

What is new?

Site characterization

The **ITACA3.2** database was enriched with the following metadata relating to the site characterization deriving from the activities of the B2 DPC-INGV 2019-2021 Agreement, carried out in the year 2021:

- Updating of the topographic class of all the stations archived in ITACA according to the Italian seismic code (NTC2018);
- Results related to the seismic characterization of 13 stations of the Rete Accelerometrica Nazionale-RAN (IT.CPC-, IT.MRN, IT.FOCC, IT.FOS, IT.PZI1, IT.TSC, IT.PGN, IT.PVF, IT. BRH, IT.BVT, IT.NVG, IT.SARM, IT.BRSA) and 6 belonging to the Rete Sismica Nazionale-RSN (IV.MOCO, IV.POFI, IV.CNCS, IV.VENL, IV.TREG, IV. CAPR). In particular, the data include: 19 geological maps, 18 lithotechnical maps, 10 lithological maps, 18 shear wave velocity profiles, 19 reports describing the geological surveys and geophysical investigations carried out at the site for the characterization, 10 photos of the accelerometric station and its surroundings, 19 ambient noise analysis;
- Results relating to the study of the directionality effects of the resonance frequencies of the site visible in the *Microtremor Analysis* section of the *Geophysics* TAB;
- Update of the subsoil category on the basis of the $V_{s,30}$ value estimated from the velocity profiles and from empirical correlations with slope;
- Uploading of: 2 microtremor analysis, 58 H/V calculated on the S phase of the Fourier spectra (38 updates and 20 new entries), 52 H/V calculated on the coda-waves of the Fourier spectra (35 updates and 17 new entries), 85 new H/V calculated from the acceleration response spectra of the recordings;
- Possibility to download the H/V curves in terms of: frequency, geometric mean, standard deviation;
- Update of the *Documentation* tab of the station detail page adding: i) link to the station page of the [CRISP](#) website to view the H/V analysis of the noise measurements of the RSN stations; ii) link to the [RAMONES](#) report for the H/V analyzes, calculated on the strong phase and on the pre-event of the recordings, updated in real time; iii) reports of the H/V analyzes from noise and earthquakes for 28 stations installed in areas with low seismicity;
- Update of station metadata relating to the type of installation (housing, installation dates);

- Possibility to search stations identified as reference sites through a new search field in the *Site Metadata* tab on the stations and waveforms page;
- Publication of the flat-file of the repeatable site terms.

Tools

In **ITACA3.2** is now available a new tool called **REXELweb** for the automatic selection of accelerograms from the database via an online graphical user interface, which is guided and user-friendly. REXELweb provides spectrum-compatible combinations of 1-, 2- or 3-component ground motion records, compatible on average with a target spectrum. The tool encompasses previous versions (i.e. the Mathworks-Matlab® ESM_REXELweb v1.0 and REXELite, both provided in the framework of ITACA ed ESM utilities) thanks to additional features and the availability of uniformly processed and high-quality waveforms.

Products

- [Flat-file ITACAext](#): parametric table containing metadata and intensity measures of manually processed waveforms, relevant for the analysis of the ground-motion in Italy
- [Flat-file ITACAs2s](#): parametric table containing the repeatable site terms ($\delta S2S$) and the associated variabilities, evaluated with respect to the ITA18 ground-motion model for acceleration spectral ordinates (5% damping).