



Lessons in near surface geophysics: experiences of the IAG/USP applied geophysics group

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Abstract

In 2022 the Department of Geophysics of the Institute of Astronomy, Geophysics and Atmospheric Sciences of the University of São Paulo (IAG/USP) completed 50 years. In this half century, the department has expanded its area of expertise, from Paleomagnetism to Seismology, Geodynamics and Applied Geophysics. This work presents the lines of research implemented in Near Surface Geophysics, an area of Applied Geophysics that investigates the most superficial portion of the subsurface, with important applications in engineering and the environment. We will present some of the experience acquired in the various research projects carried out by IAG/USP. Works using electrical, electromagnetic and seismic methods will be presented in various applications of geophysics investigated by our researchers, such as groundwater, contaminated areas, archaeology, forensic geophysics and geophysics for engineering. Aspects related to fieldwork planning, geophysical testing and data interpretation will be addressed. We hope that this work will motivate young geophysicists to seek new geophysical experiences.