# TEACHER

**Silvia Castellaro.** Born in Venice (Italy) in 1975, M.Sc. in Geophysics, M.Sc. in Civil Engineering, Ph.D in Earth Sciences. Professor at the Department of Physics and Astronomy of the University of Bologna (Italy), where she teaches General Physics, Exploration Geophysics, Engineering Seismology. Her current main interests of research are the dynamic characterization of soils and structures and the use of the modal frequencies to assess some intrinsic properties of different types of structures (building, trees, geological structures...). She is author of about 70 papers on international peer-reviewed scientific journals.

## REGISTRATION

To register, please fill in <u>this form</u>. The registration is completed once the payment has been received. The registration fee is 55€ (EUR). 22% VAT tax applies only to EU residents <u>without</u> a VAT number. If you are a EU citizen and do not have a VAT number, please email us at info@moho.world before making the payment.

Payment can be made with credit card on <u>https://moho.world/en/payments/</u> or wire transfer (bank info: BANCA GENERALI, p.zza della Borsa, 8 – 34132 Trieste, IBAN: IT 29 M 03075 02200 CC8500594453).

For further information, please visit our website <a href="http://moho.world/en/courses/">http://moho.world/en/courses/</a> or contact info@moho.world.

## **ONLINE PLATFORM**

The webinar will be provided on **Zoom**.

To facilitate the course of the seminar, participants are kindly asked to "rename" themselves with their own name once they have logged in.

Participants are invited to keep their webcam on if possible. It will help us to get immediate feedback and makes interaction more enjoyable.

### **COURSE TIMING**

Depending on the participant's time zone, the webinar can be attended alternatively on:

### • Mon., July 24<sup>th</sup>, 2023 (UTC afternoon time)

- UTC time: 2 pm - 5.30 pm

- Rome time: 4 pm 7.30 pm
- New York time: 10 am 1.30 pm
- Los Angeles time: 7 am 10.30 am

## • Wed., July 26<sup>th</sup>, 2023 (UTC morning time)

- UTC time: 7 am - 10:30 am

- Rome time: 9 am 12:30 pm
- New Delhi time: 12:30 pm 4 pm
- Beijing time: 3 pm 6.30 pm

# JOINT FIT OF H/V, DISPERSION CURVES AND OTHER DATA: EXERCISE SESSION





Monday, July 24<sup>th</sup> 2023 (UTC afternoon time) or Wednesday, July 26<sup>th</sup> 2023 (UTC morning time)

# INTRODUCTION

In this seminar we will carry out together a series of exercises on the interpretation of H/V data and dispersion curves. These exercise will be a little more articulated than those presented in the basic courses, to which we refer <u>here</u>.

First, we will exploit the multichannel analysis of surface waves as seismic refraction tool, to quickly assess the Poisson's ratio, which can have a non-negligible effect on the amplitude of H/V curves, particularly at high frequency.

We will then discuss how to interpret or try to improve complex dispersion curves, drawing on the information that H/V curves can provide at the same site.

Finally, we will examine how to exploit data from other analysis (e.g., borehole tests such as down-hole), firstly by trying to understand how reliable they are, and secondly by trying to arrive at a subsoil model that brings all the experimental evidence together.

Cases brought in by participants, if significant and of common interest, may be discussed during or at the end of the seminar. Participants are invited to send them in advance to support@moho.world for pre-assessment.

10 min

Coffee break

them together.





# **COURSE CONTENTS**

in terms of interpretation?

The punctual vs spatial information of

H/V vs dispersion curves: how to use

We use the traces acquired for

dispersion curves as traces for

refraction seismic. What can be gained

First part (2h)

V<sub>R</sub> [m/s]

#### Second part (1h20min)

When dispersion curves are complex: can H/V help with interpretation? How?

Are borehole geophysical tests always reliable? How to understand them, how to use them.

### Final discussion.

At the end of the course, the teacher will remain available for questions from the participants.