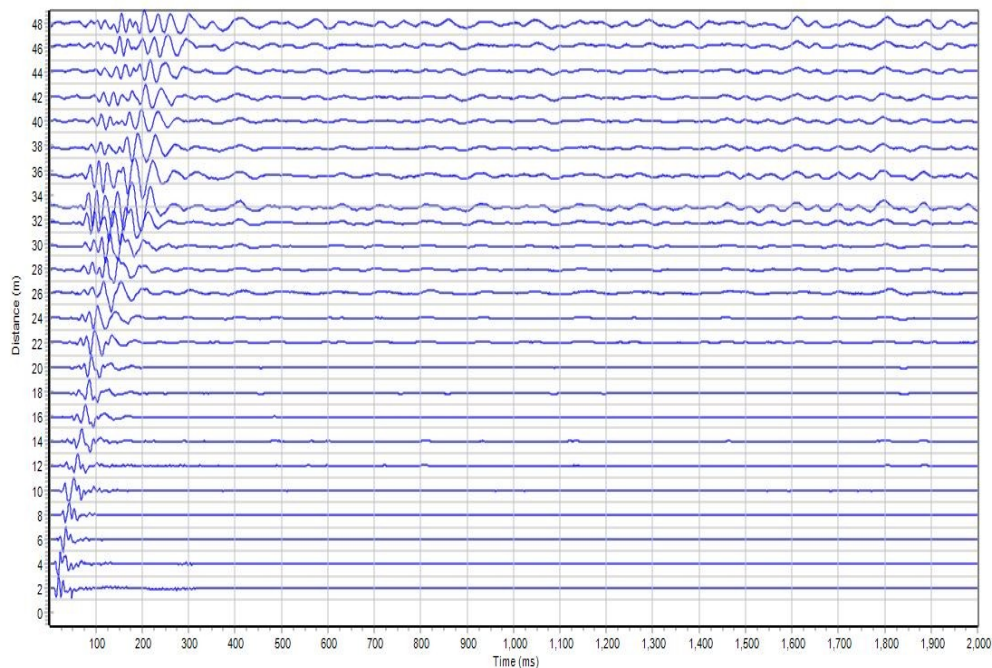


## GeoMASW ver.1:

processing data by Multichannel Analysis of Surface Waves (MASW) technique

elaborazione di dati dalla tecnica Multichannel Analysis of Surface Waves (MASW)



### Input data – Dati di input:

Seg2 and ASCII recording.

Formati Seg2 e ASCII

### Processing methods – Metodi di elaborazione:

propagator matrix method [Thomson(1950) and Haskell (1953), reformulated by Dunkin (1965) and Watson (1970)].

metodo della matrice del propagatore [Thomson(1950) e Haskell (1953), riformulato da Dunkin (1965) e Watson (1970)].

### Signal processing – Elaborazione del segnale:

offset removal;

tapered cosine window;

smoothing by Konno & Ohmachi method.

Lisciamento con il metodo di Konno & Ohmachi.

**Calculated parameters – Parametri calcolati:**

**S wave velocity profile and Vseq;**

**Profilo della velocità delle onde S a stima di Vseq;**

**site class after EC8;**

**classe del sito secondo le NT2018**

**Young modulus, edometric modulus, bulk modulus and shear modulus for low strain;**

**Modulo di Young, modulo edometrico, modulo volumetrico e modulo di taglio per basse deformazioni;**

**Young modulus and edometric modulus for high strain (Fahey & Carter, 1993);**

**Modulo di Young, modulo edometrico, modulo volumetrico e modulo di taglio per alte deformazioni(Fahey & Carter, 1993);**

