

**In memorize of Professor Zbigniew Źyszkowski
(1910–1988)**



On September 28, 1988, Professor Zbigniew Źyszkowski — one the pioneers of Polish acoustics and electro-acoustics, a founder of Wrocław Acoustic Center died in Wrocław. He was born in Wrocław in 1910. He was graduated in Faculty of Electricity at Warsaw Technical University. In 1933 he started work in the State Tele- and Radiotechnical Works in Warsaw. Here, he was involved first time in electro-acoustic problems to design the telephone receiver. At this time, the scientific foundations of electro-acoustics found to be at the preliminary state of development. Moreover, this scientific domain was not taking into account within the Polish high-school education programme. Therefore, the study on design of microphones, receivers and loudspeaker had to be developed at the beginning. In 1938, Zbigniew Źyszkowski headed the electro-acoustic division in the State Tele and Radiotechnical Works. After the World War II outbreak he stayed in Great Britain as a soldier of Polish Forces. In 1942 he moved to work in Military Communication Institute to involve in the radar equipment design and to study acoustics based on the English and American professional literature. Analysis analogy for acoustic and electrical circuits to be studied and mastered by him was very helpful in his later activity.

He came back to Poland in 1946 and he started work at the Wrocław Technical University, firstly as an adiunkt (1947) then he appointed Associate Professor (1950) and Extraordinary Professor (1954). The years between 1947 and 1954 are very fruitful in his professional activity. However, from the scientific and economic point of view, acoustics and electro-acoustics were still underestimated. Therefore, Professor Zbigniew Źyszkowski was involved in telecommunication but at the same time he was fighting for setting up acoustics and electro-acoustics to education programme. Already, in 1948, the lecture of electro-acoustics was introduced for two hours weekly in Telecommunication Section, moreover the lecture of electro-acoustic devices for students entered the fifth semester in Section of Teletransmission was introduced too. Importance of electro-acoustics as the student education programme was gradually

extended. The new created Departments technical universities introduced following lectures "Theory of electro-acoustic", "Electro-acoustic transducers" and "Design of electro-acoustic devices". In 1954, a speciality of electro-acoustics was appointed after decision which has been undertaken during the conference on students education programmes, attended by Professor Zbigniew Żyszkowski and organized by Technical Section of Main Board at High Education Ministry. A period now to be discussed should be indicated as the most important for Professor's Zbigniew Żyszkowski publication and organization activity. In 1950, Professor headed the Chair of the Cable Transmission Technics, since 1953 the Chair of Teletransmission Technics, at the beginning consisted of three persons staff. The work-shop at the Chair was also established to produce the scientific equipment needed for research and student laboratories. In 1952, Faculty of Communication was appointed, Professor Zbigniew Żyszkowski became its dean. He held this post with some interruptions until 1968. In 1953 he published the first edition of book entitled "Foundations of electro-acoustics" to be most creative in his life. At this time, this book presented the most extensive monography, comparing with this kind of literature published all over the world. Three editions, the each one more improved, were published. There are thirty generations of students who studied using his book, a few fragments of which are still current. His kind of the telecommunication lecture should be also emphasized, in particular, series of lectures concerned about Foundations of Cable Teletransmission, General Teletransmission and Foundation of Telecommunication. During this period of time, he published following textbooks

"Details of teletechnical devices" – Warsaw 1950, "Outline of transmission circuits" – Warsaw 1950, "Foundations of telecommunication – magnetic circuits" – Wrocław 1951, "Foundations of telecommunication – passive circuits" – Wrocław 1954, "Principles of telecommunication" – Warsaw 1952 coauthor Władysław Majewski.

At this moment the following impressions related to this extremely passive political period should be pointed out. The first of them concerns his activity conditions to be passed throughout the period of Stalinism. Professor, as a soldier of Polish Forces in the West and reemigrant from Great Britain could expect for different difficulties and shickaneries but it didn't cause his discouragement and it didn't influence on his efficacious activity in spite of his continuous conflict with incidents. The second impression concerns the high school didactic problems. As he described in his diary, a didactic process consumed about 60% of his work time, the rest of which was spent on learning and organization activity. At this time he was appointed Extra-ordinary Professor, he also was a head of the Chair and a dean. It proves that the didactic activity was really high estimated and it had an influence on promotion of academic teachers. Moreover, a little time consumption to be spent on organisation activity proves that the academic relationships which came into existence at this time were not formalistic and bureaucratic.

The next period of this professional activity should be emphasized during the years 1954–1968. At this time, the main domain of his activity is devoted to the organisation and scientific problems. As it was above mentioned, apart his posts as a head and dean, he was Pro-Rector of Wrocław Technical University during the years 1958–1959. To discuss his scientific activity, it should be also mentioned his initiative to undertake research which later created independent research directions conducted by his former assistants. A research on a process of linear and non-linear disturbances of fonic tracks to be undertaken and developed by Professor Zbigniew Żyszkowski and his teams should be pointed out a success of which can be presented by the objective measure of stochastic signal as well as by the measurement method of the disturbances and by design of the appropriate measurement equipment. The interesting results were also obtained for research on transmission conditions of the stochastic signal within a high-frequently track for radio receiver, the practical using of which were applied to research on acoustic conditions of radio receivers to be produced in Dzierżoniów Radio Receivers Works. This research programme, stimulated at Wrocław Technical University, caused development of the signal theory.

