

BIBLIOGRAFÍA

- Abers, G. A., P. E. van Keken, E. A. Kneller, A. Ferris, and J. C. Stachnik, 2006. The thermal structure of subduction zones constrained by seismic imaging: Implications for slab dehydration and wedge flow. *Earth Planet. Sci. Lett.* 241, 387–397.
- Abubakirov, I. R. and A. A. Gusev, 1990. Estimation of scattering properties of lithosphere of Kamchatka based on Monte-Carlo simulation of record envelope of near earthquake. *Phys. Earth Planet. Interiors* 64, 52-67.
- Aki, K., 1956. Correlogram analyses of seismograms by means of a simple automatic computer. *J. Phys. Earth* 4, 71-79.
- Aki, K., 1967. Scaling law of the seismic spectrum. *J. Geophys. Res.* 72, 1217-1231.
- Aki K., 1969. Analysis of the seismic coda of local earthquakes as scattered waves. *J. Geophys. Res.* 74, pp. 615-631.
- Aki, K., 1980a. Attenuation of shear-waves in the lithosphere for frequencies from 0.05 to 25 Hz. *Phys. Earth Planet. Interiors* 21, 50-60.
- Aki, K., 1980b. Scattering and attenuation of shear waves in the lithosphere. *J. Geophys. Res.* 85, B11, 6496-6504.
- Aki, K., 1982. Scattering and attenuation. *Bull. Seism. Soc. Am.* 72, 319-330.
- Aki K., M. Bouchon, B. Chouet and S. Das, 1977. Quantitative prediction of strong motion for a potential earthquake fault. *Annali di Geofisica* 30, 3-4 (Annals of Geophysics 53, 1, .81-91, 2010)
- Aki K. and B. Chouet, 1975. Origin of Coda Waves: Source, Attenuation and Scattering Effects. *J. Geophys. Res.* 80, 23, 3322-3342.
- Aki, K. and P. Richards, 1980, 2002. Quantitative Seismology. 1st. Ed, 1980, 2nd Ed., 2002. University Science Books, 700 pp.
- Aki, K and M. Tsujiura, 1959. Correlation study of near earthquake waves. *Bull. Earthq. Inst. Univ Tokyo* 37, 207-232.
- Akinci, A., E. del Pezzo and J. M. Ibáñez, 1995a. Separation of scattering and intrinsic attenuation in southern Spain and western Anatolia (Turkey). *Geophys. J. Int.* 121, 337-353.
- Akinci, A., J. M. Ibáñez, E. del Pezzo and J. Morales, 1995b. Geometrical spreading and attenuation of Lg waves: a comparison between western Anatolia (turkey) and southern Spain. *Tectonophysics* 250, 47-60.
- Allmendinger, R. W., T. E. Jordan, S. M. Kay and B. L. Isacks, 1997. The evolution of the Altiplano-Puna Plateau of the Central Andes. *Annual Reviews of Earth and Planetary Sciences* 25, 139-174.
- Alvarado, P. M., 1992. Atenuación sísmica en el norte de Mendoza. Trabajo final de Licenciatura en Geofísica. Facultad de Cs. Exactas, Físicas y Naturales. Universidad Nacional de San Juan.
- Alvarado, P.M., S. Beck, G. Zandt, M. Araujo and E. Triep, 2005. Crustal deformation in the south-central Andes backarc terranes as viewed from regional broad-band seismic waveform modelling. *Geophys. J. Int.*, doi: 10.1111/j.1365-246X.2005.02759.x
- Alvarado P., M. Pardo, H. Gilbert, S. Miranda, M. Anderson, M. Saez and S. Beck, 2009. Flat-slab subduction and crustal models for the seismically active Sierras Pampeanas region of Argentina. *GSA Memoirs* 2009, 204, 261-278. doi: 10.1130/2009.1204(12)
- Alvarado, P., G. Sánchez, M. Saez, B. Castro de Machuca, 2010. Nuevas evidencias de la actividad sísmica del terreno Cuyania en la región de subducción de placa horizontal de Argentina: *Revista Mexicana de Ciencias Geológicas* 27, 2, 278-291.
- Anderson, A. L., A. Ben-Menahem and C. B. Archambeau, 1965. Attenuation of seismic energy in the upper mantle. *J. Geophys. Res.* 70, 1441-1448.
- Anderson, A. L. and R. S. Hart, 1978. *Q* of the Earth. *J. Geophys. Res.* 83, 5869-5882.

- Anderson, D. L., 2000. Thermal state of the upper mantle: No role for mantle plumes. *Geophys. Res. Letters* 27, 3623-3626, doi:10.1029/2000GL011533.
- Anderson, J. G. and S. Hough, 1984. A model for the shape of the Fourier amplitude spectrum of acceleration at high frequencies. *Bull. Seismol. Soc. Am.* 74, 1969-1993.
- Anderson, M., P. Alvarado, G. Zandt, S.L. Beck, 2007, Geometry and brittle deformation of the subducting Nazca plate, central Chile and Argentina, *Geophys. J. Int.*, doi:10.1111/j.1365-246X.2007.03483.x, 2007.
- Anderson, M., G. Zandt, E. Triep, M. Fouch and S. Beck, 2004. Anisotropy and mantle flow in the Chile-Argentina subduction zone from shear wave splitting analysis. *Geophys. Res. Lett.* 31, L23608, doi:10.1029/2004GL020906
- Azcuy, C.L., R.R. Andreis, A. Cuerda, M. A. Hünicken, M. V. Pensa, D. A. Valencio y J. F. Vilas, 1987. Cuenca Paganzo. En: S. Archangelsky (Ed.), *El Sistema Carbonífero en la República Argentina*, Academia Nacional de Ciencias, Cap. III: 41-100. Córdoba.
- Azimi, Sh. A., A. Y. Kalinin, V. B. Kalinin and B. L. Pivovarov, 1968. Impulse and transient characteristics of media with linear and quadratic absorption laws. *Phys. Solid Earth* 2, 88-93.
- Badi, G. A., 1991. Relación de la sismicidad y tectónica en América del Sur entre los 22° y 32° S con la subducción de la Placa de Nazca. Práctica de la Especialidad. Facultad de Cs. Astronómicas y Geofísicas. Universidad Nacional de La Plata.
- Badi, G., E. Del Pezzo, J. M. Ibanez, F. Bianco, N. Sabbione and M. Araujo, 2009. Depth dependent seismic scattering attenuation in the Nuevo Cuyo region (southern central Andes). *Geophys. Res. Lett.* 36, 24, L24307. <http://dx.doi.org/10.1029/2009GL041081>
- Badi, G., J. Ibáñez, , E. Del Pezzo, N. Sabbione, F. Bianco, 2010. Depth Dependent Seismic Attenuation in the Nuevo Cuyo Region, Argentina. *EOS Trans. AGU*, 91(26), Meet. Am. Suppl S23B-07.
- Badi G., J. Ibáñez Godoy y N. Sabbione, 2000. Determinación de Q coda en la región centro-oeste de la Rep. Argentina con datos digitales. Actas de la 20va. Reunión Científica de la Asociación Argentina de Geofísicos y Geodestas. En CD, 85-90.
- Badi G., J. Ibáñez Godoy y N. Sabbione, 2005. Atenuación de ondas de corte en la Región de Nuevo Cuyo. Actas de la XXII Reunión de la Asociación de Geofísicos y Geodestas, Buenos Aires, 6 al 10 de octubre de 2004. pp. 1-5, en CD.
- Badi G., J. Ibáñez Godoy y N. Sabbione, 2007. Atenuación sísmica de corto período en la Región de Nuevo Cuyo. *GEOACTA* 32, 193-205.
- Badi G., M. L. Rosa, N. C. Sabbione y M. Plasencia, 2004. Atenuación de Ondas Rayleigh en el extremo sur del Continente Sudamericano. 27-52. En: E. Triep, A. Introcaso (ed.). *Tópicos de Geociencias. Un Volumen de Estudios Sismológicos, Geodésicos y Geológicos en homenaje al Ing. Fernando Séptimo Volponi*. Editorial: EFU Fundación Universidad Nacional de San Juan., 334 pp.
- Badi G. y N. Sabbione, 1992. Relación de la Sismicidad y Tectónica en América del Sur entre los 22° y 32° S con la subducción de la Placa de Nazca. Exposición Oral en la XVII Reunión de la Asociación de Geofísicos y Geodestas, Buenos Aires, Argentina, 27 de octubre, Res. MaMB2.
- Badi G. y N. Sabbione, 1994. Sismicidad en la zona de convergencia de las placas Sudamericana y de Nazca. Exposición Oral en la Asamblea Regional de Sismología en América del Sur. IASPEI – CERESIS – ISOP, Brasilia, Brasil, 22 al 26 de agosto, Res. SSR.20.
- Baldis, B.A., M. S. Beresi, O. Bordonaro y A. Vaca, 1982. Síntesis evolutiva de la Precordillera Argentina. 5º Congreso Latinoamericano de Geología, 4:399-445.
- Baldis, B., O. Bordonaro, C. Armella, M. Beresi, N. Cabaleri, S. Peralta y H. Bastías, 1989. La Cuenca Paleozoica inferior de la Precordillera Argentina. En: G.A. Chebli y L.A. Spalletti (Eds.), *Cuencas Sedimentarias Argentinas*, Serie Correlación Geológica Nº.6, 101-122. S. M. Tucumán.
- Baldis, B. A., J. Febrer y A. Vaca, 1982. Transducción: un nuevo fenómeno asociado a los procesos de la tectónica global. Quinto Congreso Latinoamericano de Geología, Argentina. Actas III, 705-718.
- Baldo E. G., J. Saavedra, C. W. Rapela, R. J. Pankhurst, C. Casquet y C. Galindo, 1999. Síntesis geocronológica de la evolución paleozoica inferior del borde sur occidental de Gondwana en las Sierras Pampeanas, Argentina. *Acta Geológica Hispánica* 32, no 1-2, 17-2.

