

BORN: July 5, 1949, at Trieste, Italy; Male.  
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#### EDUCATION:

Doctor in Geology, University of Trieste (110 cum laude); thesis in Applied Geology (published). [at the time, the B.Sc. or Ph.D. definitions were not used in Italy].

#### POSITIONS HELD:

Research Fellow at the Istituto Nazionale di Oceanografia e di Geofisica Sperimentale-OGS, for the Progetto Finalizzato Geodinamica of CNR (1977-1981).

Senior [1st] Researcher, OGS (from 1981 up to now).

Visiting Professor (Geology), International Centre for Theoretical Physics of UNESCO&IAEA, Miramare, Trieste, Italy (1981).

Visiting Professor (Seismic Microzoning), University of Udine, Italy (1989).

Visiting Professor (Seismic Microzoning), University of Padua, Italy (1990).

Visiting Professor (Engineering Seismology), University of Pisa, Italy (1991).

#### SCIENTIFIC CONTRIBUTIONS:

(1) Developed a series of seismic microzonation studies, and analysed the so-called strong-motion attenuation relations from Europe to India.

(2) Performed multidisciplinary works on the soil mechanics of seismic "liquefaction" of sands and gravels, with the termoluminescence dating of the deposits.

(3) Study of the macroseismic intensity which includes a new kinematic source model (*KF*) to calculate the source radiation in terms of intensity/damage; innovative works on source inversion of intensity data sets of present, and pre-instrumental, earthquakes; innovative works on the calculation of intensity scenarios and of maximum ground displacement scenarios (both with the forward parametric use of *KF* by Montecarlo); the development of a new graphical tool to draw objective and reproducible isoseismals based on the natural-neighbour principle.

#### INTERNATIONAL RECOGNITIONS/CITATIONS:

The American Geophysical Union (in 2004), the Seismological Society of America (in 2008) and the European Seismological Commission (in 2012) kindly invited me to organize 2 sessions each in their international conferences in San Francisco, Santa Fe, and Moscow respectively (see: [www.agu.org/cgi-bin/sessionsfm04?meeting=fm04&sec=S](http://www.agu.org/cgi-bin/sessionsfm04?meeting=fm04&sec=S) ;

[www.seismosoc.org/meetings/2008/program.html/](http://www.seismosoc.org/meetings/2008/program.html/) file Program Schedule.pdf; #26 and 28 in [www.esc2012-moscow.org/thematic\\_areas.html](http://www.esc2012-moscow.org/thematic_areas.html)).

Then, the Italian Ministry included me in the board of reviewers of the national projects PRIN2009 and in the ANVUR 2012-2015 board of reviewers of the quality of the Italian research. I do the same for the Journal of Geophysical Research, JGR, and the Bulletin of the Seismological Society of America, BSSA, (both published by renown scientific associations, AGU and SSA). Instead, I resigned the board of the Journal of Seismology (which had invited me to participate) after having experienced the insufficient scientific reliability of its private publishing co. (Springer) and its Editor (T. Dahm), who, at a certain moment, ought to republish the whole ms#512 as a long errata corripge (in 2006).

Finally, let me please recall the citation of a work of mines, which found applications for some nuclear power plants in Europe (State-of-the-Art of BSSA; 72, 6, S43-S60), and the acknowledgment for my review of the new version of the ShakeMap

algorithm (Worden, Wald, Allen, Lin and Cua; of Synergetics Inc., USGS, Geoscience Australia and ETH of Zürich; BSSA, p. 3096, Dec. 2010).

## PRINCIPAL PUBLICATIONS

Chiaruttini C., Sirovich L., 1981. The correlation of peak ground horizontal acceleration with magnitude, distance and seismic intensity for Friuli and Ancona, Italy, and the Alpide Belt. *Bull. Seism. Soc. Am.*, 71, 6, 1933-2009.

Sirovich L. (a cura di), 1983. Indagini di microzonazione sismica. Intervento urgente in 39 centri abitati della Campania e Basilicata colpiti dal terremoto del 23 novembre 1980. P.F. *Geodinamica pubbl.* n.492, 1-218, 52 tavv. f.t.

Sirovich L., Slejko D., 1989. Different Approaches to the Seismic Hazard of Sannio-Matese (Southern Italy). *Natural Hazards*, 2, 329-348.

Priolo E., Sirovich L., 1989. Some improvements in computer program CHARSOIL, including an elastic half-space boundary condition. In: Cakmak A.S., Herrera I. (Editors); *Soil Dynamics and Liquefaction. Comp.Mech.Publ.*, London-New York, 181-195.

Sirovich L., Chiaruttini C., 1989. Source complexity of the 1980 Southern Italian Earthquake from the Analysis of Strong-Motion S Wave Polarization. *Bull. Seism. Soc. Am.*, 79, 6, 1810-1832

Sirovich L., Chiaruttini C., 1991. Reply to P.Bernard and A. Zollo's "Comment on 'Source complexity of the 1980 Southern Italian Earthquake from the Analysis of Strong-Motion S Wave Polarization'". *Bull. Seism. Soc. Am.*, 81,1,282-288.