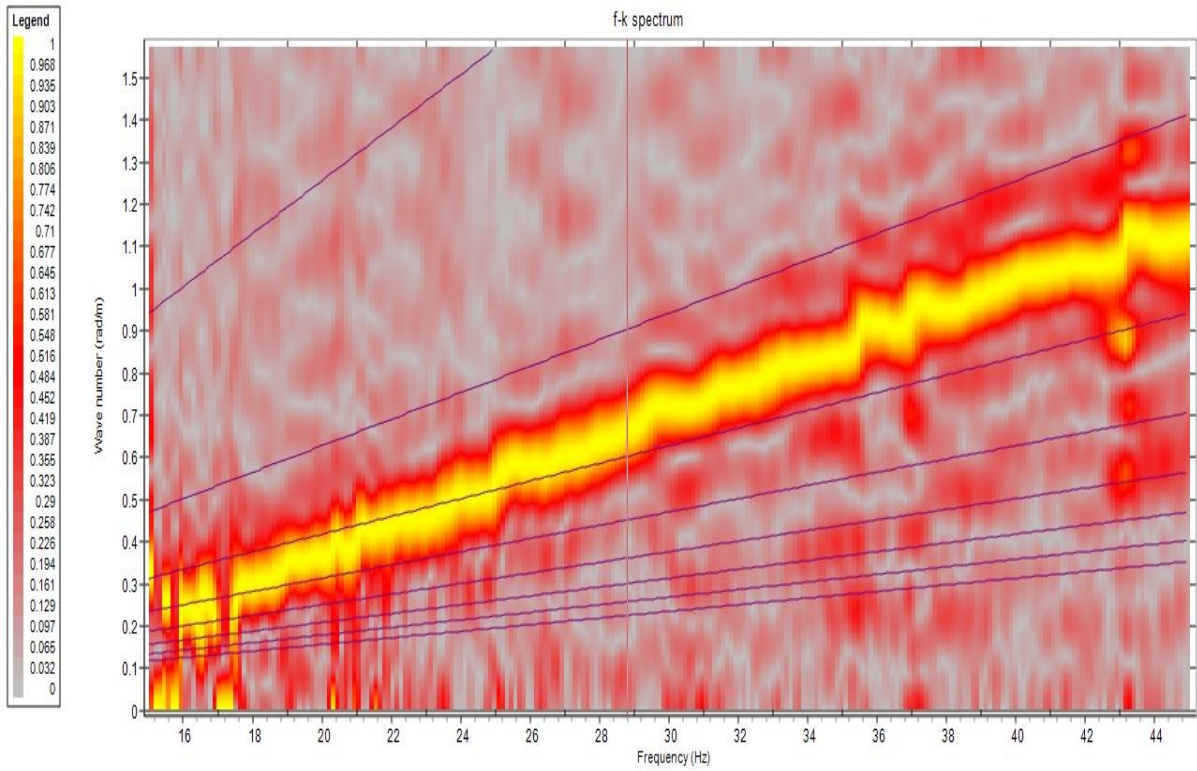
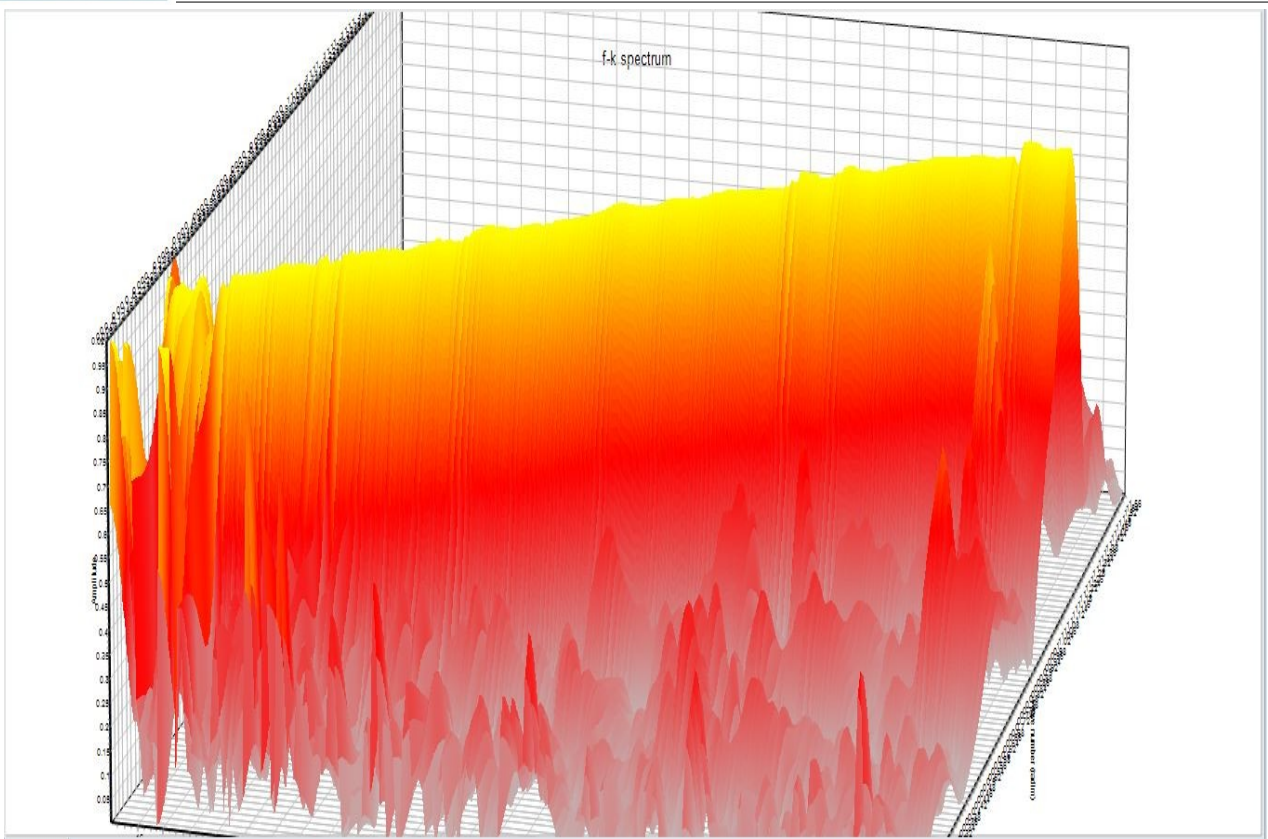
**undrained cohesion (Levesques et al., 2007);**