- Barazangi, M. and B. Isacks, 1976. Spatial distribution of earthquakes and subduction of the Nazca plate beneath South America. *Geology* 4, 686-692.
- Beck, S. and G. Zandt, 2002. The nature of orogenic crust in the central Andes. *J. Geophys. Res.* 107, B10, 2230, doi:10.1029/2000JB000124.
- Beck S. L., G. Zandt, S. C. Myers, T. C. Wallace, P. G. Silver and L. Drake, 1996. Crustal-thickness variations in the central Andes. *Geology* 24, 407-410.
- Ben-Menahem, A., 1965. Observed attenuation and *Q* values of seismic surface waves in the upper mantle. *J. Geophys. Res.* 70, 4641-4651.
- Ben-Menahem, A. and S. Singh, 1998. Seismic waves and sources. Sec. Ed. Courier Dover Pub., 1136 pp.
- Benz, H. M., A. Franke and D. M. Boore, 1997. Regional Lg attenuation for the Continental United States. *Bull. Seism. Soc. Am.* 87, 3, 606-619.
- Bermúdez, A., D. Delpino, F. Frey y Saal, A., 1993. Los basaltos de retroarco extraandinos. En: Ramos, V.A. (Ed.) *Geología y Recursos Naturales de Mendoza. 12º Congreso Geológico Argentino y 2º Congreso de Exploración de Hidrocarburos, Relatorio I - 13:* 161-172.
- Bianco, F., M. Castellano, E. Del Pezzo and J. M. Ibañez, 1999. Attenuation of short-period seismic waves at Mt Vesuvius, Italy. *Geophys. J. Int.* 138, 67-76.
- Bianco, F. and E. Del Pezzo, 2002. Scat-Cad: a Mathcad 2000 professional package to model the energy decay due to seismic attenuation. *Computers & Geosciences*, 28, 851-855.
- Bianco, F. and E. Del Pezzo, 2010. MathLTWA: Multiple lapse time window analysis using Wolfram *Mathematica* 7. *Computers & Geosciences*, 36, 10, 1388-1392.
- Bianco F., E. Del Pezzo, M. Castellano, J. Ibanez and F. Di Luccio, 2002. Separation of intrinsic and scattering seismic attenuation in the Southern Apennine zone, Italy. *Geophys. J. Int.*, 150, 10-22.
- Bianco F., E. Del Pezzo, L. Malagnini, F. Di Luccio and A. Akinci, 2005. Separation of depth dependent intrinsic and scattering seismic attenuation in the northeastern sector of the Italian Peninsula. *Geophys. J. Int.* 161, 130-142, doi: 10.1111/j.1365-246X.2005.02555.x
- Biescas, B., Z. Rivera, J.A. Zapata, 2007. Seismic attenuation of coda waves in the eastern region of Cuba. *Tectonophysics* 429, 99–109.
- Biswas, N. N. and K. Aki, 1984. Characteristics of coda waves: central and southcentral Alaska. *Bull. Seism. Soc. Am.* 74, 493-507.
- Bisztricsany, E. A., 1958. A new method for determination of the magnitude of earthquakes. *Geofiz. Kozlemen.*, 7, 2.
- Blair, D.P. and A.T. Spathis, 1982. Attenuation of explosion generated pulse in rock masses. *J. Geophys. Res.* 87, 3885-3892.
- Bloch, S., A. L. Hales and M. Landisman, 1969. Velocities in the crust and upper mantle of southern Africa from multi-mode surface-wave dispersion. *Bull. Seism. Soc. Am.* 59, 1599-1629.
- Bollinger, G. and C. Langer, 1988. Development of a velocity model for locating aftershocks in the Sierra Pie de Palo region of western Argentina. *U. S. Geol. Surv. Bull.* 1795, 1-16.
- Booker, J. R., A. Favetto, C. Pomposiello and F. Xuan, 2005a. The role of fluids in the Nazca flat slab near 31°S revealed by the electrical resistivity structure. 6th Int. Symposium on Andean Geodynamics (ISAG 2005, Barcelona), Extended Abstracts: 119-122.
- Booker, J. R., C. Pomposiello, A. Favetto and A. Burd, 2005b. Implications of Electrical Conductivity Structure Associated With the Nazca Slab Beneath Argentina. *Am. Geophys. Union, Fall Meeting 2005*, abstract #GP34A-01.
- Brune, J. N., 1962. Attenuation of dispersed wave trains. *Bull. Seism. Soc. Am.* 52, 109-112.
- Brune, J. N., 1970. Tectonic stress and the spectra of seismic shear waves from earthquakes. *J. Geophys. Res.* 75, 4997-5009.
- Burd, A.I., J.R. Booker, R.L. Mackie, C.Pomposiello, A. Favetto and J.C. Larsen, 2010. Three and two-dimensional electrical conductivity of the mantle near the Chile-Argentina Nazca Flat Slab: insights into slab behavior. *Am. Geophys. Union, Fall Meeting 2010*, abstract #GP21B-02.
- Butler, R., C. McCreery, L. Frazer, and D. Walker, 1987. High-Frequency Seismic Attenuation of Oceanic P and S Waves in the Western Pacific, *J. Geophys. Res.* 92, B2, 1383-1396.
- Byerlee, J.D., 1978. Friction of rocks. *Pure Appl. Geophys.* 116, 616–626.

- Cahill, T. and B. L. Isacks, 1992. Seismicity and shape of the subducted Nazca Plate. *J. Geophys. Res.* 97, 17503-17529.
- Campillo, M. and A. Paul, 1992. Influence of the lower crustal structure on the early coda of regional seismograms. *J. Geophys. Res.* 97, 3405-3416.
- Canas, J. A. and B. Mitchell, 1978. Lateral variation of surface-wave anelastic attenuation across the Pacific. *Bull. Seism. Soc. Am.* 68, 1637-1650.
- Canas, J. A. and B. Mitchell, 1981. Rayleigh wave attenuation and its variation across the Atlantic Ocean. *Geophys. J. R. Astr. Soc.* 67, 159-176.
- Canas, J. A., L. Pujades, J. Badal, G. Payo, F. de Miguel, F. Vidal, G. Alguacil, J. Ibáñez and J. Morales, 1991. Lateral variation and frequency dependence of coda-*Q* in the southern part of Iberia. *Geophys. J. Int.* 107, 57-66.
- Castano, J. C., M. A. Araujo, M. H. Millán, C. A. Navarro, M. V. Castano, 1999. Epicentros de los terremotos destructivos ocurridos en la República Argentina. INPRES, Secretaría de Minería e Industria. Subsecretaría de Minería. Mapa.
- Castro, C. E., J. C. Perucca, W. Simon y H. Sosa, 2005. Las Lajas de Nikizanga. Flanco Oriental de la Sierra de Pie de Palo. San Juan – Argentina. Actas de la XIII Reunión Anual Iberoamericana de Enseñanza Superior de la Minería, Lima, Perú, 13pp.
- Chebli, G.A., M. E. Mozetic, E.A. Rossello y M. Bühl, 1999. Cuencas sedimentarias de la Llanura Chacopameana. En: Geología Argentina. Instituto de Geología y Recursos Minerales. Buenos Aires. *Anales* 29(20), 627-644.
- Chen, P., C. R. Bina, and E. A. Okal, Slab stress and volcanism in Nazca plate subduction: variations with dip angle and intermediate-depth seismicity, *Eos, Transactions of the American Geophysical Union*, 80, Fall Supplement, S12F-02, 1999.
- Chen, W. P. y Molnar, P. 1983. Focal depth of intracontinental and intraplate earthquakes and their implications for the thermal and mechanical properties of the lithosphere. *J. Geophys. Res.* 88, 4183- 4214.
- Cheng, C. C. and B. J. Mitchell, 1981. Crustal *Q* structure in the United States from multi-mode surface waves. *Bull. Seism. Soc. Am.* 71, 161-181.
- Chernov, L. A., 1960. Wave propagation in a random medium. McGraw-Hill. New York, 168 pp.
- Chevrot, S. and Y. Cansi, 1996. Source spectra and site response estimates using the coda of Lg waves in western Europe. *Geophys. Res. Lett.* 23, 13, 1605-1608.
- Chinn, D. S. and B. L. Isacks, 1983. Accurate source depths and focal mechanisms of shallow earthquakes in western South America and in the New Hebrides Island Arc. *Tectonics* 2, 529-563
- Chouet, B., 1979. Temporal variation in the attenuation of earthquake coda near Stone Canyon, California. *Geophys. Res. Lett.* 6, 143-146.
- Chun, K., G. F. West, R. J. Kokoski, and C. Samson, 1987. A Novel Technique for Measuring Lg Attenuation - Results from Eastern Canada Between 1 to 10 Hz. *Bull. Seism. Soc. Am.* 77, 398-419.
- Chung, T. W., K. Yoshimoto and S. Yun, 2010. The Separation of Intrinsic and Scattering Seismic Attenuation in South Korea. *Bull. Seism. Soc. Am.* 100, 6; 3183-3193; doi: 10.1785/0120100054
- Collier, J. D. and G. R. Helffrich, 2001. The thermal influence of the subducting slab beneath South America from 410 and 660 km discontinuity observations. *Geophys. J. Int.* 147, 319-329.
- Comte, D., M. Pardo, L. Dorbath, C. Dorbath, H. Haessler, L. Rivera, A. Cisternas and L. Ponce, 1994. Determination of seismogenic interplate contact zone and crustal seismicity around Antofagasta, northern Chile, using local data. *Geophys. J. Int.* 116, 553-561.
- Cormier, V. F., 1982. The effect of attenuation on seismic body waves. *Bull. Seism. Soc. Am.* 72, 6, S169-S200.
- Correig, A. M. and B. J. Mitchell, 1989. Attenuative body wave dispersion at La Cerdanya, eastern Pyrenees. *Phys. Earth Planet. Inter.* 57, 304-310.
- Correig, A. M. B. J. Mitchell and R. Ortiz, 1990. Seismicity and coda *Q* values in the eastern Pyrenees: first results from the La Cerdanya Seismic Network. *Pure Appl. Geophys.* 132, 311- 329.

