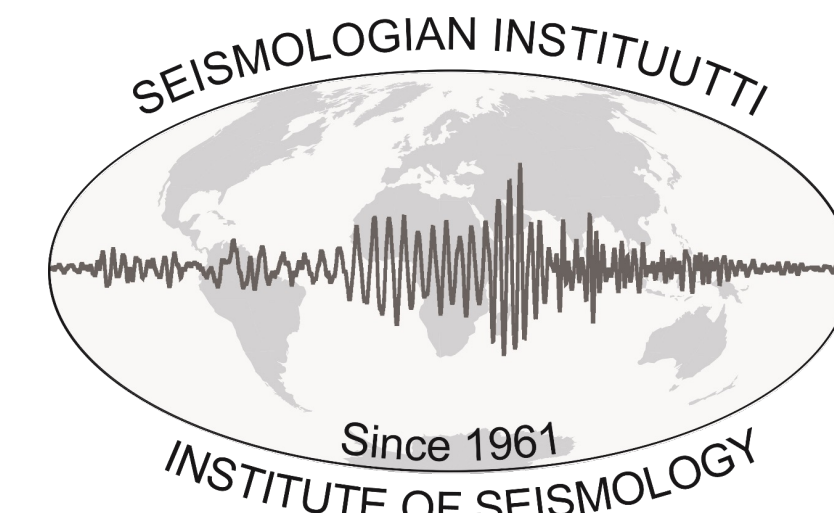




# Finnish Mobile Seismic Instrument Pool



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## An infrastructure for academic & industrial research projects

### PROJECT LIFE

#### 1. Application

Call for application twice a year (Nov-Jan & Jun-Aug).

#### 2. Instruments preparation

Configuration of the instruments, battery charging, packaging and shipment (national or international).

#### 3. Recording (a few days to years)

Instruments are installed and left recording. Extended recording time can be achieved with external batteries or swap.

#### 4. Instrument return & data download

Instruments are returned, data is downloaded. On-site data download, before instrument return, can be achieved.

#### 5. Data sharing

Data is shared with the projects partners.

Data to be part of national FIN-EPOS and international EPOS.

### INSTRUMENTS

#### 982 Large-N, ~1200 in spring 2024 (GeoSpace)

- 5Hz 3C Land cartesian geophones
- GSB3 digitizer, 64GB memory, internal battery
- External batteries to extend recording period
- + **50 GSX3-LTE** digitizer, with wireless data transfer

#### 71 SmartSolo IGU-16HR 5Hz 3C all-in-one instruments

#### 46 Broadbands (Güralp)

- 3ESPC Compact broadband 3-axis (60 s to 100 Hz)
- 4 channel Minimus digitizer, 128GB memory
- GNSS antenna
- 12V, 70 Ah rechargeable gel car batteries

#### 5 Accelerometers (Güralp)

- Triaxial orthogonal Fortis DC-to-100Hz
- Can be connected to a Minimus digitizer



Boxes for national & international shipping



Storage facility, Kumpula campus



Large-N devices



Broadband devices

### COLLABORATIVE POOL

- Established, maintained and operated in collaboration with:
  - Four universities: Aalto, Helsinki, Oulu and Turku
  - Geological Survey of Finland (GTK)
- Hosted and coordinated by the Institute of Seismology, University of Helsinki
- More than 30 projects done since 2021, beginning of pool establishment
- Projects done in collaboration with other institutions, national or international

### APPLICATIONS

- Seismic imaging, monitoring, event detection
- Active source, passive, or ambient noise experiments
- Short term to long term recordings
- Study at different scale:
  - Local: faults, near surface, dams
  - Regional: mineral exploration, water table measurements, earthquake detection and localization
  - Global Earth: deep Earth structures, crust imaging

## Supported by the FLEX-EPOS project

“Flexible instrument network for enhanced geophysical observations and multi-disciplinary research”

Latest Research Council of Finland FIRI funded research infrastructure project under FIN-EPOS\* umbrella

- total budget of 4.1 M€
- 3 M€ for setting up the pool
- funding secured until end of 2024

- Establish national pool of geophysical instruments
- Enhance multi-disciplinary geophysical superstations
- Tackle fundamental research questions in seismology, geomagnetism and geodesy

\*FIN-EPOS is the Finnish national component of European Plate Observing System EPOS



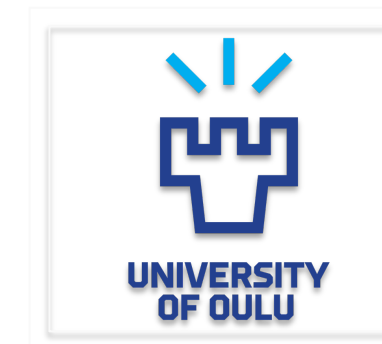
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Wiki pages

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