one of the steps on the difficult path selected by the university administration to improve and restore the Odesa University functioning. Fisher decided to transform a rather average unit of a provincial Soviet university into a world-class scientific institution. It was a difficult task, but Y.Z Fisher relied on a cohort of young theorists whom he personally selected, educated, and inspired.

One of the prominent members of this group was Mykola Malomuzh. He is the last student of the outstanding scientist and educator, and he still continues to work at his alma mater. His students always distinguished his admiration, gratitude, and respect, when Prof. Malomuzh mentioned his teacher Prof. Y.Z Fisher.

Y.Z Fisher's interests covered a lot of domains in theoretical physics. Nevertheless, the scientific achievements of his disciples and their students span even more domains ranging from astrophysics to biological physics. Mykola Malomuzh has inherited a broad understanding of physics integrity. He wrote papers dealing with problems in various physics domains including the physics of fluids, critical phenomena, light scattering, properties of water, properties of dispersed systems, highly viscous liquids and glass, biophysics, electronics, and many others. His first main interest started from the theory of fluctuations and scattering in liquids.

Even a simple list of his innovative works and students is highly impressive. Mykola Malomuzh together with Kulinskyi and Tolpekin developed the theory of critical fluctuations in systems with Coulomb interactions. Together with Fisenko, Kulinskyi, and Veitsman, he developed the complex theory of double critical points. He wrote highly influential works on critical scattering (together with Fisher, Bulavin, Sushko, Fisenko, Kulinskyi, Matveichuk, Veitsman, and Oleynik), the fine structure of Rayleigh wing (together with Atakhodzhaev,

Citation: Mykola Petrovych Malomuzh (on his 75th birthday). *Ukr. J. Phys.* **68**, No. 7, 503 (2023). https://doi.org/10.15407/ujpe68.7.503.

Цитування: Микола Петрович Маломуж (до 75-річчя від дня народження). *Укр. фіз. журн.* **68**, № 7, 505 (2023).

Shaizullaev, Pelishenko, Grunder, and Latushkin), and hydrodynamic oscillations (together with Fisher, Bulavin, Lokotosh, Pankratov, Oleynik, Shakun, Bardik, Troyanovskyi, and Zatovskyi). He studied proton dynamics and thermodynamics of water and other liquids with hydrogen bonds (together with Bulavin, Lishchuk, Makhlaichuk, Lokotosh, Pankratov, Slinchak, Oleynik, Fisenko, Kulinskyi, Chechko, Zaremba, Gotsulskyi, Zakharchenko, Magazù, Maisano, Zatovskyi, and Veitsman), highly viscous and dispersed systems (together with Orlov, Fisenko, Lokotosh, Branka, Faraone, Magazù, Maisano, Migliardo, Villari, Morozov, Kuzmin, Lishchuk, Blazhnov, Stepanyan, Shapiro, Atakhodzhaev, Faizullaev, and Pelishenko), biophysics (together with Bulavin, Komisarenko, Magazù, Fisenko, Bardik, Nerukh, Solonin, Guslisty, and Khorolskyi), and the general theory of fluids (together with Fisher, Bulavin, Sysoev, Shakun, Rudenko, Yagupolskyi, Khlopov, Oleynik, Lokotosh, Sushko, Bardik, Latushkin, Gotsulskyi, Makhlaichuk, and Kuznetsova). Together with Chechko, Gotsulskyi, Makhlaichuk, and Khorolskyi, he developed the theory of peculiar points in water and alcohols.

Lots of those works were co-authored by Malomuzh's old friend and in time wife, the outstanding physicist Tetyana Lokotosh. Her long illness and untimely death became a grave tragedy for Mykola Petrovych.

Prof. Malomuzh supervised the postgraduate studies of more than two dozen graduate students. Every university student, whoever his supervisor was, knew that he could always put a question to Mykola Petrovych to obtain a well-thought-out answer.

Prof. Malomuzh can be regarded as a disciple of Y.Z. Fisher's scientific school and simultaneously as a founder of his own school. Scientific schools differ from one another by their styles, which are established by their founders, and by their basic qualities imparted to their students. The main feature of Malomuzh's style is the clarity of approach. He begins to develop each of his models by creating a clear and convincing physical scenario of the underlying phenomenon. Although his works are technically flawless and elegant, he avoids technical virtuosity for the sake of clarity. "We are here to solve physical problems rather than show off how well we know mathematics" is one of his favorite phrases, which is well known to all of his students.

This viewpoint is related to another feature of M.P. Malomuzh and his school, the search for truth. All of his students know about his almost religious devotion to the truth. The dedication of Mykola Petrovych to clarity and truth manifests itself in both his scientific activity and his activity beyond science. He isn't tolerant of the entangled web of half-truths, which is inherent to the politics performed at the university and beyond. This is the origin of endless frustration for plenty of administrators who have dealt with him.

The scientific relations of Mykola Petrovych were always wide, even covering various continents; often they transformed into a deep friendship. The latter statement can be confirmed by not only his physicist colleagues from – only in Ukraine – Lviv, Kharkiv, Poltava, Kyiv, and other cities. Especially friendly relations were established with colleagues from the Faculty of Physics of the Taras Shevchenko National University of Kyiv, where M.P. Malomuzh defended his doctoral dissertation in 1991, and the then head of the faculty Prof. L.A. Bulavin.

When the current Russian-Ukrainian war began, the attitude of Prof. Malomuzh toward the Russian aggression was unambiguous: he has demanded from his numerous friends and collaborators in Russia to clearly and unambiguously condemn Russia for this atrocity. The absence of such statements from his Russian now ex-colleagues was one of his greatest disappointments.

Nowadays, Ukrainian science and education, as well as the whole country, are experiencing hard times. However, the striving for clarity and truth that is inherent to Prof. Malomuzh and his scientific school is an example giving hope that Ukraine will possess worthy science and education.

L.A. BULAVIN, B.A. VEITSMAN,
D.A. GAVRYUSHENKO, M.F. GOLOVKO,
V.Ya. GOTSULSKYI, V.V. KLEPKO,
I.M. KOVAL, M.M. LAZARENKO,
M.I. LEBOVKA, L.M. LYSETSKYI,
S. MAGAZÙ, G. MAISANO,
S.M. ODYNAEV, YU.O. PLEVACHUK,
L.M. SABIROV, O.V. KHOROLSKYI,
K.O. CHALYI, O.V. CHALYI, K.V. CHEREVKO