SESSION 09- From Seismic Networks to Next-Generation Seismological Data Services

Conveners

C. Cauzzi, ORFEUS and Swiss Seismological Service (SED) at ETH Zürich, Switzerland
J. Carter, EarthScope Consortium, USA
W. Crawford, Marine Geosciences, Institut de Physique du Globe de Paris (IPGP)
S. D'Amico, Faculty of Science, Department of Geosciences, University of Malta
C. Evangelidis, Institute of Geodynamics, National Observatory of Athens (NOA-IG), Greece
C. Haberland, GFZ Helmholtz Centre for Geosciences, Potsdam, Germany
A. Kiratzi, EPOS Seismology and Department of Geophysics, Aristotle University of Thessaloniki (AUTH), Greece
C. Mascandola, Istituto Nazionale di Geofisica e Vulcanologia (INGV), Milan, Italy
V. Poggi, National Institute of Oceanography and Applied Geophysics (OGS), Udine, Italy
Z. Roumelioti, Department of Geology, University of Patras, Greece
J. Schaeffer, Observatoire des Sciences de l'Univers de Grenoble, Isterre, Epos-France-DC, France
K. Sigloch, Géoazur, Université Côte d'Azur, CNRS, Observatoire Côte d'Azur, Sophia Antipolis, France
R. Sleeman, ORFEUS Data Center (ODC) and Royal Netherlands Meteorological Institute (KNMI), De Bilt
A. Strollo, GFZ Helmholtz Centre for Geosciences, Potsdam, Germany
C. Trabant, EarthScope Consortium, USA

Session Description

This session welcomes contributions from the broad domain of observational seismology, focusing on workflows and products enabled by permanent and mobile seismic networks, operating onshore and offshore. The session targets network operators, project leaders, and data users working with modern, novel, open, and FAIR-compliant datasets, as well as with advanced technologies for data acquisition, management and analysis. Contributions are encouraged on: (a) data collection, curation and provisioning from the deployment, operation, management of modern seismic network and the delivery of waveform data products at local, regional and global scales across a distributed federation of datacenters; (b) integration of new data types (e.g., DAS systems) and communities at the interface between Seismology and other Earth Science domains; (c) development, testing, and comparison of emerging strategies (e.g., ML) and software tools for earthquake monitoring, in particular for real-time applications; (d) delivery of technical and scientific seismological and multidisciplinary data products; (e) integration of recorded seismological data into computational workflows, digital twins, and agentic AI systems.