Professor Żyszkowski assumed that the objective disturbance measurement should be completed by the subjective quality estimation of electro-acoustic circuits, methodology of which, particular for the sound transmission circuits, electro-acoustic transducers as well as the speech and music sounds reproduction, was elaborated by his team. Results were applied for industrial production of electro-acoustic equipment, for instance, in the Loudspeakers Work "Tonsil" in Września, collaboration with which was conducted personally by Professor during a long period of time. These research directions, carried out in Wrocław acoustic center, stimulated the development of psychoacoustics Professor's

interest in telephonometry to be practised in Wrocław Technical University, caused the development of the cybernetic acoustic, the new domain of science, very important for human being and machine relationships.

Professor initiated also the ultrasonic research, particularly its industrial application. The ultrasonic method of capacity measurement for the band conveyor, device for stress evaluation in the rock mass and equipment for measurement of ultrasonic wave rate in fluids were elaborated.

At this time, Professor was engaged in the staff education. He is thesis advisor of seventeen terminated Ph.D studies, from which seven were obtained in his Chair by his younger collaborators. In 1968, at the end of now discussed period of time, the Chair in common with the work-shop consisted of eleven didactic and ten technical collaborators of scientific staff as well as forty two collaborators in management, design and work-shop sections.

In 1968, Institute of Telecommunication and Acoustics was established, Professor Zbigniew Żyszkowski became its director and a head of its Electro-acoustic Department. His professional activity was devoted to electro-acoustics, although in 1971 and 1972 he published a textbook entitled "Foundations of cable teletransmission" based on the lecture programme. His care about materials base and acoustic measurement technics caused the foundation of Section for noise and vibration research. His social activity was expressed by the active participation in the Polish Acoustical Society, particular in its Wrocław Section as well as in the Acoustic Committee of the Polish Academy of Sciences. He was a member of the Expert Board for International Collaboration in Telephony and Telegraphy, member of the Telecommunication Section of Electronics and Telecommunication Main Board at the Science and Technics Committee. In 1980 he was retired but he was still active collaborant engaged in research carried out in the Institute. In 1984 he published the third edition of "Foundations of electro-acoustics" and in 1987 a textbook "Electro-acoustic measurement".

For his professional activity Professor Zbigniew Żyszkowski was distinguished Officer and Chevalier Cross of the Polonia Restituta, the Gold Cross of Merit, Medal of the National Education Board and the others numerous state, regional and professional distinctions. In 1986 he was awarded a honorary title for Teacher of Merit. His name was included in the honorary list Man Merit at the Wrocław Technical University.

For us, scholars and collaborators, Professor Zbigniew Żyszkowski will be kept in our minds as a honest Boss who used to be against the unknowledge and carelessness but with countless reserves of sympathy and support for students and younger collaborators, always finding time to help and guide them. He admired precision and brightlight in his lectures. May be it would be worth mentioning his solicitude for the mother tongue. His papers were made up with an aesthetic sence of the elegance avoiding unnecessarily long introductions and conclusions. His carefulness and systematic allowed him to make the acoustic therminology uniform to be useful for the Polish Standard.

We shall uniss a scientist and an educator, a man of strong personality whose kind of work marked permanent trace in the professional activity of his scholars.

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In memorize of Professor Wiktor Jankowski (1905—1988)



On November 30, 1988 Professor Wiktor Jankowski — a prominent researcher of medical sciences, a pioneer of the Polish physiological acoustics, a honorary member of the Polish Acoustical Society died at Wrocław.

Professor Wiktor Jankowski was born at Lwów on February 21, 1905 in the family of doctor. It was graduated in the Faculty of Medicine at the Jan Kazimierz University in Lwów. In 1930 he received a doctor degree of medical sciences. During the period 1930-1946 he worked in the Otolaryngological Clinic at the Jan Kazimierz University. On the basis of the scientific work he has done, he was awarded habilitation in July, 1939.

In 1946 he moved on to Wrocław where he was involved in reconstruction of the Otolaryngological Clinic. In 1953 he appointed an Extraordinary Professor and he headed the Otolaryngological Clinic at the Academy of Medicine in Wrocław. He appointed a Full Professor in 1963.

His scientific results are presented in 176 papers published in Polish and abroad journals. It is important to stress both his pioneer research on the sound — as well as the limen — and the lintel — audiometry and some research on the physiopathology and electrophysiology of the auditionic organ. These directions are basic for the scientific school created by him involving significant contribution to the acoustic development. Most of his papers are devoted to the problems of human protection within the acoustic environment of industry. Professor was scholar and teacher for successive generations of doctors, in their mids can be found a few professors and many doctors of medical sciences.