- Cortés, J. M., P. Vinciguerra, M. Yamín and M. M. Pasini, 1999. Tectónica cuaternaria de la región andina del Nuevo Cuyo (28° - 38° LS). En: Geología Argentina. Instituto de Geología y Recursos Minerales. Buenos Aires. Anales 29 (24), 760-778.
- Dainty, A. M., 1981. A scattering model to explain seismic Q observations in the lithosphere between 1 and 30 Hz. *Geophys. Res. Lett.*, 8, 1126-1128.
- Dainty, A. M., 1984. High-frequency acoustic backscattering and seismic attenuation. *J. Geophys. Res.* 89, B5, 3172-3176.
- Dainty, A. M. and M. N. Toksöz, 1981. Seismic cadas on the earth and the moon: A comparison. *Phys. Earth Planet. Inter.* 26, 250-260.
- Dainty, A. M. and M. N. Toksöz, 1990. Array analysis of seismic scattering. *Bull. Seism. Soc. Am.* 80, 2242-2260.
- Deshayes, P., T. Monfret, M. Pardo and E. Vera. Three-dimensional P- and S-wave seismic attenuation models in central Chile - western Argentina (30° - 34° S) from local recorded earthquakes. 7th International Symposium on Andean Geodynamics (ISAG 2008, Nice), Extended Abstracts: 184-187
- De Miguel, F., J. M. Ibáñez, G. Alguacil, J. A. Canas, F. Vidal, J. Morales, J. A. Peña, A. M. Posadas and F. Luzón, 1992. 1-18Hz L_g attenuation in the Granada Basin (Southern Spain). *Geophys. J. Int.* 111, 270-280.
- De Souza J. L. and B. J. Mitchell, 1998. Lg Coda Q Variations across South America and their Relation to Crustal Evolution. *Pure Appl. Geophys.* 153, 587-612.
- Del Pezzo, E., 2008. Seismic wave scattering in volcanoes. http://www.earth-prints.org/bitstream/2122/3845/1/SeismicWaveScatteringinVolcanoes_DelPezzo.pdf
- Del Pezzo, E., R. Allotta and D. Patane, 1990. Dependence of Q_c (coda Q) on coda duration time interval: model or depth effect? *Bull. Seism. Soc. Am.* 80, 1028-1034.
- Del Pezzo, E. and F. Bianco, 2007. 30 years of coda observations: Q_c , Q_i and Q_s . A summary of the main results obtained worldwide, in memory of Keiiti Aki. Earth Print Repository, <http://www.earth-prints.org/>.
- Del Pezzo, E., Bianco, F., Zaccarelli, L., 2006. Separation of Q_i and Q_s from passive data at Mt. Vesuvius: a reappraisal of the seismic attenuation estimates. *Phys. Earth Planet. Int.* 159, 202-212.
- Del Pezzo, E., S. de Martino, F. de Miguel, J. Ibáñez and A. Sorgente, 1990. Characteristics of the Seismic attenuation in two tectonically active zones of southern Europe. *Pure Appl. Geophys.* 135, 91-106.
- Del Pezzo, E., F. Ferulano, A. Giarrusso and M. Martini, 1983a. Seismic coda Q and scaling law of the source spectra at the Aeolian Island, Southern Italy. *Bull. Seism. Soc. Am.* 73, 97-108.
- Del Pezzo, E., G. Iannaccone, G. Martini and R. Scarpa, 1983b. The November 1980 southern Italy earthquake. *Bull. Seism. Soc. Am.* 73, 187-200.
- Del Pezzo, E., J. Ibáñez, J. Morales, A. Akinci and R. Maresca, 1995. Measurements of intrinsic and scattering seismic attenuation in the crust, *Bull. Seism. Soc. Am.* 85, 1373-1380.
- Del Pezzo, E., M. Simini and J.M. Ibáñez, 1996. Separation of intrinsic and scattering Q for volcanic areas: comparison between Etna and Campi Flegrei. *J. Volc. Geotherm. Res.* 70, 213-219.
- Doglioni, C., E. Carminati and M. Cuffaro, 2006. Simple kinematics of subduction zones. *International Geology Review*. 4, 479-493.
- Dorbath, C. and the Lithoscope Andean Group, 1996. Mapping the continuity of the Nazca plate through its aseismic part in the Arica elbow by teleseismic tomography. Third ISAG, St Malo (France)
- Douglas, A., 1967. Joint epicentre determination. *Nature* 215, 47-48.
- Dutta, U., N. N. Biswas, D. A. Adams, and A. Papageorgiou, 2004. Analysis of S-Wave Attenuation in South-Central Alaska. *Bull. Seism. Soc. Am.* 94, 1, 16-28.
- Dziewonski, A. M., 2005. The robust aspects of global seismic tomography. In Foulger, G.R., Natland, J. H., Presnall, D. C. and Anderson D. L., eds, Plate, plumes and paradigms: *Geol. Soc. Am. Special Paper* 388, 147-154. doi:11.1130/2005.2388(12)
- Dziewonski, A. M., S. Bloch and M. Landisman, 1969. A technique for the analysis of transient seismic signals. *Bull. Seism. Soc. Am.* 59, 427-444.
- Engdahl, E. R., R. D. van der Hilst and J. Berrocal, 1995. Imaging of subducted lithosphere beneath South America. *Geophys. Res. Lett.* 22, 16, 2317-2320.

- Ewing, W. M., W. S. Jardetzky and F. Press, 1957. Elastic waves in layered media. McGraw Hill, New York.
- Ewing, W. M. and F. Press, 1954. Mantle Rayleigh waves from the Kamchatka earthquake of November 4, 1952. Bull. Seism. Soc. Am. 44, 471-479.
- Frer, J., B. Baldis, J. Gasco, M. Mamani y C. Pomposielo, 1982. La anomalía geotérmica Calchaquí en el noroeste argentino: un nuevo proceso geodinámico asociado a la subducción de la Placa de Nazca. Quinto Congreso Latinoamericano de Geología, Argentina. Actas III, 705-718.
- Fedotov, S. A. and S. A. Boldyrev, 1969. Frequency dependence of body-wave absorption in the crust and the upper mantle of the Kuril-island chain. Izv. Akad. Sci. USSR, Phys. Solid Earth 9, 17-33.
- Fehler, M., M. Hoshiba, H. Sato and K. Obara, 1992. Separation of scattering and intrinsic attenuation for the Kanto-Tokai region, Japan, using measurements of S-wave energy versus hypocentral distance. Geophys. J. Int. 108, 787-800.
- Fehler, M. and H. Sato, 2003. Coda. Pure Appl. Geophys. 160, 541-554.
- Fernández Ibáñez, Fermín, 2004. Condicionantes Reológicos de la Sismicidad Cortical en Béticas-Rif y Alborán Trabajo de Investigación Tutelada Bienio 2002/2004. Departamento de Geodinámica, Universidad de Granada.
- Fernández Seveso, F., M. Pérez, I. Brisson y L. Álvarez, 1993. Análisis de cuenca: Técnicas aplicadas en la serie carbónica-pérmbica del Paganzo. Boletín de Informaciones Petroleras, YPF, 33:77-107.
- Feruglio, E., 1946. Sistemas orográficos de la Argentina. Geografía de la República Argentina. Sociedad Argentina de Estudios Geográficos, GAEA 4, 536pp.
- Foulger, G.R., B.R. Julian, D.P. Hill, A.M. Pitt, P.E. Malin and E. Shalev, 2004. Non-double-couple microearthquakes at Long Valley caldera, California, provide evidence for hydraulic fracturing. J. Volcanol. Geotherm. Res. 132, 45-71.
- Frankel, A., 1991. Mechanisms of seismic attenuation in the crust: scattering and anelasticity in New York State, South Africa, and Southern California. J. Geophys. Res. 96, B4, 6269-6289.
- Frankel, A. and R. Clayton, 1984. A finite-difference simulation of wave propagation in two-dimensional random media. Bull. Seism. Soc. Am. 74, 2167-2186.
- Frankel , A. and R. Clayton, 1986. Finite difference simulations of seismic scattering: Implications for the propagation of short-period seismic waves in the crust and models of the crustal heterogeneity. J. Geophys. Res. 91, 6465-6489.
- Frankel, A., A. McGarr, J. Bicknell, J. Mori, L. Seeber and E. Cranswick, 1990. Attenuation of high-frequency shear waves in the crust: Measurements from New York State, South Africa and Southern California. J. Geophys. Res. 95, 17441-17457.
- Frankel A. and L. Wennerberg, 1987. Energy-flux model of seismic coda: separation of scattering and intrinsic attenuation. Bull. Seism. Soc. Am. 77, 1223-1251.
- Fromm, R., Zandt, G. & Beck, S.L., 2004. Crustal thickness beneath the Andes and Sierras Pampeanas at 30°S inferred from Pn apparent phase velocities. Geophys. Res. Lett. 31, L006625, doi:10.1029/2003GL019231.
- Gao, L. S. 1984. Coda waves analysis for distinguishing attenuation due to isotropic scattering from attenuation due absorption. Pure Appl. Geophys. 122, 1-9.
- Gao, L. S., L. C. Lee, N. N. Biswas and K. Aki. 1983a. Comparison of the effects between single and multiple scattering on coda waves for local earthquakes. Bull. Seism. Soc. Am. 73, 377-389.
- Gao, L. S., N. N. Biswas, L. C. Lee and K. Aki. 1983b. Effects of multiple scattering on coda waves in three-dimensional medium. Pure Appl. Geophys. 121, 1, 3-15.
- García, S. y J. Mendoza, 2004. Determinación del factor de calidad Q para Venezuela. Congreso SOVG.
- Giampiccolo, E., S. D'Amico, D. Patanè and S. Gresta, 2007. Attenuation and Source Parameters of Shallow Microearthquakes at Mt. Etna Volcano, Italy. Bull. Seismol. Soc. Am. 97, 184-197.
- Giampiccolo, E., T. Tuvè, S. Gresta and D. Patanè, 2006. S-waves attenuation and separation of scattering and intrinsic absorption of seismic energy in southeastern Sicily (Italy). Geophys. J. Int. 165, 211-222
- Giardini, D., G. Grünthal, K. Shedlock and P. Zhang, 1999. Global Seismic Hazard Map in The global seismic hazard assessment program (GSHAP) 1992-1999. D. Giardini, ed. Annali di Geofisica 42, 6, 1230 pp.

