

SESSION ON THE HISTORY AND PHILOSOPHY OF EARTH SCIENCES

Nilgün Okay, Gönenç Göçmengil

Earth sciences reflect not only the scientific body of knowledge aimed at understanding the formation, change, and functioning of the Earth, but also the historical and intellectual transformations in humanity's relationship with nature. The historical development of geology, geophysics, paleontology, mineralogy, petrology, and other earth science disciplines reveals how our knowledge of the Earth was produced, interpreted, and transformed across different periods. This body of scientific knowledge, developed through the study of rocks, minerals, fossils, and geological processes, also sheds light on the historical evolution of scientific methods, theories, research tools, and understandings of nature.

Organized under the main theme "Earth Sciences in Solving Global Problems: Earth-Society-Future," the History and Philosophy of Earth Sciences Session aims to discuss the historical development, intellectual foundations, and societal impacts of earth sciences across different periods and geographies. The institutionalization of the earth sciences, the development of geological and geophysical research, the historical journey of paleontology and mineralogy, scientific discoveries, natural history collections, museums, cartography, mining activities, and the transformation of scientific research methods constitute the session's primary areas of interest. This historical body of knowledge is important for understanding the development of scientific knowledge about the Earth and for evaluating today's environmental and social issues from a historical perspective.

Current issues such as climate change, natural disasters, the sustainable use of water and mineral resources, environmental degradation, and the preservation of geological heritage necessitate a reassessment of the historical experiences and intellectual legacy of the earth sciences. In this vein, the session aims to feature research addressing the processes of production and dissemination of geological knowledge, the evolution of scientific theories, the interaction of the earth sciences with other disciplines, and the social, cultural, and economic dimensions of scientific activities.

Understanding the Earth also requires understanding the history of our knowledge about it, as well as the people, institutions, and intellectual traditions that produce this knowledge. With this understanding, the session aims to create an interdisciplinary forum for discussion that goes beyond chronological developments in the history of the earth sciences to examine the formation, transformation, and social context of scientific knowledge. Geoscientists, historians of science, philosophers, and researchers from related disciplines working on the history, philosophy, epistemology, scientific heritage, history of education, and ethical dimensions of the geosciences are invited to contribute to the session with their papers.