



*In Memoriam*  
**Professor Aleksander Guterch (1936–2023)**  
**an outstanding Polish geophysicist and polar researcher**



Professor Aleksander Guterch at the Professor Adam Dziewoński medal award ceremony during the 65<sup>th</sup> anniversary of Institute of Geophysics, Polish Academy of Sciences in 2018, photograph by K. Teisseyre.

Aleksander Guterch, Professor at the Institute of Geophysics, Polish Academy of Sciences, died on December 28, 2023, at the age of 87. He was born in Sękowa, southern Poland, on February 16, 1936. Professor Guterch graduated from the Faculty of Physics, University of Warsaw, in 1961, and since 1963 he has been working at the Institute of Geophysics of the Polish Academy



of Sciences, where he received PhD degree in 1969. For more than 40 years, he headed the Deep Structures Laboratory and then the Department of Seismic Lithospheric Research. Around him, a strong scientific team for seismic studies of the Earth's crust and upper mantle aggregated. He was tutor and adviser for many young people, graduated students and doctors. Aleksander Guterch authored and co-authored ca. 250 scientific publications with over 5000 citations.

In the years 1997–2003, Aleksander Guterch initiated and was the organizer or co-organizer of the great seismic projects targeting the deep crustal structures and the lower lithosphere in Central Europe, from the Baltic Sea to the Adriatic Sea. These were great refraction seismic experiments known as POLONAISE'97 (Polish Lithosphere Onsets – An International Seismic Experiment, 1997), CELEBRATION 2000 (Central European Lithospheric Experiment Based on Refraction, 2000), Sudetes 2003, GRUNDY 2003, and ALPS 2002 projects. All regional main geological structures have been covered by a system of seismic profiles, with a total length of ca. 20,000 km. Those studies were carried out in cooperation with 35 scientific and industrial institutions from fifteen European countries as well as the USA and Canada. A summary of the results was presented in the publication *Crustal and lithospheric structures between the Alps and East European Craton from long-range controlled source seismic experiments* published in *Treatise on Geophysics*. His interests included not only the structure of the lithosphere of Central Europe but also other tectonic units of the East European Craton, such as Fennoscandia and Sarmatia in Finland, Lithuania, Belarus and Ukraine.

The second major area of Professor Aleksander Guterch scientific interest was the lithosphere of the polar regions, the Arctic and the Antarctic. He organized six geophysical expeditions to the Arctic (1976, 1978, 1985, 1999, 2005, 2008), to study the structure of the Mid-Atlantic Ridge and the edge of the Eurasian plate in the Spitsbergen area, and four geodynamical expeditions to West Antarctica (1979/80, 1984/85, 1987/88, 1990/91). The seismic studies of the lithosphere in the Antarctic Peninsula sector, resulted in developing new geodynamical model of the subduction zone of former Phoenix plate below the South Shetland Islands and Bransfield Strait. These polar expeditions were run by the Institute of Geophysics PAS, some of them jointly with scientific institutions from Norway, Germany, Japan and the USA.

Professor Guterch was well recognized in the Polish and international polar research community. In the years 1991–1999, he was a vice-chairman and later in years 1999–2007 the chairman of the Committee of Polar Research of the Polish Academy of Sciences. He was a member of many national advisory bodies for polar policy, represented Poland in the European Polar Council in years 2001–2016 and was a member of the steering committee of the *Plate Tectonics and Polar Gateways in Earth History* project for the IPY 2007/08. Professor Guterch initiated the preparation of the National Strategic Polar Research Program for 2002–2010, thanks to which Poland actively participated in the 4<sup>th</sup> International

Polar Year 2007–2008 with the governmental project *Structure, evolution and dynamics of the lithosphere, cryosphere and biosphere in the European sector of the Arctic and in the Antarctic*.

The Professor was a full member of the Polish Academy of Sciences, a member of Polish Academy of Arts and Sciences, a member of the Academia Europaea, a member of the Warsaw Scientific Society, the Polish Geophysical Society, an honorary member of the Hungarian Society of Geophysicists, as well as a member of many national and international scientific committees and associations. He received many awards and distinctions, including several state decorations: Knight's Cross of the Order of Polonia Restituta (1973), Officer's Cross of the Order of Polonia Restituta (1998) and the Bene Merito honorary badge (2015). In 2018, during the ceremony of the Institute's 65<sup>th</sup> anniversary, he was awarded a distinguished medal named after Professor Adam Dziewoński.

The Professor's hobby was old cartography and the history of Poland. He was especially interested in the history of white arms of the Polish military. Long-time he was President and an honorary member of the Association of Lovers of Old Arms and Uniforms. He was also a holder of the title of the honorary citizenship of the Sękowa commune.

Aleksander Guterch was an active member of the Committee on Polar Research of the Polish Academy of Sciences until his very last days. In the person of the Professor, we lose not only a great scientist, but also a mentor to many of us and a kind colleague. We will greatly miss him.

*Tomasz Janik and Wojciech Czuba  
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