- Gilbert, H., Beck, S. & Zandt, G., 2006. Lithospheric and upper mantle structure of Central Chile and Argentina, *Geophys. J. Int.* 165, 383–398.
- Gimenez, M., P. Martínez and A. Introcaso, 2000. A crustal model based mainly on gravity data in the area between the Bermejo Basin and the Sierras de Valle Fértil, Argentina. *J. South American Earth Sciences* 13, 275-286.
- Gir, R., S. Mohan, G. Subhash and M. Choudhury, 1978. Investigation of crustal structure by the analysis of reverberation periodicities. *Bull. Seism. Soc. Am.* 68; 5; 387-1397.
- Giroldi, L. G., 1990. Atenuación sísmica en San Juan. Trabajo final de Licenciatura en Geofísica. Facultad de Cs. Exactas y Naturales. Universidad Nacional de San Juan.
- Gladwin, M. T. and F. D. Stacey, 1974a. Ultrasonic pulse velocity as a rock stress sensor. *Tectonophysics* 21, 39-45. doi:10.1016/0040-1951(74)90060-2
- Gladwin, M. T. and F. D. Stacey, 1974b. Anelastic degradation of acoustic pulses in rock. *Phys. Earth Planet. Inter.*, 8, 332-336.
- Gonzalez, V. and L. Persson, 1997. Regional coda Q in Costa Rica, Central America. *J. Seismology* 1, 269–287
- González Bonorino, F., 1950. Algunos problemas geológicos de las Sierras Pampeanas. Asociación Geológica Argentina, Revista 5(3): 81-110.
- Goutbeek, F. H., B. Dost and T. van Eck, 2004. Intrinsic absorption and scattering attenuation in the southern part of the Netherlands. *J. Seism.* 8, 1, 11-23.
- Groeber, P., 1938. Mineralogía y Geología. Espasa-Calpe Argentina, 1-492, Buenos Aires.
- Gutscher, M.A., 2002. Andean subduction styles and their effect on thermal structure and interplate coupling. *J. South Am. Earth Sci.* 15, 3-10.
- Gutscher, M. and J. Malavieille, 1999. Style of upper plate deformation linked to interplate coupling over flat slab segments: evidence from the Andean Margin. En: McKlay, K., ed., *Thrust Tectonics 99*, London, abstracts 214-217.
- Gutscher, M., W. Spakman, H. Bijwaard and E.R. Engdahl, 2000. Geodynamic of flat subduction: Seismicity and tomographic constraints from the Andean margin. *Tectonics* 19, 5, 814-833.
- Guzev, A. A. and V. K. Lemzikov, 1985. Properties of scattered elastic waves in the lithosphere of Kamchatka: Parameters an temporal variations. *Tectonophysics* 112, 137-153.
- Haberland C. and A. Rietbrock, 2001. Attenuation tomography in the western central Andes: A detailed insight into the structure of a magmatic arc. *J. Geophys. Res.* 106, 11151-11167.
- Haberland, C., A. Rietbrock, B. Schurr and H. Brasse, 2003. Coincident anomalies of seismic attenuation and electrical resistivity beneath the southern Bolivian Altiplano plateau. *Geophys. Res. Lett.* 30(18), 1923, doi:10.1029/2003GL017492.
- Hadley, K., 1976. Comparison of calculated and observed crack densities and seismic velocities in Westerley granite. *J. Geophys. Res.* 81, 3484-3494.
- Hanks, T. C., 1979. b-values and ω^γ seismic source models: implications for tectonic stress variations along active crustal fault zones and the estimation of high-frequency strong ground motion. *J. Geophys. Res.* 84, 2235-2242.
- Hartse, H., W. S. Phillips, M. C. Fehler and L. S. House, 1995. single-station spectral discrimination using coda waves. *Bull. Seism. Soc. Am.* 85, 1464-1474.
- Hatzidimitriou, P. M., 1995. S-wave attenuation in the crust in northern Greece. *Bull. Seism. Soc. Am.* 85, 1381-1387.
- Havskov J, 2005. Q and spectral analysis in SEISAN. University of Bergen, Norway
- Havskov, J. and G. Alguacil, 2004. Instrumentation in earthquake seismology 22, Modern approaches in geophysics. Springer, 358 pp.
- Havskov J., S. Malone, D. McClurg and R. Crosson, 1989. Coda *Q* for the state of Washington. *Bull. Seism. Soc. Am.* 79, 1024-1038.
- Havskov J. and L. Ottemöller, 2008. SEISAN: the earthquake analysis software for windows, solaris, linux and macosx. Version 8.2.1. University of Bergen, Norway, British Geological Survey, UK.
- Havskov J., J. A. Peña, J. M Ibáñez, L. Ottemöller and C. Martínez-Arévalo, 2003. Magnitude scales for very local earthquakes. Application for Deception Island volcano (Antarctica). *J. Volcanol. Geotherm. Res.* 128, 115-133.
- Herrmann, R. B., 1980. *Q* estimates using the coda of local earthquakes. *Bull. Seism. Soc. Am.* 70, 447-468.

- Herraiz, M. and A. F. Espinosa, 1986. Scattering and attenuation of high-frequency seismic waves: development of the theory of coda waves. U.S.G.S. Open File Report 86-455.
- Herrin, E., W. Tucker, J. Taggart, D. W. Gordon and J. L. Lobdell, 1968. Estimation of surface focus P travel times. Bull. Seism. Soc. Am. 58, 1273-1291.
- Hollander, M., and D. A. Wolfe, 1999. Nonparametric Statistical Methods. Hoboken, NJ: John Wiley & Sons, Inc.
- Hong, T., B. Kennett and R. Wu, 2004. Effects of the density perturbation in scattering. Geophys. Res. Lett. 31, LI3602, doi:10.1029/2004GL019933.
- Hoshiba, M., 1991. Simulation of multiple-scattered coda wave excitation based on the energy conservation law, Phys. Earth Planet. Int.. 67, 123-136.
- Hoshiba, M., 1993. Separation of scattering attenuation and intrinsic absorption in Japan, using the Multiple Lapse Time Window Analysis of full seismogram envelope. J. Geophys. Res. 98, 15809-15824.
- Hoshiba, M. 1994. Simulation of coda wave envelope in depth dependent scattering and absorption structure. Geophys. Res. Lett. 21, 2853-2856.
- Hoshiba, M., 1995. Estimation of nonisotropic scattering in western Japan using coda wave envelopes: Application of a multiple nonisotropic scattering model. J. Geophys. Res. 100, 645-657.
- Hoshiba, M., A. Rietbrock, F. Scherbaum, H. Nakahara & C. Haberland, 2001. Scattering attenuation and intrinsic absorption using uniform and depth dependent model – Application to full seismogram envelope recorded in Northern Chile. J. of Seismology 5, 157-179.
- Hoshiba, M., H. Sato and M. Fehler, 1991. Numerical basis of the separation of scattering and intrinsic absorption from full seismogram envelope – a Monte-Carlo simulation of Multiple Isotropic Scattering. Papers in Met. and Geophys. 42, 65-91
- Hudson, J. and J. R. Heritage, 1981. The use of the Born approximation in seismic scattering problems. Geophys. J. Roy. Astr. Soc. 66, 221-240.
- Hwang, H. and B. Mitchell, 1987. Shear velocities, Q_β , and the frequency dependence of Q_β in stable and tectonically active regions from surface wave observations. Geophys. J. R. Astr. Soc. 90, 575-613.
- Ibáñez, J. M., 1990. Atenuación de ondas coda y Lg en el sur de España y de Italia a partir de sismogramas digitales. Tesis Doctoral. Facultad de Ciencias. Universidad de Granada, España.
- Ibáñez, J. M., E. del Pezzo, F. De Miguel, M. Herraiz, G. Alguacil and J. Morales, 1990. Depth-dependent seismic attenuation in the Granada zone (southern Spain). Bull. Seism. Soc. Am. 80, 1232-1244.
- Ibáñez, J. M. , E. del Pezzo, M. Martín, D. Patané, F. de Miguel, F. Vidal and J. Morales, 1993. Estimates of Coda-Q using a non-linear regression. J. Phys. Earth., 41, 203-219.
- Ibáñez, J. M., F. de Miguel, G. Alguacil, J. Morales, F. Vidal, E. Del Pezzo y A. M. Posadas, 1991. Análisis de Q coda en las Béticas Centrales con datos digitales. Rev. de Geofísica 47, 59-74.
- Ibáñez, J. M., Carmona, E., Almendros, J., Saccorotti, G., Del Pezzo, E., Abril, M., Ortiz, R., 2003. The 1998-1999 seismic series at Deception Island volcano, Antarctica. J. Volcanol. Geotherm. Res. 128, 65-88.
- Introcaso, A., M. C. Pacino and H. Fraga, 1992. Gravity, isostasy and Andean crustal shortening between latitudes 30° and 35° S. Tectonophysics 205 (1-3): 31-48.
- INPRES, 2006. Instituto Nacional de Prevención Sísmica, Secretaría de Obras Públicas, Ministerio de Planificación Federal, Inversión Pública y Servicios. <http://www.inpres.gov.ar/seismology/linkppal.htm>.
- INPRES-CIRSOC 103, 1983. Reglamento: "Normas Argentinas para las construcciones sismorresistentes", Parte I. Construcciones en general. Ed. Nov.1983. INTI, Bs.As., Argentina, 109 pp.
- Isacks, B. L., 1988. Uplift of the Central Andean Plateau and Bending of the Bolivian Orocline. J. Geophys. Res. 93, 3211-3231.
- Japas, M. S., J. M. Cortés y M. Pasini, 2008. Tectónica extensional triásica en el sector norte de la Cuenca Cuyana: primeros datos cinemáticos. Revista de la Asociación Geológica Argentina 63 (2): 213 - 222

