

REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEMS IN GEOLOGY SESSION

Tolga Çan, Muhterem Küçükönder

Remote Sensing and Geographic Information Systems have become essential tools for scientific data acquisition and spatial analysis in Earth sciences, enabling the observation, analysis, and modeling of the Earth's surface across different spatial and temporal scales. Optical, thermal, and radar (SAR/InSAR) satellite data, LiDAR, high-resolution imagery acquired by unmanned aerial vehicles (UAVs), and digital elevation models provide significant opportunities for a wide range of applications, including geological mapping, active tectonics, exploration of groundwater and surface resources, monitoring of surface deformation, and natural hazard and risk assessment.

Organized within the framework of the 79th Geological Congress of Türkiye, under the main theme "Earth Sciences in Addressing Global Challenges: Earth–Society–Future," this session aims to provide a platform for sharing recent scientific and technological advances in the applications of Remote Sensing and Geographic Information Systems in Earth sciences, discussing approaches across different disciplines, and evaluating how the resulting scientific knowledge can contribute to addressing societal needs and supporting decision-making processes. The session also seeks to strengthen interdisciplinary scientific collaboration and contribute to the development of science-based solutions to global challenges.

Within the scope of this session, we invite Earth scientists and early-career researchers from universities, research centers, public institutions, and the private sector to present their original scientific and applied research based on Remote Sensing, Geographic Information Systems, spatial data analysis, modeling, and decision-support systems through oral or poster presentations. We would be delighted to welcome you to this session, which aims to promote scientific knowledge exchange and advance the application of modern technologies in Earth science.