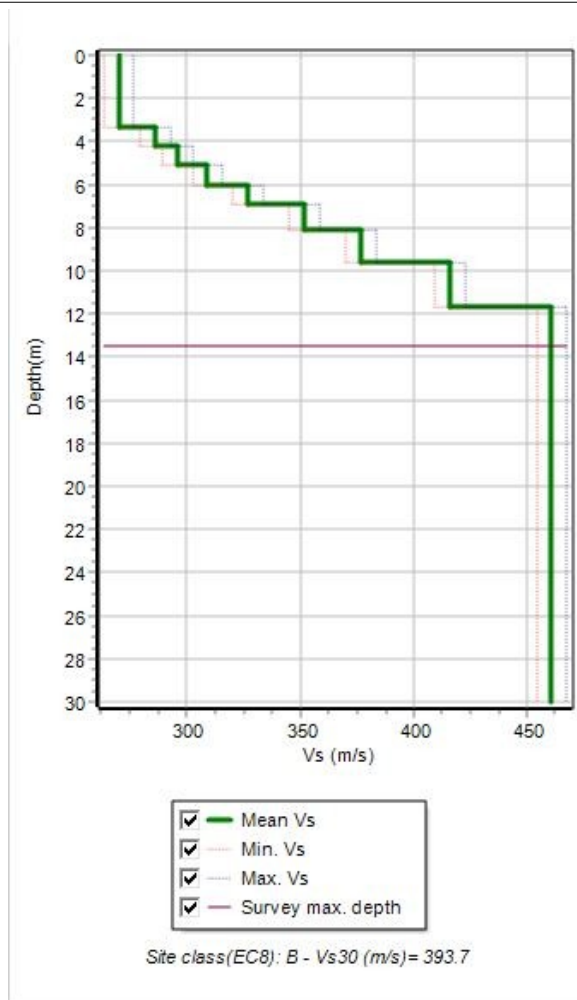
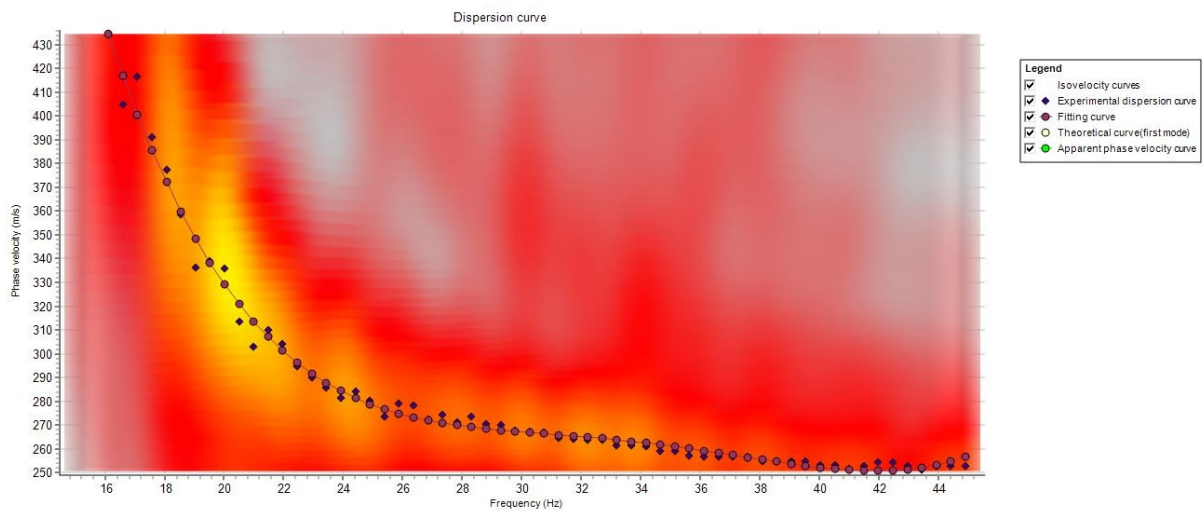
**coesione non drenata (Levesques et al., 2007);**