- Jeffreys, H., 1929, 1959. The Earth, its origin, history and physical constitution, Cambridge University Press, 2nd. Edition, 1929, 4th edition, 1959.
- Jin, A. and K. Aki, 1986. Temporal change in coda Q before the Tangshan earthquake of 1976 and the Haicheng earthquake of 1975. *J. Geophys. Res.* 91, 665-673.
- Jongmans, D., (1991). Near-source pulse propagation: application to Q-determination. *Geophysical Prospecting* 39, 943-952.
- Jordan, T. E. , B. L. Isacks, R. W. Allmendinger, J. A Brewer, V. A. Ramos and C. J. Ando, 1983. Andean tectonics related to geometry of subducted Nazca plate. *Geol. Soc. of America Bulletin* 94, 341-361.
- Kay, S.M., S. Orrell and J.M. Abbruzzi, 1996. Zircon and whole rock Nd-Pb isotopic evidence for a Grenville age and a Laurentian origin for the Precordillera terrane in Argentina. *J. Geology.* 104, 637-648.
- Kay, S. M. and C Mpodozis, 2002. Magmatism as a probe of the Neogene shallowing of the Nazca plate beneath the modern Chilean flat-slab. *J. South Am. Earth Scs.* 15, 39-57.
- Kadinsky-Cade, K., 1985. Seismotectonics of the Chile margin and the 1977 Caucete earthquake of western Argentina, Ph. D Thesis, Cornell University, Ithaca, New York.
- Kendrick, E. C., M. Bevis, R. F. Smalley Jr., O. Cifuentes, F. Galván, 1999. Current rates of convergence across the central Andes: Estimates from continuous GPS observations. *Geophys. Res. Lett.*, 26(5), 541-544.
- Kissling, E., 1995. Velest User's guide – Short Introduction to Velest Version 3.1 by E. Kissling, U. Kradolfer and H. Maurer. Institute of Geophysics and Swiss Seismological Service, Switzerland.
- Kissling, E., 1988, Geotomography with local earthquake data, *Rev. Geophys.* 26, 659–698.
- Kissling, E., W. L. Ellsworth, D. Eberhart-Phillips, U. Kradolfer, 1994. Initial reference models in seismic tomography. *J. Geophys. Res.* 99, B10, 19635 – 19646
- Kjartansson, E., 1979. Constant Q-wave propagation and attenuation. *J. Geophys. Res.*, 84, 4737-4748.
- Kleiman, L. E. 1999. Mineralogía y petrología del volcanismo permo-triásico y triásico del Bloque de San Rafael en el área de Sierra Pintada, provincia de Mendoza, y su relación con las mineralizaciones de uranio. Tesis Doctoral. Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, 286 pp.
- Kleiman, L. E. 2002. Magmatism and tectonic evolution of the Choiyoi and Puesto Viejo volcanics (Late Paleozoic-Early Mesozoic) at 34-35°S Latitude, San Rafael, Mendoza Argentina. 15° Congreso Geológico Argentino (Santa Cruz), Actas 1: 15-16.
- Kley, J., Monaldi, C. R. and Salfity, J. A., 1999. Along-strike segmentation of the Andean foreland: causes and consequences. *Tectonophysics*, 301, 75-94.
- Knopoff, L. and J. A. Hudson, 1964. Scattering of elastic waves by small inhomogeneities. *J. Acoust. Soc. Am.* 36, 338-343.
- Knopoff, L. and J. A. Hudson, 1967. Frequency dependence of amplitude of scattered elastic waves. *J. Acoust. Soc. Am.* 42, 18-20.
- Kopnichenko, Y. F., 1977. The role of multiple scattering in the formation of a seismogram's tail (English Transl.), *Izv. Akad. Nauk SSSR, Fiz. Zemli*, 13, 394-398.
- Kopp, H., E. R. Flueh, C. Papenberg and D. Klaeschen, 2004. Seismic investigations of the O'Higgins Seamount Group and Juan Fernández Ridge: Aseismic ridge emplacement and lithosphere hydration. *Tectonics*, 23, TC2009, doi:10.1029/2003TC001590.
- Kulhánek O., 1990. Anatomy of Seismograms. Develop. Solid Earth Geophysics. 18 Elsevier, 178 pp.
- Kulhánek O., 2002. The Structure and Interpretation of Seismograms. In: International handbook of earthquake and engineering seismology. Lee, Kanamori, Jennings and Kisslinger Ed., Academic Press, 933 pp.
- Kumar, N., I. A. Parvez and H. S. Virk, 2005. Estimation of coda wave attenuation for NW Himalayan region using local earthquakes. *Phys. Earth Planet. Inter.* 151, 243–258.
- Kuwahara, Y., H. Ito, H. Kawakatsu, T. Ohminato and T. Kiguchi, 1997. Crustal heterogeneity as inferred from seismic coda wave decomposition by small-aperture array observation. *Phys. Earth Planet. Inter.* 104, 247-256.
- Kvamme, L. and J. Havskov, 1989. Q in southern Norway. *Bull. Seism. Soc. Am.* 79, 1575-1588.

- Lacombe C., M. Campillo, A. Paul and L. Margerin, 2003. Separation of intrinsic absorption and scattering attenuation from Lg coda decay in central France using acoustic radiative transfer theory. *Geophys. J. Int.* 154, 417–425.
- Lay, T., 1987. Analysis of near-source contributions to early P-wave coda for underground explosions. II. Frequency dependence. *Bull. Seism. Soc. Am.* 77, 4, 1252-1273.
- Lay, T., 2005. The deep mantle thermo-chemical boundary layer: The putative mantle plume source. In Foulger, G.R., Natland, J. H., Presnall, D. C. and Anderson D. L., eds, *Plate, plumes and paradigms: Geol. Soc. Am. Special Paper* 388, 193-205. doi:10.1130/2005.2388(12).
- Lifshitz, E. M., L. D. Landau and L. P. Pitaevskii, 1986. *Física Estadística*. Vol. 9, Parte 2. Ed. Reverté, 472 pp.
- Liu, H. P., D. L. Anderson and H. Kanamori, 1976. Velocity dispersion due to anelasticity: implications for seismology and mantle composition. *Geophys. J. R. Astr. Soc.* 47, 41-58.
- López, G., D. Hatzfeld, R. Madariaga, S. Barrientos, J. Campos, H. Lyon-Caen, A. Zollo, G. Giannacone y E. Kausel, 1997. Microsismicidad en la zona centro-sur de Chile: 8º Congreso Geológico de Chile, Antofagasta, Actas 3, 1771-1774.
- Llambías, E. J., L. E. Kleiman y J. A. Salvarredi, 1993. El magmatismo gondwánico. En: *Geología y Recursos Naturales de Mendoza. 12º Congreso Geológico Argentino y 2º Congreso de Exploración de Hidrocarburos (Mendoza)*, Relatorio 53-64.
- Maeda, T. and T. Sasatani, 2006. Two-layer Qs structure of the slab near the southern Kurile trench. *Earth Planets Space* 58, 543–553.
- Mai, P. M., and G. C. Beroza, 2002. A spatial random field model to characterize complexity in earthquake slip. *J. Geophys. Res.* 107(B11), 2308, doi:10.1029/2001JB000588.
- Mancilla, F., R.B. Herrmann, J. Morales and D. Stich, 2008. Vertical Ground Motion in Southern Spain. *Bull. Seism. Soc. Am.* 98, 733-745.
- Margerin, L., M. Campillo, and B. van Tiggelen, 1998. Radiative transfer and diffusion of waves in a layered medium: new insight into coda Q. *Geophys. J. Int.* 134, 596–612.
- Margerin, L., M. Campillo, N. M. Shapiro N.M. and B. van Tiggelen, 1999. Residence time of diffuse waves in the crust as a physical interpretation of coda Q: application to seismograms recorded in Mexico. *Geophys. J. Int.* 138, 343–352.
- Margheriti, L., L. Wennerberg and J. Boatwright, 1994. A Comparison of Coda and S-Wave Spectral Ratios as Estimates of Site Response in the Southern San Francisco Bay Area. *Bull. Seism. Soc. Am.* 84, 1815-1830.
- Martínez, M.P., M.E. Giménez, A. Introcaso y J. A. Robles, 1997. Excesos de espesores corticales y acortamientos andinos en tres secciones ubicadas en 36°, 37° y 39° de latitud sur. 7º Congreso Geológico Chileno. Actas 1: 101-105.
- Martínez Arévalo C., 2005. Estructura superficial de atenuación para ondas sísmicas directas, P y S, en ambientes volcánicos. Aplicación al volcán Isla Decepción (Antártida) y volcán Etna (Italia). Tesis de doctorado en Cs. Físicas, Univ. de Granada, España.
- Martínez-Arévalo, C., F. Bianco, J. Ibáñez and E. del Pezzo, 2003. Shallow seismic attenuation and shear-wave splitting in the short period range of Deception Island volcano (Antarctica). *J. Volcanol. Geotherm. Res.* 128, 89-113.
- Martínez Catalán, J. R., 2002. *Geología Estructural y Dinámica Global. 4.-Deformación a escala cristalina.* <http://web.usal.es/~gabi/APUNTES/TEMA4.PDF>
- Masuda, T., 1988. Corner Frequencies and Q Values of P and S Waves by Simultaneous Inversion Technique. *Tôhoku Geophys. Journ. (Sci. Rep. Tôhoku Univ., Ser. 5)* 31, 101-125.
- Matsunami, K. and M. Nakamura, 2004. Seismic attenuation in a nonvolcanic swarm region beneath Wakayama, southwest Japan. *J. Geophys. Res.* 109, B09302, doi:10.1029/2003JB002758.
- Mayeda, K., S. Koynagi, M. Hoshiba, K. Aki and Y. Zeng, 1992. A comparative study of scattering, intrinsic and coda Q' for Hawaii, Long Valley and Central California between 1.5 and 15 Hz. *J. Geophys. Res.* 97, 6643-6659.
- McCall, K. and R. Guyer, 1994. Equation of state and wave propagation in hysteretic nonlinear elastic materials. *J. Geophys. Res.* 99, 23887-23897.
- McNutt, S. R., 2005. Volcanic Seismology. *Annu. Rev. Earth Planet. Sci.* 32: 461–491, doi:10.1146/annurev.earth.33.092203.122459.
- Meissner, R. y Strehlau, J. 1982. Limits of stresses in continental crusts and their relation to the depth-frequency distribution of shallow earthquakes. *Tectonics* 1, 73-89.

