

# Vita Robert B. Herrmann

## 1. Education

Ph.D. in Geophysics, Saint Louis University, St. Louis, Missouri, 1974  
B. S. Physics, Summa cum Laude, Xavier University, Cincinnati, Ohio, 1967  
Roger Bacon high School, St. Bernard Ohio, 1963

## Employment

Paul C. Reinert Chair of Natural Sciences (2010) Saint Louis University  
Otto Nuttli Professor of Geophysics (2004) Saint Louis University  
Professor of Geophysics (1983) Saint Louis University  
Associate Professor of Geophysics (1978-1983) Saint Louis University  
Assistant Professor of Geophysics (1975-1978) Saint Louis University  
Post-doctoral Research Associate (1974-1975) Cooperative Institute for Research in the Environmental Sciences/University of Colorado/NOAA  
Research Assistant (1972-1974) Saint Louis University  
NSF Graduate Fellow (1967-1969, 1971-1972)

## Service

### Professional Societies:

Editorial Committee Earthquake Notes (1977-1981)  
Secretary, Eastern Section Seismological Society of America (1981-1983)  
Vice Chairman, Eastern Section Seismological Society of America (1983-1985)  
Chairman, Eastern Section Seismological Society of America (1985-1987)  
Fifth Member, Eastern Section Seismological Society of America (1987-1989)  
Board of Directors, Seismological Society of America (1982-1988)  
Typesetting Editor, Eastern Section, Seismological Society of America (1986-92)

### National Panels:

N.R.C. Committee of Seismology Panel on Local, Regional and National Networks (1978-1979)  
N. R. C. Committee of Seismology Panel on Regional Seismic Networks(1988-)  
Committee of Seismology, National Research Council (1983-1985 )  
AFTAC Seismic Review Panel (1988-present)  
National Earthquake Hazards Reduction Advisory Committee (2012- )

### Military:

Lt. Col., USAR-EN (Ret) (1969-1997)

### State Commission:

Appointed Member, Seismic Safety Commission, State of Missouri (1995-2008)

## Awards

Jesuit Seismological Association Award of Eastern Section, Seismological Society of America, 1997.  
Otto Nuttli Professorship Saint Louis University, 2004