**peak angle of internal friction (Uzielli et al., 2013);**

**angolo di attrito di picco (Uzielli et al., 2013);**

**Rock Quality Designation (R.Q.D.).**







Geotechnical parameters at low strain			Geotechnical parameters at high strain									
N.	From(m)	to(m)	dz(m)	Vs(m/s)	Poisson R.	U.W.(kN/mc)	Vp(m/s)	G0(MPa)	Ed(MPa)	Kv(MPa)	Ey(MPa)	
1	0.0	3.3	3.3	270.0	0.31	17.91	512.96	133.09	480.39	302.93	348.27	
2	3.3	4.2	0.9	286.0	0.3	17.99	535.93	150.0	526.71	326.71	390.28	
3	4.2	5.1	0.9	296.0	0.3	18.01	552.89	160.85	561.21	346.74	417.93	
4	5.1	6.0	0.9	309.0	0.3	18.03	575.47	175.49	608.66	374.68	455.37	
5	6.0	6.9	0.9	327.0	0.3	18.03	609.15	196.53	681.98	419.95	510.02	
6	6.9	8.1	1.2	352.0	0.29	18.07	652.44	228.23	784.09	479.78	590.98	
7	8.1	9.6	1.5	377.0	0.3	18.05	700.95	261.51	904.02	555.34	678.1	
8	9.6	11.7	2.1	416.0	0.3	18.06	773.04	318.59	1100.15	675.36	825.91	
9	11.7	30.0	18.3	461.0	0.3	18.02	860.71	390.38	1360.82	840.31	1014.1	

Geotechnical parameters at low strain			Geotechnical parameters at high strain								
N.	From(m)	to(m)	dz(m)	Vs(m/s)	U.W.(kN/mc)	sigmav(MPa)	RQD%	E(MPa)	Phi(°)	Cu(kPa)	
1	0.0	3.3	3.3	270.0	17.91	0.0267		65.37	41	272.913	
2	3.3	4.2	0.9	286.0	17.99	0.0341		73.25	41	299.073	
3	4.2	5.1	0.9	296.0	18.01	0.0415		78.45	40.7	315.871	
4	5.1	6.0	0.9	309.0	18.03	0.0489		85.47	40.7	338.212	
5	6.0	6.9	0.9	327.0	18.03	0.0563		95.73	41.1	370.072	
6	6.9	8.1	1.2	352.0	18.07	0.0662		110.93	41.7	416.062	
7	8.1	9.6	1.5	377.0	18.05	0.0785		127.28	42.2	464.022	
8	9.6	11.7	2.1	416.0	18.06	0.0959		155.02	43.1	542.643	
9	11.7	30.0	18.3	461.0	18.02	0.2461		190.35	40.7	638.911	