

Surface wave analysis: solving ambiguities and pitfalls through multi-component data (3C nodes)

Eliosoft organizes a 4-hour short course in English, hosted at the headquarters of the Order of Geologists of Campania (Via Stendhal 23, Naples, Italy), available both on-site (limited seats) and online.

Surface-wave and vibration data analysis have become essential tools in engineering, geotechnical and seismic hazard studies. However, the most popular techniques are often based on oversimplifications or misconceptions, which can lead to erroneous assessments of subsurface conditions or structural behavior.

This seminar provides both a theoretical foundation and practical guidance on key aspects critical to accurate and effective seismic and vibration data acquisition and analysis.

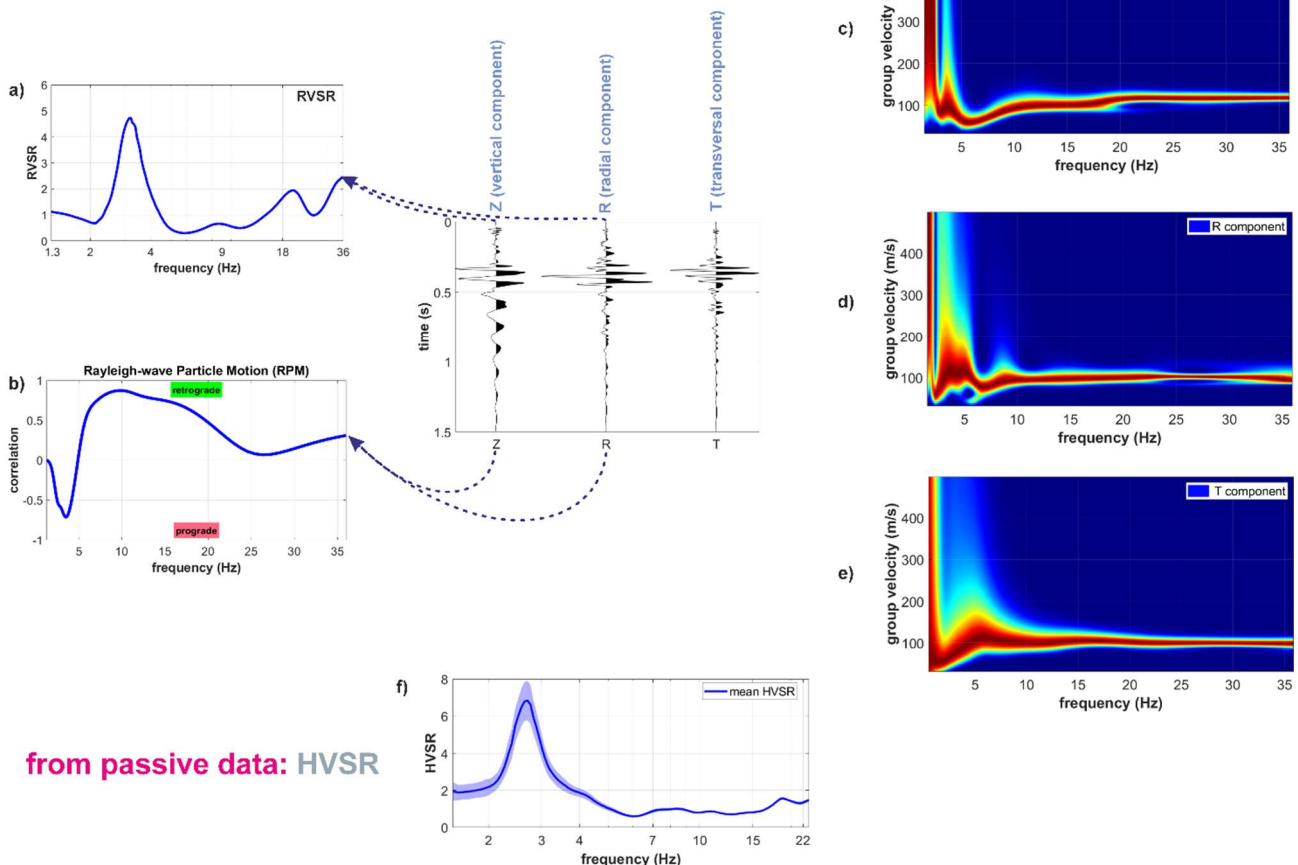
Participants will explore how to overcome common challenges in data acquisition and processing, and how to enhance their results through the analysis of **multi-component data, in particular from 3-component (3C) nodes**.