## 1. Journal Publications

1. 1. Energy transfer in one-dimensional collisions of many objects (with J. B. Hart), *American Journal of Physics* **36**, 46-49, 1968.
2. 2. Herrmann, R. B. (1969). The structure of the Cincinnati Arch as determined by short period Rayleigh waves, *Bull. Seism. Soc. Am.* **59**, 399-407.
3. 3. The south central Illinois earthquake of November 9, 1968: Macro seismic studies (with D. W. Gordon, T. J. Benett, and A. M. Rogers), *Bull. Seism. Soc. Am.* **60**, 953-972, 1970.
4. 4. Herrmann, R. B. (1973). Some aspects of band-pass filtering of surface waves, *Bull. Seism. Soc. Am.* **63**, 703-711.
5. 5. Herrmann, R. B. (1973). Surface wave generation by the south central Illinois earthquake of November 9, 1968, *Bull. Seism. Soc. Am.* **63**, 2121-2134, 1973.
6. 6. Street, R. L., R. B. Herrmann and O. W. Nuttli (1974). Earthquake mechanics in the central United States *Science* **184**, 1285-1287, 1974.
7. 7. Herrmann, R. B. and O. W. Nuttli (1975). Ground motion modeling in a continental interior, I. Theory and observations *International Journal of Earthquake Engineering and Structural Dynamics* **4**, 49-58, 1975.
8. 8. Herrmann, R. B. and O. W. Nuttli (1975). Ground motion modeling in a continental interior, II. Effect of focal depth, azimuth, and attenuation, *International Journal of Earthquake Engineering and Structural Dynamics* **4**, 59-72, 1975.
9. 9. R. L. Street, R. B. Herrmann and O. W. Nuttli (1975). Spectral characteristics of the Lg wave generated by central United States earthquakes, *Geophysical Journal of the Royal Astronomical Society* **41**, 51-63, 1975.
10. 10. Herrmann, R. B. (1975). The use of duration as a measure of seismic moment and magnitude, *Bull. Seism. Soc. Am.* **65**, 899-913.
11. 11. Herrmann, R. B. and B. J. Mitchell (1975). Statistical analysis and interpretation of surface wave anelastic attenuation data for the stable interior of North America *Bull. Seism. Soc. Am.* **65**, 1115-1128, 1975.
12. 12. Herrmann, R. B. (1975). A student's guide to the use of P and S wave data for focal mechanism determination, *Earthquake Notes* **46**, 29-40, 1975. [EQNOTES 46 4 29-39.pdf](#)
13. 13. Herrmann, R. B. (1976). Some more complexity in S-wave particle motion, *Bull. Seism. Soc. Am.* **66**, 625-630.
14. 14. Herrmann, R. B. (1976). Focal depth determination from the signal character of long-period P-waves, *Bull. Seism. Soc. Am.* **66**, 1221-1232.
15. 15. Mitchell, B. J., L. W. B. Leite, Y. K. Yu and R. B. Herrmann (1976). Attenuation of Love and Rayleigh waves across the Pacific at periods between 15 and 110 seconds, *Bull. Seism. Soc. Am.* **66**, 1189-1202.
16. 16. Street, R. L., and R. B. Herrmann (1976). Problems with using magnitude scales for eastern North American earthquakes, *Earthquake Notes* **47**, 37-45, 1976. [EQNOTES 47 3 37-45.pdf](#)
17. 17. Herrmann, R. B. (1977). *Earthquake Generated SH Waves in the Near Field and Near-Regional Field*, Final Report Contract DACW 39-76-C-0058, U. S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi, 94 pages, August.
18. 18. Herrmann, R. B. and S. F. Schaefer (1977), Seismic risk analysis applied to the central United States, *Earthquake Notes* **48**, 35-43. [EQNOTES 48 4 35-43.pdf](#)
19. 19. Herrmann, R. B. (1977). Analysis of Strong Motion Data from the New Madrid Seismic Zone: 1975-1976, Department of Earth and Atmospheric Sciences, Saint Louis University, August 1977 (NTIS PB\ 280\ 148/AS)
20. 20. Herrmann, R. B., G. W. Fischer and J. E. Zollweg (1977). The June 13, 1975 earthquake and its relationship to the New Madrid Seismic Zone, *Bull. Seism. Soc. Am.* **67**, 209-218.
21. 21. Herrmann, R. B. (1977). On the determination of the impulse response of seismograph systems with emphasis on the SRO system, *Earthquake Notes* **48**, 3-23 [EQNOTES 48 1-2 3-23.pdf](#)
22. 22. Herrmann, R. B. (1977). A method for the synthesis of the seismic coda of local earthquakes, *J. Geophys.* **43**, 341-350.
23. 23. Herrmann, R. B. (1977). Recurrence relations, *Earthquake Notes* **48**, 47-49 [EQNOTES 48 1-2 47-49.pdf](#)