- Mitchell, B., 1995. Anelastic structure and evolution of the continental crust and upper mantle from seismic surface wave attenuation. *Rev. Geophys.* 33, 441-462.
- Mohan, S., G. Subhash and M. A. Choudhury, 1979. Coda power and modulation characteristics of a complex P signal from underground nuclear explosions. *Tectonophysics* 53, 1-2, T33-T39, doi:10.1016/0040-1951(79)90350-0
- Mongay Fernández, C., 2005. Quimiometría. Universitat de València, 423pp.
- Moore, D. S., 2005. Estadística Básica Aplicada. Antoni Bosch Ed., 876pp.
- Morales, J., J. Ibáñez, F. Vidal, F. de Miguel, G. Alguacil and A. Posadas, 1991. Q_c site dependence in the Granada basin (southern Spain). *Bull. Seism. Soc. Am.* 81, 2486-2492.
- Morelli, A., A.M. Dziewonski and J.H. Woodhouse, 1986. Global upper mantle tomography of seismic velocities and anisotropies. *J. Geophys. Res.* 96, 20337-20351.
- Morse, P. M. and K. U. Ingard, 1986. Theoretical acoustics. Princeton University Press, 927 pp.
- Myers, S. C., S. Beck, G. Zandt, and T. Wallace, 1998. Lithospheric-scale structure across the Bolivian Andes from tomographic images of velocity and attenuation for P and S waves, *J. Geophys. Res.* 103, 21 233-21 252.
- Nakamura, Y., 1977. Seismic energy transmission in an intensively scattering environment. *J. Geophys.* 43, 389-399.
- Nakanishi, I. and D. L. Anderson, 1983. Measurements of mantle wave velocities and inversion for lateral heterogeneity and anisotropy. Part I: analysis of great circle phase velocities. *J. Geophys. Res.* 88, 10267-10283.
- Nishizawa, O. T., T. Satoh, X. Lei and Y. Kuwahara, 1997. Laboratory studies of seismic waves propagation in inhomogeneous media using a laser Doppler vibrometer. *Bull. Seism. Soc. Am.* 87, 809-823.
- Novelo-Casanova, D. A. and W. H. K. Lee, 1991. Comparison of techniques that use the Single Scattering Model to compute de quality factor Q from coda waves. *Pure Appl. Geophys.* 135, 1, 77-89.
- Novelo Casanova, D. A y A. Martínez Bringas, 2005. A seismic attenuation zone below Popocatépetl Volcano inferred from coda waves of local earthquakes. *Geofísica Internacional* 44, 2, 177-186.
- Nur, A., 1971. Viscous phase in rocks and the low-velocity zone. *J. Geophys. Res.* 76, 1270-1277.
- O'Brien, G.S. and C.J Bean, 2009. Volcano topography, structure and intrinsic attenuation: Their relative influences on a simulated 3D visco-elastic wavefield, *J. Volcanol. Geotherm. Res.*, doi:10.1016/j.jvolgeores.2009.03.004
- Ojeda, A. and J. Havskov, 2001. Crustal structure and local seismicity in Colombia. *J. Seismology* 5, 575-593.
- Ortiz, A. y J.J. Zambrano, 1981. La provincia geológica Precordillera oriental. 8º Congreso Geológico Argentino, Actas 3: 59-74.
- Osagie, E., 1986. Anelasticity of the crust and upper mantle of South America from the inversion of observed surface wave attenuation. *Geophys. J. R. Astr. Soc.* 86, 1-17.
- Padhy, S., 2009. Inversion of Seismogram Envelopes Using a Multiple Isotropic Scattering Model in Garhwal Himalaya. *Bull. Seism. Soc. Am.* 99, 2A, 726-740, doi: 10.1785/0120080076.
- Pardo, M.; T. Monfret, E. Vera, A. Eisenberg, S. Gaffet, E. Lorca and A. Perez, 2002. Seismotectonic and Body-wave Tomography of Central Chile-NW Argentina Flat-slab Subduction Zone Using Local Earthquakes. *Proceedings EGS XXVII General Assembly*, Nice, 469-472.
- Pardo, M., T. Monfret, E. Vera, G. Yanez, and A. Eisenberg, 2004. Flat-Slab to Steep Subduction Transition Zone in Central Chile-Western Argentina: Body Waves Tomography and State of Stress. *AGU Fall Meeting Abstracts*, B164.
- Pereira Dias, A. and J. L. de Souza, 2004. Estimates of coda Q attenuation in the João Câmara area (Northeastern Brazil). *J. Seismology* 8: 235-246.
- Perucca, J. C., M. C. Puertas, E. R. Uliarte y J. J. Zambrano, 1979. Carta Geotectónica de Cuyo. Boletín N° 4, Fac. de Cs. Exactas Físicas y Naturales. Universidad Nacional de San Juan.
- Perucca, J. C., G. Salinas de Salmuni, M. C Puertas y J. Zambrano, 1997. Aporte de las imágenes ERS-1 a la carta geotectónica de Cuyo. Sector centro-oeste de la provincia de San Juan, Argentina. *Proceedings of an International Seminar on the Use and Applications of ERS in Latin America*, Viña del Mar, Chile. ESA SP-405.

- Perucca, L. y H. Bastias, 2006. Regiones Sismotectónicas en el centro-oeste argentino. Provincias de La Rioja, San Juan y Mendoza. Temas de Geología Argentina I (2). INSUGEO, Serie Correlación Geológica, 21:209-222. Tucumán. ISSN 1514-4186. ISSN 1666-9479 en línea.
- Perucca, L. y J. Paredes, 2004. Descripción del Fallamiento Activo en la Provincia de San Juan. Tópicos de Geociencias. Un Volumen de Estudios Sismológicos, Geodésicos y Geológicos en Homenaje al Ing. Fernando Séptimo Volponi. Editorial: EFU Fundación Universidad Nacional de San Juan. E. Triep, A. Introcaso (ed.). 269-309.
- Phillips, W. S. and K. Aki, 1986. Site amplification of coda waves from local earthquakes in central California. *Bull. Seism. Soc. Am.* 76, 627-648.
- Pozgay, S. H., D. A. Wiens, J. A. Conder, H. Shiobara, and H. Sugioka, 2009. Seismic attenuation tomography of the Mariana subduction system: Implications for thermal structure, volatile distribution, and slow spreading dynamics, *Geochem. Geophys. Geosyst.*, 10, Q04X05, doi:10.1029/2008GC002313.
- Pujades, L. G., A. Ugalde, J. A. Canas, M. Navarro, F. J. Badal and V. Corchete, 1997. Intrinsic and scattering attenuation from observed seismic cudas in the Almeria Basin (southeastern Iberian Peninsula). *Geophys. J. Int.* 129, 281-291.
- Pujol, J., J. M. Chiu, R. Smalley Jr., M. Regnier, B. Isacks, J.L. Chatelain, J. Vlasity, J. Castano and N. Puebla, 1991. Lateral velocity variations in the andean foreland in Argentina determined with the JHD method. *Bull. Seism. Soc. Am.* 81, 2441-2457.
- Pulli, J., 1984. Attenuation of coda waves in New England. *Bull. Seism. Soc. Am.* 74, 1149-1166.
- Raffaele, R., L. Scarfi, G. Badi, J. Ibáñez, S. Imposa, 2010. Sub-horizontal Subduction in Western Argentina, between 29°S and 34°S, as viewed from a Local Seismic Network. Póster presentado en Cities on Volcanoes 6th, Puerto de la cruz, Tenerife, Islas Canarias, España, 31 de mayo al 4 de junio de 2010.
- Ramos, V.A., 1988. Late Paleozoic-early Paleozoic of South America, a collisional history. *Episodes*, 2:168-173.
- Ramos, V.A., 1999a. Plate tectonic setting of the Andean Cordillera. *Episodes* 22, 183-190.
- Ramos, V.A., 1999b. Las provincias geológicas del territorio argentino. En: *Geología Argentina*. Instituto de Geología y Recursos Minerales. Buenos Aires. Anales 29(3), 41-96.
- Ramos, V.A., 1999c. Los depósitos sinorogénicos terciarios de la Región Andina. En: *Geología Argentina*. Instituto de Geología y Recursos Minerales. Buenos Aires Anales 29 (22): 651-682.
- Ramos, V.A., 1999d. Evolución Tectónica de la Argentina. En: *Geología Argentina*. Instituto de Geología y Recursos Minerales. Buenos Aires. Anales 29 (24), 714-759.
- Ramos, V.A., Cegarra, M. and Cristallini, E., 1996. Cenozoic tectonics of the High Andes of west-central Argentina, (30°- 36°S latitude). *Tectonophysics* 259: 185-200.
- Ramos, V. A., E. O. Cristallini and D. J. Pérez, 2002. The Pampean flat-slab of the Central Andes. *J. South Am. Earth Sciences* 15, 59-78.
- Rautian, T. G. and V. I. Khalturin, 1978. The use of the coda for determination of the earthquake source spectrum. *Bull. Seism. Soc. Am.* 68, 923-948.
- Ren, Y., E. Stutzmann, R. D. van der Hilst, and J. Besse, 2007. Understanding seismic heterogeneities in the lower mantle beneath the Americas from seismic tomography and plate tectonic history, *J. Geophys. Res.* 112, B01302, doi:10.1029/2005JB004154.
- Regnier, M. J., C. Chatelain, R. Smalley Jr., J.M. Chiu, B. L. Isacks and M. Araujo, 1992. Seismotectonics of Sierra Pie de Palo, a basement block uplift in the Andean foreland of Argentina. *Bull. Seism. Soc. Am.* 82, 6, 2549-2571.
- Regnier, M. J., J.M. Chiu, R. Smalley Jr., B. L. Isacks and M. Araujo, 1994. Crustal Thickness Variation in the Andean Foreland, Argentina, from Converted Waves. *Bull. Seism. Soc. Am.* 84, 4, 1097-1111.
- Rietbrock A., 2001. P wave attenuation structure in the fault area of the 1995 Kobe earthquake. *J. Geophys. Res.*, 106, 4141-4154.
- Rietbrock, A. and C. Haberland, 2001. A Tear in the subducting Nazca Slab: Evidence from Local Earthquake Tomography and High Precision Hypocenters. American Geophysical Union, Fall Meeting 2001, abstract #T31A-0822