Chiaruttini C., Sirovich L., 1991. Focal mechanism of an earthquake of Baroque age in the 'Regno delle Due Sicilie' (southern Italy). *Tectonophysics*, 193,195-203.

Peruzza L., Sirovich L. and Slejko D., 1994. Spectral characteristics of the seismic hazard between the Alps and the Dinarides. *Soil Dynamics and Earthquake Engineering*, Vol. 13, pp. 213-217.

Sirovich L., 1994. A case of the influence of radiation pattern on peak acceleration. *Bull. Seism. Soc. Am.*, Vol. 84, N.5, pp. 1658-1664.

Sirovich, L., 1996. "In-situ testing of repeatedly liquefied gravels and liquefied overconsolidated sands". *Soils and Foundations*, Vol. 36, 4, pp. 35-44.

Sirovich, L., 1996. "Repetitive liquefaction at a gravelly site, and liquefaction in overconsolidated sands". *Soils and Foundations*, Vol. 36, 4, pp. 23-34.

Sirovich, L., 1996. A simple algorithm for tracing out synthetic isoseismals. *Bull. Seism. Soc. Am.*, 86, 4, 1019-1027.

Sirovich, L., 1996, Synthetic Isoleismals of two Californian Earthquakes. *Natural Hazards*, 14, 1, 23-37.

Sirovich, L., 1997. Synthetic isoseismals of three earthquakes in California-Nevada. *Soil Dynamics and Earthquake Engineering*, 16, 353-362.

Sirovich, L., 1998. First evidence of an interglacial lake of Eemian age in northeast Italy. *Journal of Quaternary Science*, 13 (1), 65-71.

Sirovich, L. and F. Pettenati 1999. Seismotectonic outline of South-Eastern Sicily: an evaluation of available options for the scenario earthquake fault rupture. *Journal of Seismology*, 3, 213-233.

Pettenati, F., Sirovich, L., and F. Cavallini, 1999. Objective Treatment, and Synthesis of Macroseismic Intensity Data Sets Using Tessellation. *Bull. Seism. Soc. Am.*, 89, 5, 1203-1213.

Sirovich L. and Pettenati F., 2001. Test of source parameters inversion of the intensities of a 54,000-death shock of the XVII Century in SE Sicily. *Bull. Seism. Soc. Am.*, 91, 4, 792-811.

Sirovich, L., Pettenati, F. and C. Chiaruttini, 2001. Test of Source-Parameter Inversion of Intensity Data. *Natural Hazards*, 24, 105-131.

Sirovich L., Pettenati F., Cavallini F., Bobbio M., 2002. Natural-Neighbor Isoleismals. *Bull. Seism. Soc. Am.*, Vol. 92, 5, 1933-1940.

Pettenati F. and Sirovich L., 2003. Tests of source-parameter inversion of the U.S. Geological Survey intensities of the Whittier Narrows, 1987 Earthquake. *Bull. Seism. Soc. Am.*, 93, 1, 47-60.

Sirovich L. (2003). Breve stato dell'Arte sulle strategie di prospezione e di calcolo indirizzate alla microzonazione ed agli effetti di sito. *Stato dell'Arte ad invito*. GNGTS 2003.

Gentile F., F. Pettenati and L. Sirovich, 2004. Validation of the Automatic Nonlinear Source Inversion of the U. S. Geological Survey Intensities of the Whittier Narrows, 1987 Earthquake, *Bull. Seism. Soc. Am.*, Vol. 94, 5, 1737-1747.

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Sirovich L. and F. Pettenati (2004). The Sources of Destructive Earthquakes Retrieved From Their Regional Intensity Patterns by a new Inversion Technique. 2004 AGU Fall Meeting, San Francisco, 13-17 Dec. 2004 (abstract and poster). *Suppl. Eos, Transactions, Am. Geophys. Union*, Vol. 85, n.47, 23 Nov. 2004, p. F1391. (a invito)

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Sirovich L. (2012). Riconsiderando la situazione sismica della centrale nucleare di Krško (Slovenia). Capitolo del volume collettaneo del Politecnico di Milano, Dipartimento di Ingegneria Strutturale in onore del Prof. Giuseppe Grandori. (a invito)

Livio Sirovich, Franco Pettenati, and Fabio Cavallini (2013). Intensity-Based Source Inversion of the Destructive Earthquake of 1694 in the Southern Apennines, Italy. *J.G.R. Solid Earth*, Vol. 118, 1–17, doi:10.1002/2013JB010245.

Sirovich L., Suhadolc P., Costa G. and F. Pettenati, 2014. A review of the seismotectonics and some considerations on the seismic hazard of the Krško NPP area (SE Slovenia). *Boll. Geof. Teor. e Appl.*, 55, 1, 175-195, DOI 10.4430/bgta0103. ([http://www2.ogs.trieste.it/bgta/provapage.php?id\\_articolo=614](http://www2.ogs.trieste.it/bgta/provapage.php?id_articolo=614))

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