24. Herrmann, R. B. (1978). A note on causality problems in the numerical synthesis of elastic wave propagation in cylindrical coordinate systems, *Bull. Seism. Soc. Am.* **68**, 117-123.
25. Herrmann, R. B. and G. W. Fischer (1978). Theoretical seismogram constraints on some crustal velocity models in the central United States *PAGEOPH* **116**, 1250-1261.
26. Herrmann, R. B. (1978). A seismological study of two Attica, New York earthquakes, *Bull. Seism. Soc. Am.* **68**, 641-651.
27. Herrmann, R. B. and J. A. Canas (1978). Focal mechanism studies in the New Madrid Seismic Zone, *Bull. Seism. Soc. Am.* **68**, 1095-1102.
28. Herrmann, R. B. (1978). *Computer Programs in Earthquake Seismology, Volume 1: General Programs*, edited by R. B. Herrmann, Department of Earth and Atmospheric Sciences, Saint Louis University, November 1978 (NTIS PB \ 292\ 462).
29. Herrmann, R. B. (1978). *Computer Programs in Earthquake Seismology, Volume 2: Surface Wave Programs*, Department of Earth and Atmospheric Sciences, Saint Louis University, November 1978 (NTIS PB \ 292\ 463).
30. Herrmann, R. B., S. H. Cheng and O. W. Nuttli (1978). Archaeoseismology applied to the New Madrid earthquakes of 1811-1812, *Bull. Seism. Soc. Am.* **68**, 1751-1759.
31. Herrmann, R. B. (1979). SH wave generation by dislocation sources - A numerical study, *Bull. Seism. Soc. Am.* **69**, 1-16.
32. Herrmann, R. B. (1979). Surface wave focal mechanisms for eastern North American earthquakes with tectonic implications, *J. Geophys. Res.* **84**, 3543-3552.
33. Mitchell, B. J., and Herrmann, R. B. (1979). Shear velocity in the Eastern United States from the inversion of surface wave group and phase velocities, *Bull. Seism. Soc. Am.* **69**, 1133-1148.
34. Nuttli, O. W. and Herrmann, R. B. (1978). *Credible Earthquakes for the Central United States, State-of-the-Art for Assessing Earthquake Hazards in the United States*, Miscellaneous Paper, U. S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi, 100pp., 16 fig., December 1978.
35. Herrmann, R. B., and C. Y. Wang (1979). *SH - A Computer Program for Generating Far-field Tangential Time Histories for Point Earthquake Sources*, Department of Earth and Atmospheric Sciences, Saint Louis University, January 1979 (NTIS PB 296 455).
36. Herrmann, R. B. (1979). FASTHYPO -- A hypocenter location program, *Earthquake Notes* **50**, No. 2., 25-37 [EQNOTES 50 2 25-37.pdf](#).
37. Herrmann, R. B. and J. A. Voss (1980). A surface wave study of the June 16, 1978 Texas earthquake, *Earthquake Notes* **51**, 3-14 [EQNOTES 51 1 3-14.pdf](#).
38. Wang, C. Y., and R. B. Herrmann (1980). A numerical study of P, SV and SH wave generation in a plane layered medium, *Bull. Seism. Soc. Am.* **70**, 1015-1036.
39. Herrmann, R. B. (1980). Q estimates using the coda of local earthquakes, *Bull. Seism. Soc. Am.* **70** 447-468.
40. Herrmann, R. B., J. Dewey and S.-K. Park (1980). The Dulce, New Mexico earthquakes of January, 1966, *Bull. Seism. Soc. Am.* **70**, 2171-2183.
41. Herrmann, R. B., W. Stauder, C. Nicholson, S. Singh, M. Woods, C. Kim, R. Perry, S. Morrissey and E. Haug (1980). Central Mississippi Valley earthquakes - 1978 *Earthquake Notes* **51**, 22-24.
42. Herrmann, R. B., W. Stauder, S. Singh, C. Nicholson, D. Reidy, R. Perry, S. Morrissey and E. Haug (1980). Central Mississippi Valley earthquakes- 1979 *Earthquake Notes* **52**, 26-31.
43. Eberhart-Phillips, D., R. M. Richardson, M. L. Sbar and R. B. Herrmann (1981). Analysis of the 4 February 1976 Chino Valley, Arizona Earthquake, *Bull. Seism. Soc. Am.* **71** 787-802.
44. Herrmann, R. B. and M. J. Goertz (1981). A numerical study of peak ground motion scaling, *Bull. Seism. Soc. Am.* **71**, 1963-1979.
45. Herrmann, R. B., S.-K. Park and C. Y. Wang (1981). The Denver earthquakes of 1967-1968, *Bull. Seism. Soc. Am.* **71**, 731-746.