The course includes real-world case studies to reinforce learning through practical examples.

A dedicated discussion and Q&A session will provide space for questions, in-depth clarifications, and the exchange of experiences among participants.

Holistic analysis of Surface waves [HoliSurface® - HS] everything you can get & analyze from a single 3C geophone

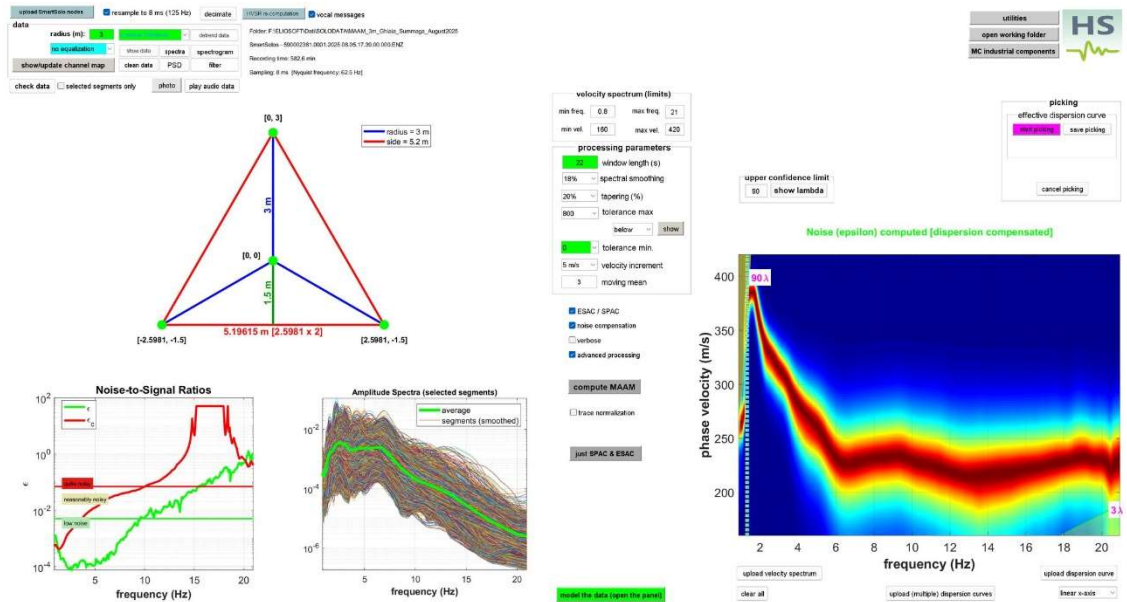
from active data: 3 group-velocity spectra + RPM + RVSR



from passive data: HVSR

PROGRAMME

- Body wave refraction and surface wave analysis: beyond legends with physics
- Data acquisition and analysis: the several active and passive options
- A critical overview over the most common misunderstood acronyms: MASW, ReMi, ESAC, SPAC, HVSR, HS, MFA/FTAN, MAAM
- Revealing surface wave properties and inverting them: the options for these two critical steps (modal curves, effective curve, *Full Velocity Spectrum* analysis)
- Joint analysis of seismic data: fundamentals
- Site amplification: legends and evidences from SSR
- 2D Vs profiles: various active and passive methodologies
- Vibration analysis (buildings and bridges)
- Seismic cables *versus* seismic nodes: new opportunities
- Q&A and Discussion



INFORMATION

Date: September 11, 2025

Time: 14:00 – 18:00 Rome time (CEST) -> 12:00 – 16:00 UTC

Language: English

Speaker: Giancarlo Dal Moro

Location: Via Stendhal 23 – 80133 Naples, Italy [*Hosted at the headquarters of the Order of Geologists of Campania*]

Course Format: In-person (limited seats) or Online

REGISTRATION

To register, please send an email to info@winmasw.com including:

- Full name(s) of participant(s)
- Company, university, or research organization
- **Attendance mode: In-person or Online**

