

INVITATION TO THE LECTURE

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EPOS Platform

European multidisciplinary infrastructure for solid Earth
data access

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The European Plate Observing System (EPOS) addresses the problem of homogeneous access to heterogeneous distributed digital assets in geoscience within Europe, following the FAIR principles. EPOS has been a European Research Infrastructure Consortium (ERIC) since 2018, with the goal of building long-term and sustainable infrastructure for solid Earth science. The EPOS Platform was launched into the operational phase in April 2023 and is introducing new ways for cross-disciplinary research, especially for data discovery and visualization. Currently, the EPOS Platform, a metadata and semantic-driven system for integrating Data, Software and Services, provides access to data and data products from ten different geoscientific areas: Seismology, Near Fault Observatories, GNSS Data and Products, Volcano Observations, Satellite Data, Geomagnetic Observations, Anthropogenic Hazards, Geological Information and Modelling, Multi-scale laboratories and Tsunami Research. New scientific communities are about to join EPOS. The presentation is introducing the EPOS Platform and demonstrating its usage on a multidisciplinary scientific case study and showing potential of future collaborative research by using Jupyter notebooks deployed at distributed computing facilities. Jupyter Notebooks might be used as dynamic learning tools since they combine methodological descriptions with executable code that users can modify for specific needs. By leveraging parameterized queries to web services integrated through EPOS, users can easily customize data retrieval and facilitate reproducibility by sharing workspace snapshots via GitHub.