Professor Wiktor Jankowski was a principal founder of the Polish Acoustical Society — he used to be its effective member till last his days. He was one of the founders of its Wrocław Section and Medical Division. During the period 1965-1968 he was Vice-President of the Society and President of its Wrocław Section. As the first one, he was awarded honorary membership of the Polish Acoustical Society for the acknowledgement to his pioneer contribution to the development of the physiological acoustics.

We missed a scientist, doctor and scholar whose activity will remain the stable trace in our minds.

In memorize of Dr Jerzy Jaroszyński (1923–1989)

On September 19, 1989 Dr Jerzy Jaroszyński — a merit member of the Polish Acoustical Society — one of the Wrocław Section's principal founders, the high respected researcher within the domain of electro-acoustics, died in Wrocław.

Dr Jerzy Jaroszyński was born in Warsaw on July 29, 1923 in a family of an electrical engineer. In 1942 he entered the Electrical Department at the Warsaw Technical University where in 1947 he received a diploma in electrical engineering. Since April 1947 he has begun his work in Polish Radio Broadcasting in Wrocław as a movement engineer. At this time, after the World War II destructions, he designed and supervised the radio broadcasting system. His high efficiently professional activity have been connected with the technical department of the Polish Radio and Television Broadcasting in Wrocław. At the same time, during the period 1950–1962, he lectured in the Communication Department at the Wrocław Technical University. Till the last days, his active participation in the research projects developed in the Telecommunication and Acoustics Institute at the Wrocław Technical University should be emphasized. It is important to stress his research on design and paractical application of stereophonic and quadrohonic systems. In November 1970, his team, as the first one in Poland, introduced the stereophonic broadcasting system in Wrocław. His experimental research on quadrohonic broadcasting system was also successful. The scientific research on phenomena foundations of audio monitoring in stereophony has been summarized in his doctoral thesis entitled "Correlation model of the auditory direction localization" terminated in 1985 at the Electronic Department of the Wrocław Technical University. A few times professional activity was awarded the state prizes. In 1963, together with Professors W. Jankowski and Z. Żyszkowski, he was one of the principal founders of Wrocław Section of the Polish Acoustical Society. His professional authority and honesty let him hold a few posts in the board of Section in Wrocław and let him to become a delegate during the home meetings.

We forever took leave of noble, honest man, our creative colleague.

In memorize of Professor Stanisław Kossowski (1909–1989)

On October 3, 1989, Professor Stanisław Kossowski, a principal founder of the Polish Acoustical Society has died in Wrocław.

Professor Stanisław Kossowski was born at Lwów on August 31, 1909. In 1934 he was graduated in the Faculty of Medicine at the Jan Kazimierz University in Lwów. During the years 1934–1937 he worked as an assistant in the Surgical Clinic, here in 1937, on completing his study, he received a doctor degree of medical sciences and then he started work at the Otolaryngological Clinic.

During the World War II 1939–1944 he stayed at Lwów and worked at Lwów Medical Institute, later the State Medical Institute. In 1946, together with Professors Teofil Zalewski he organized the Otolaryngological Clinic in Wrocław, here he perfected his professional activity. The results are presented in about 90 research papers including works on the physiological acoustics in particular, the original research on low audition human perception caused by the noisy work conditions. His team was awarded the Health Minister First Prize for the carried out on the animals experimental research on the microphonics effects in the inner ear.

Professor Stanisław Kossowski was an active member of many scientific societies and boards, for instance during the period 1957–1963 he took part in Board of Vibration Effects Research on Human

Structure at the Committee of the Polish Academy of Sciences During thirty years period of this professional work he managed successive generations of otolaryngologist, as well he was thesis advisor o five terminated Ph.D. degrees.

All his professional life, Professor Stanislaw Kossowski used to be an effective member of the Polish Acoustical Society its principal founder as well as a founder of its Wroclaw Section and Medical Division.

We missed an upright doctor, a great scholar and teacher, who will be long remembered by friends, collaborators and colleagues of a noble, hopeful and cherful man.

Dr. Stanislaw Kossowski was born in Wroclaw on the 10th of January 1914. He received his education at the Technical University of Wroclaw where in 1941 he received a diploma in electrical engineering. After the war he worked in Polish Radio broadcasting as a government engineer. In 1947 he returned to Wroclaw and joined the technical department of the Polish Radio and Television Institute. During the period 1950-1952 he worked in the Research Department at the Wroclaw Technical University. In the last part of his professional activity he worked in the Department of Acoustics and Communication at the Wroclaw Technical University. It is important to stress his work on the development of ultrasonic systems in Poland. He worked on ultrasonic systems in Poland and abroad. His research was also concerned with the development of ultrasonic systems in Poland. The first ultrasonic system was also developed by him. His research has been published in many scientific journals. His work on ultrasonic systems has been recognized by the Polish Academy of Sciences. In 1963 he was awarded the title of Doctor of Technical Sciences. In 1967 he was awarded the title of Professor. He was also a member of the Polish Acoustical Society. His professional activity and his work on ultrasonic systems have been recognized by the Polish Academy of Sciences. He was also a member of the Polish Acoustical Society. His professional activity and his work on ultrasonic systems have been recognized by the Polish Academy of Sciences.



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