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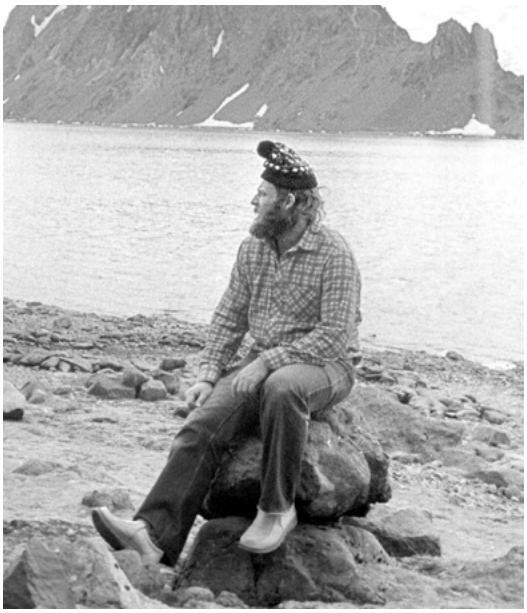
In Memoriam
Professor Marek Grad (1951–2020) an outstanding Polish geophysicist and polar researcher



Professor Marek Grad during the first Polish Antarctic Geophysical Expedition 1979/1980. Photograph taken near the *Arctowski* Station on King George Island, West Antarctica.

Marek Grad, Professor at the Institute of Geophysics, University of Warsaw, Poland, died suddenly on May 17, 2020, at the age of 68. He was born in Grodzisk Mazowiecki, Poland, on November 19, 1951, graduated from the Faculty of Physics, University of Warsaw in 1975, and since then he has been working at the Institute of Geophysics of this University. He received PhD degree in the Institute of Geophysics, Polish Academy of Sciences in 1981.

Professor Grad was an academic teacher, lecturer, tutor and adviser for a large group of students, graduate students and doctors. He had been the director of the Institute of Geophysics, University of Warsaw for many years. For over 40 years, he has closely collaborated with the Department of Lithospheric Research of the Institute of Geophysics, Polish Academy of Sciences.

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In the years 1997–2003, Marek Grad was a co-organizer and active participant of seismic research of the deep crustal structures and the lower lithosphere in Central Europe, from the Baltic to the Adriatic. These were great refraction seismic experiments commonly known as POLONAISE'97 (Polish Lithosphere Onsets − An International Seismic Experiment, 1997), CELEBRATION 2000 (Central European Lithosphere Experiment Based on Refraction, 2000), Sudetes 2003, GRUNDY 2003, and ALPS 2002 projects. All the main geological structures of the study area have been covered by a system of modern seismic profiles, with a total length of about 20,000 km. The research was carried out in cooperation with 35 scientific and industrial institutions from 12 European countries as well as the USA and Canada.

The results following from the above-mentioned seismic experiments, along with those obtained by other researchers in Europe, became the basis for the initiative undertaken by Marek Grad to develop a great synthesis of seismic studies of the Earth's crust of the entire European Plate, from the North Atlantic in the west to the Urals in the east, and from the Arctic in the north to Mediterranean Sea in the south. The result of this synthesis was the *The Moho depth map of the European Plate*, published in 2009. Marek Grad was the initiator, coordinator, and principal investigator of this project.

Professor Grad has also actively participated in seismic lithosphere studies of the polar regions in the Arctic and Antarctic − organized in 1976-2010 by the Institute of Geophysics, Polish Academy of Sciences. He took part in six geophysical expeditions to the Arctic, organized jointly with the scientific institutions from Norway, Germany, Japan, and the USA, as well as in five expeditions to West Antarctica. Seismic studies of the deep structure of the Earth’s crust and lower lithosphere carried out in the transition zone between the Phoenix Plate, South Shetland Islands Block, and the Antarctic Plate in West Antarctica were of special importance. Total length of seismic profiles in this region was about 4500 km. The results, achieved with the active participation of Marek Grad, resulted in significant publications.

In recent years, the scientific interests of Professor Grad have further expanded. He organized a large project BB-13 - recognition of the structure of the Earth's crust and upper mantle in northern Poland, using broadband seismic stations, in the framework of the MAESTRO grant awarded to him. His scientific achievements are widely accepted by international scientific community (Scopus 5273, WoS 4232, h-index 42). He has been awarded many times with individual and team awards by both the Polish Academy of Sciences and the Rector of the University of Warsaw. In 2018, he was awarded the Professor Adam Dziewoński Medal, granted by the Institute of Geophysics, Polish Academy of Sciences. Professor Grad has been a member of the Polish Academy of Sciences since 2004, a member of the Warsaw Scientific Society since 1997, and a foreign member of the Finish Academy of Science and Letters since 1999.

We recall with great pleasure our excellent collaboration with Professor Marek Grad.

He was survived by his wife Joanna and son Maciej.

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