- Rodi, W., C. A. Schultz, W. G. Hanley, S. Sarkar and H. S. Kuleli, 2002a. Grid-search location methods for ground-truth collection from local and regional seismic networks, in The 24th Seismic Research Review, 394–402.
- Rodi, W., E. R. Engdahl, E. A. Bergman, F. Waldhauser, G. L. Pavlis, H. Israelsson, J. Dewey and M. N. Toksoz, 2002b. A new grid-search multiple-event location algorithm and a comparison of methods, in The 24th Seismic Research Review, 403–411.
- Rolleri, E.O., 1976. Sistema de San Bárbara. 6º Congreso Geológico Argentino, Actas 1: 240-255.
- Rolleri, E.O. y P. Criado Roqué, 1970. Geología de la provincia de Mendoza. 4a Jornadas Geológicas Argentinas, Actas 2: 1-60.
- Romanowicz, B., 2003. Global mantle tomography: progress status in the last 10 years, Annu. Rev. Geophys. Space Phys. 31 ,1, 303.
- Roth, E. G., D. A. Wiens, L. M. Dorman, J. Hildebrand, and S. C. Webb, 1999. Seismic attenuation tomography of the Tonga-Fiji region using phase pair methods, J. Geophys. Res. 104, B3, 4795–4809, doi:10.1029/1998JB900052.
- Rychert, C. A., K. M. Fischer, D. G. A. Abers, T. Plank, E. Syracuse, J. M. Protti, V. Gonzalez and W. Strauch, 2008. Strong along-arc variations in attenuation in the mantle wedge beneath Costa Rica and Nicaragua. Geochem. Geophys. Geosyst. 9, Q10S10, doi:10.1029/2008GC002040.
- Sachs, L., 1984. Applied Statistics: A Handbook of Techniques. Springer-Verlag, New York, 253pp.
- Saito, T., H. Sato and M. Ohtake, 2002. Envelope broadening of spherically outgoing waves in three-dimensional random media having power law spectra. J. Geophys. Res. 107, B5, 2089, doi: 10.1029/2001JB000264
- Saito, T., H. Sato, M. Ohtake and K. Obara, 2005. Unified explanation of envelope broadening and maximum amplitude decay of high-frequency seismograms based on the envelope simulation using the Markov approximation: Forearc side of the volcanic front in northeastern Honshu, Japan. J. Geophys. Res., 110, B01304, doi:10.1029/2004JB003225.
- Sato, A. M., Tickyj, H., Llambías, E. J. & Sato, K., 2000. The Las Matras Tonalitic–trondhjemitic pluton, central Argentina: Grenvillian–age constraints, geochemical characteristics, and regional implications. J. South Am. Earth Sciences 13, 587–610.
- Sato, H., 1977a. Energy propagation including scattering effects-single isotropic scattering approximation. J. Phys. Earth 25, 27-41.
- Sato, H., 1977b. Single Isotropic Scattering model including wave conversions. Simple theoretical model of the short period body wave propagation. J. Phys. Earth 25, 163-176.
- Sato, H. 1979. Wave propagation in one dimensional inhomogeneous elastic media. J. Phys. Earth 27, 455-466.
- Sato, H., 1984. Attenuation and envelope formation of three-component seismograms of small local earthquakes in randomly inhomogeneous lithosphere. J. Geophys. Res. 89, 1221-1241.
- Sato, H., 1988. Is the single scattering model invalid for the coda excitation at long lapse time? Pure Appl. Geophys. 128, 43-47.
- Sato, H., 1993. Energy transportation in one- and two-dimensional scattering media: Analytic solutions of the multiple isotropic scattering model. Geophys. J. Int. 112, 141-146.
- Sato, H., 1994. Multiple isotropic scattering model including P-S conversions for the seismogram envelope formation. Geophys. J. Int. 117, 487-494.
- Sato, H., R. Dmowska and M. Fehler, 2009. Advances in geophysics, Vol. 50. Academic Press, 476 pp.
- Sato, H. and M. C. Fehler, 1998. Seismic wave propagation and scattering in the heterogeneous earth. Springer-Verlag, New York, 308pp.
- Sato, H., M. C. Fehler and R. S. Wu, 2002. Scattering and Attenuation of Seismic Waves in the Lithosphere. In: International handbook of earthquake and engineering seismology. Lee, Kanamori, Jennings and Kisslinger Ed., Academic Press, 933 pp.
- Sato, H., H. Nakahara and M. Ohtake, 1997. Synthesis of scattered energy density for the non-spherical radiation from a point shear dislocation source based on the radiative transfer theory. Phys. Earth Planet. Int. 104, 1-13.
- Savage, J. C., 1966. Thermoelastic attenuation of elastic waves by cracks. J. Geophys. Res. 71, 3929-3938.
- Scherbaum F., 1990. Combined inversion for the three-dimensional Q structure and source parameters using microearthquake spectra, J. Geophys. Res. 95, 12423-12438.

- Scherbaum, F., D. Gillard and N. Deichmann, 1991. Slowness power spectrum analysis of the coda composition of two microearthquake clusters in northern Switzerland. *Phys. Earth Planet. Inter.* 67, 137-161.
- Schmitz, M., 1994. A balanced model of the southern Central Andes. *Tectonics* 13, 2, 484-492.
- Schmitz, M., W. Heinsohn and F. Schilling, 1997. Seismic, gravity and petrological indications for partial melting beneath the thickened central Andean crust 21°–23°S. *Tectonophysics* 270, 313-326.
- Schurr, B., G. Asch, A. Rietbrock, R. Trumbull and C. Haberland, 2003. Complex patterns of fluid and melt transport in the central Andean subduction zone. *Earth Planet. Sc. Lett.* 215, 105-119.
- Siame, L., O. Bellier and M. Sebrier, 2006. Active tectonics in the Argentine Precordillera and Western Sierras Pampeanas. *Rev. Asoc. Geol. Arg.* 61 (4), 604-619.
- Sibson, R. H. 1982. Fault zone models, heat flow, and the depth distribution of earthquakes in the continental crust of the United States. *Bull. Seism. Soc. Am.* 72(1), 151-163.
- Siebert L. and T. Simkin, 2002-2011. Volcanoes of the World: an Illustrated Catalog of Holocene Volcanoes and their Eruptions. Smithsonian Institution, Global Volcanism Program Digital Information Series, GVP-3, (<http://www.volcano.si.edu/world/>).
- Singh, S. and R. Herrmann, 1983. Regionalization of Crustal Coda *Q* in the continental United States. *J. Geophys. Res.* 88, 527-538.
- Smalley, R. F. Jr. and B. L. Isacks, 1987. A high-resolution local network study of the Nazca Plate Wadati-Benioff Zone under western Argentina. *J. Geophys. Res.* 92, 13903-13912.
- Smalley, R. F. Jr. and B. L. Isacks, 1990. Seismotectonics of Thin-and Thick-Skinned Deformation in the Andean Foreland from Local Network Data: Evidence for a Seismogenic Lower Crust. *J. Geophys. Res.* 95, 12487-12498.
- Smalley, R. F. Jr., J. Pujol, M. Regnier, J. Chiu, J. Chatelain, B. Isacks, M. Araujo and N. Puebla, 1993. Basement seismicity beneath the Andean Precordillera thin-skinned thrust belt and implications for crustal and lithospheric behaviour. *Tectonics* 12, 63-76.
- Stachnik, J. C., G. A. Abers, and D. H. Christensen, 2004. Seismic attenuation and mantle wedge temperatures in the Alaska subduction zone. *J. Geophys. Res.* 109, B10304, doi:10.1029/2004JB003018.
- Solomon, S. C., 1972a. On *Q* and seismic discrimination. *Geophys. J. of the R.A.S.* 31, 163-177.
- Solomon, S. C., 1972b. Seismic-Wave attenuation and partial melting in the upper mantle of North America. *J. Geophys. Res.* 77, 8, 1483-1502.
- Stacey, F. D., M. T. Gladwin, B. McKavanagh, A. T. Linde and L. M. Hastic, 1975. Anelastic damping of acoustic and seismic pulses. *Geophys. Surv.* 2, 133-157.
- Stauder, W., 1973. Mechanism and spatial distribution of Chilean earthquakes with relation to subduction of oceanic plate. *J. Geophys. Res.* 78, 23, 5033-5061.
- Stein, S. and M. Wysession, 2003. An Introduction to Seismology, Earthquakes and Earth Structure. Blackwell Pub., 498 pp.
- Su, F., K. Aki and N. Biswas, 1991. Discriminating quarry blasts from earthquakes using coda waves. *Bull. Seism. Soc. Am.* 81, 162-178.
- Suárez, G., P. Molnar and B. C. Burchfiel, 1983. Seismicity, fault plane solutions, depth of faulting and active tectonics of the Andes of Peru, Ecuador and southern Colombia. *J. Geophys. Res.* 88, B12, 10403-10428.
- Takanami, T., I. Selwyn Sacks and A. Hasegawa, 2000. Attenuation structure beneath the volcanic front in northeastern Japan from broad-band seismograms. *Phys. Earth Planet. Inter.* 121, 339-357, doi:10.1016/S0031-9201(00)00169-2.
- Tassara, A., 2005. Interaction between the Nazca and South American plates and formation of the Altiplano-Puna plateau: Review of a flexural analysis along the Andean margin (15°–34°S). *Tectonophysics* 399, 39–57.
- Tassara, A., H. J. Götze, S. Schmidt and R. Hackney, 2006. Three-dimensional density model of the Nazca plate and the Andean continental margin. *J. Geophys. Res.* 111, B09404, doi:10.1029/2005JB003976.
- Tassara, A. y G. Yañez, 2003. Relación entre el espesor elástico de la litosfera y la segmentación tectónica del margen andino (15 - 47°S). *Rev. Geol. Chile* 30, 2, 159-186. doi:10.4067/S0716-02082003000200002.

