



PROFESSOR DR. HAB. JANUSZ KACPROWSKI

Polish acousticians suffered a great loss on January 23, 1993, the date of death of Professor Janusz Kacprowski, who passed away after a lengthy and grave disease at the age of 76. The entire professional life of prof. Kacprowski was connected with acoustics: a student of the Electrical Department of the Warsaw Technological University before the war in 1939, he continued his education at the underground courses during the German occupation in Warsaw to obtain the M.Sc. degree right after the war in 1945.

He started his professional career in the Telecommunication Institute in Warsaw doing the technological and scientific research on electroacoustics; he made considerable contributions to the telephonometric speech measurement technique by preparing original telephone set quality standards and the "artificial ear" standard, henceforth generally accepted by the Polish industry. He was also the constructor of a talking clock. At the same time he was teaching electroacoustics at the Warsaw Technological University and advised numerous students preparing their M.Sc.-dissertations. His two books on electroacoustics were for several years the fundamental handbooks for students specializing in acoustics. In that period prof. Kacprowski defended his Ph.D.-thesis in the field of electroacoustics and was nominated a "docent" after the usual habilitation procedure.

In 1952 moved to the Polish Academy of Sciences, first to the Vibration Research Department and then, at the beginning of 1953, he became one of the organizers of the newly created Institute of Fundamental Technological Research of the P.A.S. Under his guidance, the electroacoustic laboratory was transformed to the Cybernetic Acoustics Department of the IFTR dealing mainly with various problems of speech acoustics and certain aspects of noise measurement techniques. Remarkable results of his research brought him the title of a full professor and several scientific awards and state decorations. In the period of more than 30 years of his activity in the Institute, concluding with his retirement in 1987, he succeeded in making his department one of the leading and internationally recognized research groups in the field of acoustics and electroacoustics.

Let us mention some of the most important results of prof. Kacprowski's extensive scientific activity:

- Original four-terminal theory of electro-mechano-acoustics transducers serving as a basis for improved capacitive measurement microphones;
- Extension of the theoretical foundations of the noise level measurements;
- Complex theoretical and experimental investigations on the speech analysis and synthesis aimed at
 - a) Establishing of the acoustic structure of Polish speech,
 - b) Optimization of wave-guide transmission lines;
 - c) Development of the man-machine communication systems;
 - d) Digital coding of the speech signal.

Prof. Kacprowski's results concerning the speech analysis and synthesis were also used in medicine for improving the methods of phonetic diagnosis and rehabilitation methods.

Prof. Kacprowski was also active in the field of organization of Polish science: he was one of the founders of the Polish Acoustical Society also Archives of Acoustics, thus contributing to the general development of Polish acoustics. We are sure that a large number of his students and co-workers will continue and develop his original ideas and concepts.

His death is a particularly painful event for all of us — the large group of people who used his friendly and valuable advice and collaborated with him in the Polish Academy of Sciences during the last four decades.

Ignacy Malecki