

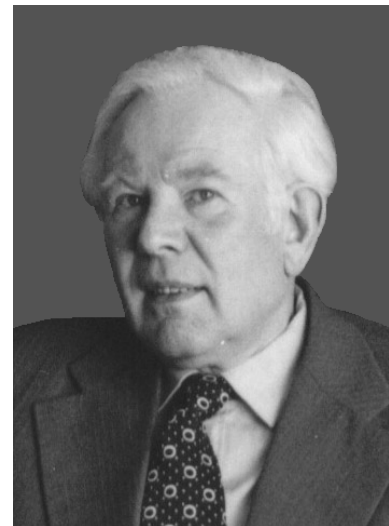
## **To 100-birthday Anniversary of Academician of NAS of Ukraine Alexander Ivanovich Kukhtenko**

Alexander Ivanovich Kukhtenko is a prominent Ukrainian scientist in the field of automatic control, invariance theory and its application, abstract theory of systems and some other trends of informatics problems. He successfully combined the fundamental research and applied problems solutions in different spheres of science and engineering.

A.I. Kukhtenko was born in March 11, 1914 in a town of Gorodnya in Chernigov province in the family of mathematics and physics teacher. In 1928 he entered a profschool at Lugansk steam-locomotive building university named after October revolution. In March 1932 he passed entrance exams in Industrial university, finished it in 1936 with a brilliant degree of mining engineer electrician. For some years he worked in this university combining teaching and research activity.

Alexander Ivanovich took part in Great Patriotic War as an artillerman of the army in I and IV Ukrainian fronts and was awarded with Red Star order.

When the war was over A.I. Kukhtenko returned to a scientific activity and over the period of 1946–1955 he headed the department at Institute of Mining Mechanics of AS of Ukraine. In the range of 1956–1978 he headed the automatics subdepartment at Kiev University of Civil Aviation (KUCA). In 1963 he took a position of a head of department at the Institute of Cybernetics keeping on teaching and research activity at KUCA. Since 1965 to 1985 he headed the department of technical cybernetics at the university. He initiated the research of new promising trends of control theory and practice. Of special interest is his research of abstract mathematical structures as the foundation of interdisciplinary connections between sciences which remain to be the source of new ideas in the field of mathematical theory of systems and control theory. These investigations made up the basis of scientific trends which are currently developing at Institute of Applied Systems Analysis of NTUU “Kiev Polytechnic University”.



The range of his scientific interests was very wide and covered both the sphere of abstract research in a general system theory and one of the most important applied fields — automatization of air motion control processes, aircrafts control.

A.I. Kukhtenko gave due consideration to training technical and scientific staff, set up his school in the field of theory of automatic control and system research. Many of his disciples and followers became candidates and doctors of sciences.

In 1964 he was elected a Corresponding Member, and in 1972 — Academician of AS of Ukraine; was twice awarded with State premium of Ukraine for preparation of the first in world literature “Encyclopedia of cybernetics” in 1974 and for the series of works on invariance theory of automatic control systems in 1991, he also received many other government awards, honorary ranks and diplomas, orders and medals.

The scientist made his main achievements in different fields of control theory. His early research dealt with dynamics of nonholonomic systems where he obtained scientifically important results on motion stability of nonholonomic systems as applied to a control problem of aircraft motion.

He obtained fundamental results in the field of invariance theory and its application, in particular together with Academician B.N. Petrov he formulated necessary and sufficient conditions of physical feasibility of absolutely invariant systems described by ordinary linear differential equations with constant coefficients. By results of research concerned with invariance was published a monograph “Invariance problems in automatics”.

Over the last period of his scientific activity Alexander Ivanovich was engaged in fundamental research of abstract theory of systems and its applications, in particular, in control.

Almost from the start of his scientific career the scientist always focused his attention on matters of technique and popularization of history of science. There were published such works: “History fragments of cybernetics formation”, “From N. Wiener to our days” and others. His versatile scientific, organizational and public activity was highly evaluated by the general public of our country and world community.

Alexander Ivanovich was honest, highly intellectual man who devoted all his life to the science service.

XXI International Conference on Automatic Control which is scheduled in the range of September 23–27, 2014 at National Technical University of Ukraine “KPI”, IPSA is devoted to 100th birthday anniversary of Academician of AS of Ukraine A.I. Kukhtenko outstanding scientist in the field of automatic control theory.

*EDITORIAL STAFF*