

## Remembering Professor Aleksander Guterch (1936–2023)

It is already more than a year ago now that Professor Aleksander Guterch passed away, on December, 28<sup>th</sup>, 2023 (Fig. 1). From this longer perspective, it is possible to fully appreciate his role in the Earth sciences, the importance of his scientific work for the study of the lithosphere in various regions of the world, and also his unique personality. The present short note is not intended to give a full picture of a scientific career of A. Guterch (for more details the reader is referred to the book edited by Janik et al. (2023) and quoted below). Rather, we would like to highlight the most important achievements and the exceptional personality of A. Guterch, which we had the opportunity to get to know during our encounters and scientific cooperation.



**Fig. 1.** Professor Aleksander Guterch (1936–2023). Photo by K. Teisseyre, 2018

Aleksander Guterch was born in Sękowa village near Gorlice in the heart of the Carpathian petroleum basin, where geology and geophysics formed everyday life for many residents, including his father, a driller in an oil company. It is therefore not surprising that the Professor chose a career path connected with the Earth sciences, leading from Marcin Kromer High School in Gorlice to the University of Warsaw, where he obtained a master's degree in geophysics in 1961. After a two-year episode as an assistant

at the Department of Lithosphere Physics at the University of Warsaw, Professor Guterch joined the Institute of Geophysics of the Polish Academy of Sciences (IG PAS) for the rest of his scientific career. Here, in 1969, he defended his doctoral thesis, and then, after obtaining his habilitation at the AGH University of Science and Technology, he became an associate professor (1981) and, 10 years later, a full professor. At the Institute of Geophysics, he was promoted to the successive positions of research assistant (1963–1969), assistant professor (1969–1971), independent researcher (docent) (1972–1981), and finally associate professor (1981), and full professor (1990). In the years 1972–2023 he served continuously as a member of the Scientific Council at the IG PAS.

During 1969–2012 Professor Guterch was a leader of the Deep Seismic Sounding (DSS) Laboratory and then the Department of Seismic Lithospheric Research at the IG PAS. This is a very rare example in the scientific community, of such a long tenure (43 years!) in essentially the same managerial position, one that was by no means lucrative or prestigious. The Professor used these long years to build a strong research team, which became the basis for many scientific achievements (more on that below). Thanks to his constantly developed scientific competences, A. Guterch was elected to many scientific associations, advisory boards, committees, *etc.* First of all, these included membership of scientific institutions: the Polish Academy of Sciences (as full member from 1998), the Polish Academy of Arts and Sciences (as corresponding member from 1999), the Warsaw Scientific Society (as full member from 1994) and the European Academy – Academia EUROPAEA, London (from 1992). He was a member of the Committee on Geophysics PAS, serving as its scientific secretary during 1968–1980, a chairman of the Committee for Polar Research at the Presidium of the PAS (1999–2007), chairman of the Geological Council at the Ministry of Environment (1993–2005), and Chairman of the National Committee for Polar Treaties at the Presidium of the PAS (from 2006), to name only a few of his memberships and positions.

Due to his personal modesty, A. Guterch did not treat all these honours as a proof of prestige or as reason for personal aggrandisement. They were useful to him primarily for developing scientific activity, service to the scientific community and, more broadly, to the Polish State. This motivated him to participate in 1995–1998 in important European scientific ventures: the Earth Sciences Panel for TRR Networks (European Commission, Brussels), and in the EUROPROBE Program (1991–2001) funded by the European Science Foundation, where he was a member of the Steering and Management committees. In the years 2003–2012 he acted as Vice-chairman of the National Committee for Cooperation with the European Science Foundation (ESF) at the Presidium of the PAS. On the domestic



The impressive scientific legacy of Professor Guterch, included in tens of articles and monographs, is a lasting contribution to Polish and world science. Acknowledging his role as initiator of research, his scientific pupils and younger colleagues properly named him the “father” of seismic studies of the lithosphere in Poland. When considering the reasons for Professor Guterch’s scientific success, one may mention several factors directly related to his exceptional personality. The key here was the vision that accompanied him in setting the goals of widely scoped scientific projects. The implementation of this vision was achieved by skillful selection of collaborators, who A. Guterch was able to inspire to achieve these scientific goals. The prime example is Prof. Marek Grad (1951–2020) employed in the Department of Physics of the Lithosphere, University of Warsaw, Aleksander Guterch’s right-hand man in many ventures. The Professor was also characterized by an extraordinary ability to organize the organizational, financial and technical support for the implementation of expensive seismic projects requiring unique equipment. Finally, it is important to mention his extraordinary determination and perseverance in pursuing scientific goals.

All these factors embedded in the Professor’s personality effectively supported the implementation of his projects thanks to his great authority not only in the scientific community, but also among decision-makers. In turn, this authority was built, for many years, upon the successes of successive research projects and their high reputation among fellow scientists, including those from our parent institution, the Polish Geological Institute. Carrying major geophysical projects aimed at studying the deep geological structure of Poland, he collaborated with many prominent geologists and geophysicists of the PGI, such as Władysław Pożaryski, Jerzy Znosko, Ryszard Dadlez, Stefan Młynarski, Jan Skorupa, Czesław Królikowski and Stanisław Wybraniec. One of the present co-authors (MN) also had the honour of collaborating with Professor Guterch on several scientific projects. The research initiated by A. Guterch had a very high potential for applied geology, especially with regard to gas and oil exploration. Hence, the Professor’s cooperation with PGI and Polish Oil and Gas company S.A. PGNiG was developed at a large scale. Owing to his great scientific and personal authority, A. Guterch was a member of the Scientific Council of PGI for many years, either by election by the Institute’s employees or by nomination of the Minister supervising the PGI. He served on the Scientific Council of

the PGI from 1981 to 1985 and from 1991 to 2007, during the latter 16-year period as the Council’s Vice-Chairman.

The second field of interest of A. Guterch, apart from geophysics, was history. It may be inferred that this developed in connection with the special place of his birth, in the area of one of the greatest battles of World War I on Polish soil. This left behind nearly 200 cemeteries scattered across the picturesque Beskid Niski, including two in his home village of Sękowa. The co-author of this memoir (SW) was born in a neighbouring village, a few kilometres from Sękowa. We studied at the same High School in Gorlice. Despite the generational difference between us, we were taught by some of the same professors. An important person for both of us was the Polish language teacher, Professor Elżbieta Dniestrzańska, whose husband, a Polish Army officer, was murdered by the Russians in Katyń. Out of respect for her, the true Katyń history was always taught at our High School. This is perhaps where Alexander Guterch’s interest in history came from (Fig. 2). The Professor took great pleasure in participating in scientific meetings organized by the Section of History of the Geological Sciences of the Polish Geological Society, in work of which he took an active part. Knowing the Professor’s historical interests, it is not surprising that he was a keen collector of antiquities, in particular old weapons. Since 1978 he was a member (eventually a Honorary Member) of the Association of Old Weapons and Colours at the National Museum in Kraków, serving in 2000–2016 as the President of the Association. He was also a member of the Józef Piłsudski Institute in Warsaw, conducting studies on the most recent history of Poland.

Professor Guterch’s scientific and organizational achievements will remain a part of the collective memory of the scientific community, as a lasting contribution to Polish science, and science more widely. But his collaborators and colleagues will also hold the memory of a man of versatile interests, kind and polite, and friendly to people.

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