- Triep, E. y C. B. de Cardinali, 1984. Mecanismos de sismos en las Sierras Pampeanas Occidentales. Actas del Noveno Congreso Geológico Argentino, III, 61-80.
- Triola, M. F., 2004. Estadística. Pearson Education, 838 pp.
- Tripathi, J. N., 2002. Scattering coefficient for S wave incident in a random medium characterized by exponential correlation function. *Geophys. J. Int.* 150 (2), 415–421 doi:10.1046/j.1365-246X.2002.01693.x
- Tripathi, J. N., A. Ram, 1997. Elastic-wave scattering in a random medium characterized by the von Kàrmán correlation function and small-scale inhomogeneities in the lithosphere. *Geophys. J. Int.* 131, 682-698.
- Tsai, Yi-Ben and K. Aki, 1969. Simultaneous determination of the seismic moment and attenuation of seismic surface waves. *Bull. Seism. Soc. Am.* 59, 275-287.
- Tselentis, G-A., 1998. Intrinsic and Scattering Seismic Attenuation in W. Greece. *Pure and Applied Geophysics* 153, 703-712, doi: 10.1007/s000240050215.
- Tsujiura, M., 1966. Frequency analysis of seismic waves: 1. *Bull. Earthquake Res. Inst., Tokyo Univ.* 44, 873-891.
- Tsujiura, M., 1978. Spectral analysis of the coda waves from local earthquakes. *Bull. Earthquake Res. Inst., Tokyo Univ.* 53, 1-48.
- Tsumura, N., S. Matsumoto, S. Horiuchi, and A. Hasegawa, 2000. Three-dimensional attenuation structure beneath the northeastern Japan arc estimated from spectra of small earthquakes. *Tectonophysics* 319, 241–260, doi:10.1016/S0040-1951(99)00297-8.
- Turcotte, D. L. and G. Schubert, 2002. *Geodynamics*. Cambridge University Press, 456 pp.
- UCLA: Academic Technology Services, Statistical Consulting Group, 2010. Statistical Computing. from http://www.ats.ucla.edu/stat/mult_pkg/faq/general/mann-whitney.htm.
- Udías Vallina, A., 1999. *Principles of Seimology*. Cambridge University Press, 475 pp.
- Ugalde, A., L.G Pujades y J.A Canas, 1998a. Aplicación del cálculo paralelo al análisis de energía sísmica en la coda de terremotos regionales. *Rev. Int. Mét. Num. Cálculo y Diseño en Ingeniería*, 14, 4, 539-555.
- Ugalde, A., L.G Pujades, J.A Canas and A, Villasenor, 1998b. Estimation of the intrinsic absorption and scattering attenuation in northeastern Venezuela (southeastern Caribbean) using coda. *Pure Appl. Geophys.* 105, 685-702.
- van Hunen, J., A. van den Berg and N. Vlaar, 2004. Various mechanisms to induce present-day shallow flat subduction and implications for the younger Earth: A numerical parameter study. *Phys. Earth Planet. Inter.* 146, 179–194.
- Vargas Sabadías, A., 1995. *Estadística descriptiva e inferencial*. Colección Ciencia y Técnica, Univ. de Castilla La Mancha, 576pp.
- Volponi, F., M. Quiroga y A. Robles, 1978. El terremoto de Caucete del 23 de noviembre de 1977. Instituto Sismológico Zonda, Universidad Nacional de San Juan, 81 pp, San Juan.
- Wagner, L. S., S. Beck, G. Zandt and M. N. Ducea, 2006. Depleted lithosphere, cold, trapped asthenosphere, and frozen melt puddles above the flat slab in central Chile and Argentina. *Earth and Planet. Sc. Lett.* 245, 289–301
- Wall, R. M. and L. E. Lara, 2001. Lavas Las Pataguas: alkaline volcanism in the Early Miocene Andean forearc of central Chile. *Rev. Geol. Chile*. [online]. Dec. 2001, vol.28, no.2, p.243-258. Available from WWW: <http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0716-02082001000200006&lng=en&nrm=iso>. ISSN 0716-0208.
- Walsh, J. B., 1966. Seismic wave attenuation in rock due to friction. *J. Geophys. Res.* 71, 2591-2599.
- Walsh, J. B., 1969. New analysis of attenuation in partially melted rock. *J. Geophys. Res.* 74, 4333-4337.
- Wegler, U., 2004. Diffusion of seismic waves in a thick layer: Theory and application to Vesuvius volcano. *J. Geophys. Res.* 109, B07303, doi:10.1029/2004JB003048.
- Wennerberg, L., 1993. Multiple-scattering interpretations of coda-*Q* measurements. *Bull. Seism. Soc. Am.* 83, 279-290.
- Wessel, P., and W.H.F. Smith, 1998. New, improved version of the Generic Mapping Tools released, *EOS Trans. AGU*, 79, 579.
- Wessel, P., and W.H.F. Smith, 2004. The Generic Mapping Tools Technical Reference and Cookbook, Version 4.0, pp. 132.

- Wiens, D A., J.A. Conder and U.H. Faul, 2008. The seismic structure and dynamics of the mantle wedge. *Annu. Rev. Earth Planet. Sciences* 36, 421–455, doi:10.1146/annurev.earth.33.092203.122633.
- Whitman, D., B. L. Isacks, J.-L. Chatelain, J.-M. Chiu, and A. Perez, 1992. Attenuation of high-frequency seismic waves beneath the central Andean plateau. *J. Geophys. Res.* 97, 19 929–19 947.
- Woodgold, C., 1990. Estimation of Q in eastern Canada using Coda Waves. *Bull. Seism. Soc. Am.* 80, 411-429.
- Woodgold, C., 1994. Coda Q in the Charlevoix, Quebec, Region: Lapse-Time dependence and spatial and temporal comparisons. *Bull. Seism. Soc. Am.*, 84, 1123-1131.
- Woodhouse, J. and A. M. Dziewonski, 1984. Mapping the upper mantle: three dimensional modeling of earth structure by inversion of seismic waveforms. *J. Geophys. Res.*, 89, B7, 5953-5986.
- Wu, H., 1985. Multiple scattering and energy transfer of seismic waves – Separation of scattering effect from intrinsic attenuation – I. Theoretical modeling. *Geophys. J. R. Astron. Soc.* 82, 57-80.
- Wu, H. and K. Aki, 1985a. Scattering characteristics of the elastic waves by an elastic heterogeneity. *Geophysics* 50, 582-595.
- Wu, H. and K. Aki, 1985b. Elastic waves scattering by a random medium and the small-scale inhomogeneities in the lithosphere. *J. Geophys. Res.* 90, 10261-10273.
- Wu, H. and K. Aki, 1988. Multiple scattering and energy transfer of seismic waves – Separation of scattering effect from intrinsic attenuation – II. Application of the theory to the Indu-Kush region. *Pure Appl. Geophys.* 128, 49-80.
- Wu, H. and J. M. Lees, 1996. Attenuation structure of Coso geothermal area, California, from wave pulse widths. *Bull. Seism. Soc. Am.* 86, 1574-1590.
- Xie, J., R. Gok, J. Ni and Y. Aoki, 2004. Lateral variations of crustal seismic attenuation along the INDEPTH profiles in Tibet from Lg Q inversion, *J. Geophys. Res.* 109, B10308, doi 10.1029/2004JB002988.
- Xie, J. and B. Mitchell, 1990. Attenuation of multiphase surface waves in the Basin and Range province, part I: Lg and Lg coda. *Geophys. J. Int.* 102, 121-137.
- Yáñez, G., C. R. Ranero, R. von Huene and J. Díaz, 2001. Magnetic anomaly interpretation across the southern central Andes (32°–34°): The role of the Juan Fernández Ridge in the late Tertiary evolution of the margin. *J. Geophys. Res.* 106, 6325–6345.
- Yoshimoto, K., 2000. Monte Carlo simulation of seismogram envelopes in scattering media. *J. Geophys. Res.* 105, 6153-6161.
- Yoshimoto, K., Sato, H. and Ohtake, M. (1993), Frequency-Dependent Attenuation of P and S Waves In the Kanto Area, Japan, Based On the Coda-Normalization Method. *Geophys. J. Int.* 114: 165–174. doi: 10.1111/j.1365-246X.1993.tb01476.x
- Yoshimoto, K., U. Wegler and M. Korn, 2006. Volcanic Front as a Boundary of Seismic-Attenuation Structures in Northeastern Honshu, Japan. *Bull. Seism. Soc. Am.*, 96; 2; 637-646; doi: 10.1785/0120050085
- Yrigoyen M. R, 1999. Situación de la Argentina en el marco geológico de América del Sur. *Geología Argentina. Instituto de Geología y Recursos Minerales.Buenos Aires. Anales* 29 (2), 35-39
- Zeng, Y., 1991. Compact solutions for multiple scattered wave energy in time domain. *Bull. Seism. Soc. Am.*, 81, 1022-1029.
- Zeng, Y., 1993. Theory of scattered P- and S-wave energy in a random isotropic scattering medium. *Bull. Seism. Soc. Am.* 83, 1264-1276.
- Zeng, Y., F. Su and K. Aki, 1991. Scattered wave energy propagation in a random isotropic scattering medium. *J. Geophys. Res.* 96, 607-619.
- Zor, E., E. Sandvol, J. Xie, N. Türkelli, B. Mitchell, A. H. Gasanov and G. Yetirmishli, 2007. Crustal Attenuation within the Turkish Plateau and Surrounding Regions, *Bull. Seism. Soc. Am.*, 97, No. 1B, pp. 151–161, doi: 10.1785/0120050227.