SeisImager/SW
Surface Wave Analysis Software

Surface waves are easy to record and loaded with information about the subsurface. With SeisImager/SW, data processing is simple, putting the answers you seek at your fingertips.

SeisImager/SW includes both active source and passive source (microtremor) data analysis capability. The higher frequency data from a sledgehammer source that travels through shallower depths can be combined with lower frequency data from microtremors that travel through greater depths. The combination of results provides one high-resolution plot of S-wave velocity (Vs) over all depths sampled. The data processing is easy and straightforward with a wizard that walks you through the steps using default parameters that are suitable for most cases, but are fully user-adjustable as needed.

In addition to the core processing flows, SeisImager/SW includes HVSR analysis functions and allows the user to build Vs models and examine the effects of velocity variations. Borehole data such as P-wave velocities and blow counts (N-values) can also be correlated.

For deeper investigations as great as 1 km, microtremors can be recorded for longer periods (10+ minutes) with the Geometrics Atom Passive Seismic System. Common Time Blocks (CTBs) of microtremors are then processed with SeisImager/SW using the new extended Spatial Autocorrelation (SPAC) capability.

Beyond the main functions, SeisImager/SW is packed with advanced processing including higher mode analysis, HVSR inversion, joint Raleigh-Love wave analysis of 3-component MAM data, and ambient noise tomography.

Features & Benefits
• Calculates phase velocity and automatically picks dispersion curve.
• Performs inversion to iteratively seek 1D Vs curve or 2D Vs cross-section.
• Allows active and passive source dispersion curves to be combined for a high-resolution result over all depths sampled.
• Flexible geometry options suit a wide range of site configurations and conditions.
• Handles a range of microtremor data record lengths for investigations to depths as great as 1km.
• Analyses are based on robust methods: frequency domain tau-p and CMP cross-correlation for Multi-channel Analysis of Surface Waves (MASW); Spatial Autocorrelation (SPAC) for Microtremor Array Measurements (MAM).
• Includes editing and QC functions, and velocity modeling.
• No fees for support, maintenance, or upgrades.

Applications
• Vs30/Vs100 site classification.
• Foundation engineering.
• Microzonation studies.
• Void detection.
• In-fill and landfill investigation.
• Stratigraphic and lithologic studies.
• Deeper surveys of geologic structure.

www.geometrics.com
SeisImager/SW Software Packages for Windows

**Demonstration version:** May be launched 15 times, capable of 1D Multi-channel Analysis of Surface Waves (MASW).

**1D version:** Capable of 1D MASW, 1D Microtremor Array Measurements (MAM), and HVSR analysis.

**2D version:** In addition to 1D version, also capable of 2D MASW.

**Plus version:** In addition to 2D version, also capable of extended Spatial Autocorrelation (SPAC) of Common Time Block (CTBs).

**Pro version:** In addition to Plus version, also capable of higher mode analysis and HVSR inversion.

**3C version:** In addition to Pro version, also capable of processing 3-component MAM data and joint Raleigh-Love wave analysis.

**3D version:** In addition to 3C version, also capable of 2D and 3D analysis of MAM data (ambient noise tomography).

**Rental (Plus) version:** Runs for 40, 75, or 250 hours.

Specifications subject to change without notice.