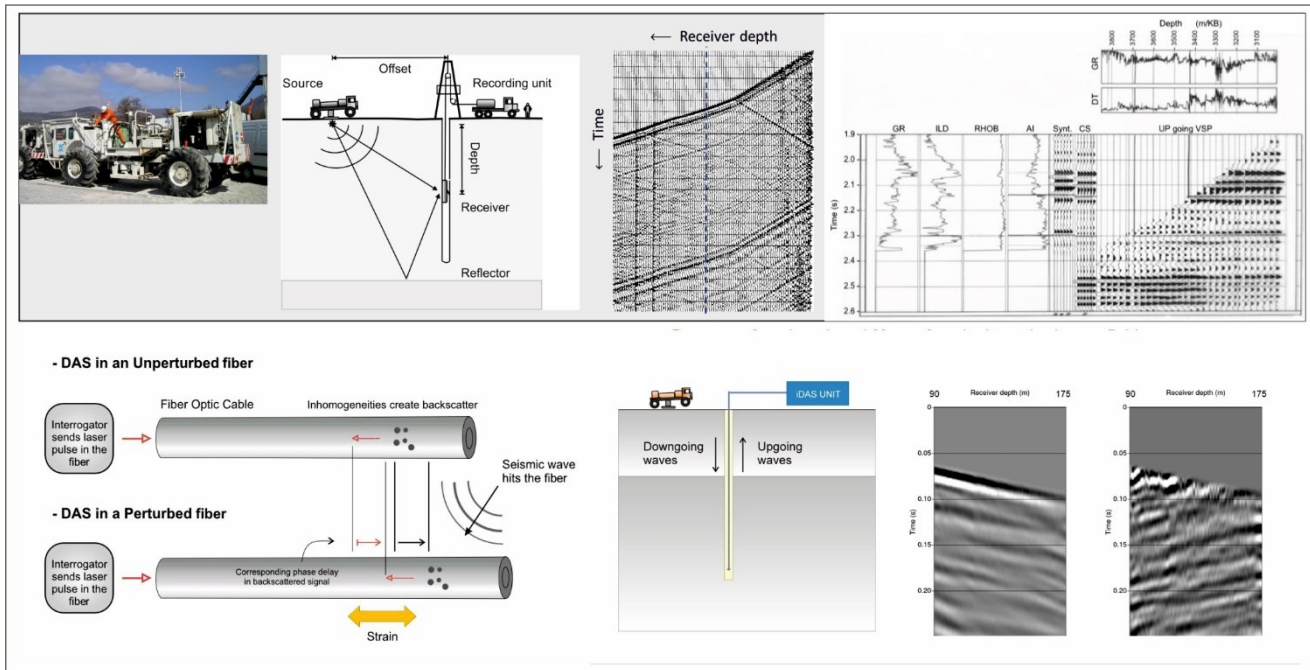




SHORT COURSE on Borehole seismic

Flavio Poletto



Program

This course introduces the fundamental borehole seismic concepts and explores advanced seismic methods. The course consists of three lessons, each lasting 2 hours. The first two lessons focus on vertical seismic profiling (VSP) and borehole geophysics. Topics include an introduction to the basic concepts of VSP and check shots, the purpose and applications of borehole seismic methods, acquisition techniques, quality control, data processing, and interpretation. Special attention is given to the resolution of VSP data and its integration with well logs for calibration. The third lesson highlights fiber optic technology for seismic acquisitions using distributed acoustic sensing (DAS). This lesson introduces the basic concepts of DAS, offering an overview of data recording conditions, method sensitivity, key parameters, and practical applications in borehole seismic measurements. It also covers the nature of the signals measured by DAS, with a comparison between strain signals from DAS and the conventional geophone signals.

| December 9, 2024 | |
|------------------------|--|
| 14:30 – 16:30, room 2L | Vertical seismic profiling (VSP) and borehole geophysics methods, data acquisition |
| December 10, 2024 | |
| 10:30 - 12:30, room 2I | Vertical seismic profiling (VSP), data processing and interpretation |
| 14:30 – 16:30, room 2G | Distributed acoustic sensing (DAS) by optical fiber sensors, concepts and applications |

Classroom 2H - Dipartimento di Geoscienze, Università di Padova
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Link Zoom:

<https://unipd.zoom.us/j/85137727327?pwd=ImNE9GGsGibD7rVzuKg89263rENUfO.1>