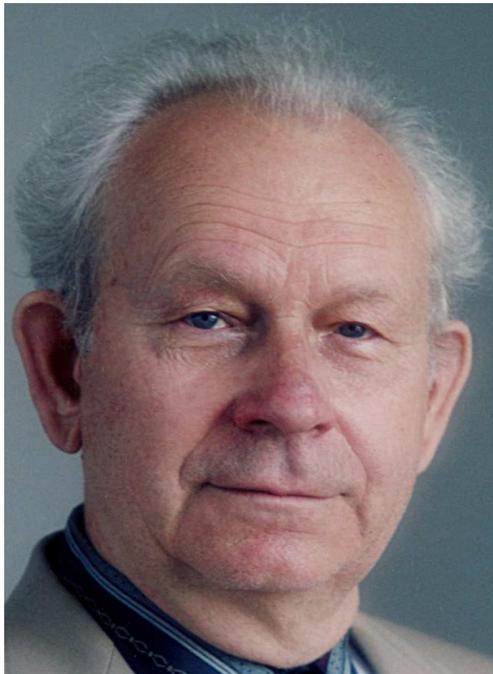

ANATOLII MYKOLAIOVYCH KONDRATENKO (On the occasion of his seventieth birthday)



On December 6, 2005, Honoured Professor of V.N. Karazin Kharkiv National University, the outstanding scientist in the field of plasma physics, Doctor of Physics and Mathematics, Professor Anatolii Mykolaiovych Kondratenko celebrated his seventieth birthday.

A.M. Kondratenko was born in Leningrad on December 6, 1935. In June, 1941, he has moved to the town of Bogodukhiv of the Kharkiv region, where he has finished a secondary school. In 1952, he has entered the Faculty of Physics and Mathematics of the Kharkiv State University. He has graduated from the University with honours degree in 1958.

Then A.M. Kondratenko found himself at the well-known center of science of Ukraine and all the USSR, the Ukrainian Institute of Physics and Technology

in Kharkiv. There he has got at once in a circle of outstanding scientists. The scientific theoretical laboratory, which was headed by Academician Ya.B. Fainberg, has created the conditions, under which his talent as a scientist and a teacher has revealed.

The pioneering scientific papers were published by A.M. Kondratenko as a result of the original studies on the theory of eigenwaves in bounded plasma waveguide structures. The theoretical approaches developed by A.M. Kondratenko in his works have determined the directions of his further scientific researches of the wave processes in bounded plasma structures. Among them, it is necessary to mention the research of the excitation and damping of waves in plasma waveguides, analysis of the decay instability of eigenwaves, creation of the basis of the non-linear theory of plasma waveguides, and development of the kinetic theory of plasma waveguides and theory of cyclotron resonance. Having defended the candidate thesis "Certain problems of the theory of plasma waveguides" in 1965, A.M. Kondratenko started to develop the obtained results intensively, by widely attracting the colleagues and pupils to this trend. In 1971, A.M. Kondratenko has defended the doctoral thesis "Problems of the kinetic theory of the penetration and propagation of electromagnetic waves in bounded plasma".

After that, he has continued his scientific activity at the Faculty of Physics and Technology of the Kharkiv State University. His scientific talent and the ability to separate the talented students and to attract them to the fruitful cooperation have widely manifested there. In 1975, A.M. Kondratenko was assigned the academic status of the Professor at the Chair of Plasma Physics. Since 1980 till 1990, A.M. Kondratenko headed the Chair of General and Applied Physics at the Faculty of Physics and Technology.

For a long time, A.M. Kondratenko carried out the energetic teaching activity, training the students on General Physics and Plasma Physics. In 2000, the

methodical manual “Introduction to Theoretical Plasma Electronics” was issued as the result of his scientific and teaching activity. It is the basis for teaching the students on this subject at the Chair of Plasma Physics.

As a result of the self-denying permanent activity, A.M. Kondratenko has obtained a number of outstanding scientific results in the field of the electrodynamics of bounded plasma. Among them, it is worth to indicate the following ones:

– creation of the basis of the electrodynamics of plasma waveguides which includes the theory of the propagation and damping of eigenmodes in various bounded plasma structures, theory of transformation of electromagnetic waves on the plasma boundary, theory of excitation of the eigenmodes of these plasma structures by beams of charged particles (including the non-linear theory of the beam–plasma interaction) and by external alternate electric fields, and non-linear theory of the interaction of eigenmodes in bounded plasma structures;

– theoretical proof of the existence of surface ionic-sound and cyclotron waves, as well as the whole class of natural electromagnetic disturbances which can propagate along the plasma – metal interface;

– creation of the basis of theoretical plasma electronics, including the theory of excitation of waveguides with plasma filling and diffraction of eigenwaves in bounded plasma structures, theoretical substantiation of the operation of electronic devices of certain types with plasma filling.

As a result of the energetic and extremely productive scientific activity, A.M. Kondratenko has created the scientific school. Its representatives are fruitfully working now in various directions of plasma physics in many countries. A.M. Kondratenko has taught and educated 27 Candidates of sciences, among which seven ones have already defended Doctoral theses. Despite the quick development of plasma physics, his scientific results remain actual till nowadays. He is the author of four monographs and more than 250 scientific papers. His scientific activities are recognized by the scientific community. The scientific activity of A.M. Kondratenko is awarded by the K.D. Synel’nykov prize of the Academy of Sciences of Ukraine on physics.

Today, he works at the position of the Professor of V.N. Karazin Kharkiv National University and has the academic status of Soros Professor. He is a member of the Scientific Council on the defence of the Doctoral theses. During the days of celebrating the two-hundredth anniversary of the Kharkiv University, his perennial and fruitful activity was marked by awarding him the honorary title of “Honoured Professor of V.N. Karazin Kharkiv National University”.

We wish you, dear Anatolii Mykolaiovych, the good health, further creative successes, happiness in your family, and long years of life!

I.I. Zalyubovsky