46. Herrmann, R. B., and O. W. Nuttli (1982). Magnitude: The relation of ML to mbLG, *Bull. Seism. Soc. Am.* **72**, 389-397.
47. Herrmann, R. B., C. A. Langston and J. E. Zollweg (1982). The Sharpsburg, Kentucky earthquake of July 27, 1980, *Bull. Seism. Soc. Am.* **72**, 1219-1239.
48. Dwyer, J. J., R. B. Herrmann and O. W. Nuttli (1983). Spatial attenuation of the Lg wave in the central United States *Bull. Seism. Soc. Am.* **73**, 781-796.
49. Herrmann, R. B. (1982). Digital processing of regional network data, *Bull. Seism. Soc. Am.* **72**, S377-S392.
50. Singh, S., and R. B. Herrmann (1983). Regionalization of crustal Q in the continental United States, *J. Geophys. Res.* **88** 527-538.
51. Herrmann, R. B., and A. Kijko (1983). Modeling some empirical Lg relations, *Bull. Seism. Soc. Am.* **73**, 157-171.
52. Herrmann, R. B. and A. Kijko (1983). Short-period Lg magnitudes: Instrument, attenuation and source effects, *Bull. Seism. Soc. Am.* **73**, 1835-1850.
53. Herrmann, R. B. (1982). The relevance of regional networks for the siting of critical facilities, *Earthquake Notes* **53**, 37-48 [EQNOTES 53 4 37-48.pdf](#).
54. Nuttli, O. W., and R. B. Herrmann (1982). Earthquake magnitude scales, *J. Geotech. Engineering Div., Proc. A. S. C. E.* **108**, 783-786.
55. Herrmann, R. B., W. Stauder, S. Singh, R. Perry, R. Dwyer, M. Meremonte, V. Masih, L. Himes, E. Haug, S. Morrissey, L. Hausmann and M. Whittington (1982). Central Mississippi Valley earthquakes - 1980, *Earthquake Notes* **53**, 53-56.
56. Nuttli, O. W., and R. B. Herrmann (1982) Ground Motion of Mississippi Valley Earthquakes, *J. Technical Topics in Civil Engineering, A. S. C. E.* **108**, 54-69.
57. Herrmann, R. B., and C.-Y. Wang (1985). A comparison of synthetic seismograms, *Bull. Seism. Soc. Am.* **75** 41-56.
58. Herrmann, R. B. (1985). An extension of random vibration theory estimates of strong ground motion to large distances, *Bull. Seism. Soc. Am.* **75** 1447-1453.
59. Saikia, C. K. and R. B. Herrmann (1985). Application of waveform modeling to determine focal mechanisms of four 1982 Miramichi aftershocks, *Bull. Seism. Soc. Am.* **75**, 1021-1040.
60. Rogers, A. M., S. C. Harmsen, R. B. Herrmann and M. Meremonte (1987). A study of ground motion attenuation in the southern Great Basin, California-Nevada using several techniques, *J. Geophys. Res.* **92** 3527-3540.
61. Shin, T.-C. and R. B. Herrmann (1987). Lg attenuation and source studies using 1982 Miramichi data, *Bull. Seism. Soc. Am.* **77**, 384-397.
62. Peters, K. and R. B. Herrmann (eds) (1986). *A collection of historical documents pertaining to the 1886 Charleston, South Carolina earthquake*, Bulletin 41, South Carolina Geological Survey, 1986, 116 pp.
63. Herrmann, R. B. (1986). Surface-wave studies of some South Carolina earthquakes, *Bull. Seism. Soc. Am.* **76**, 111-121.
64. Saikia, C. K. and R. B. Herrmann (1986). Moment-tensor solutions for three 1982 Arkansas swarm earthquakes by waveform modeling, *Bull. Seism. Soc. Am.* **76**, 709-723.
65. Saikia, C. K. and R. B. Herrmann (1987). Determination of focal mechanisms of some earthquakes at Monticello, South Carolina, and earthstructure by waveform modeling, *Geophys. J.* **90**, 669-691.
66. Chulick, J. A. and R. B. Herrmann (1986). The relation of mLg to ML for California earthquakes: observations and modeling, *Earthquake Notes* **57**, 95-102 [EQNOTES 57 3 95-102.pdf](#).
67. Herrmann, R. B. and B. Mandal (1986). A study of wavenumber integration techniques, *Earthquake Notes* **57**, 33-40 [EQNOTES 57 2 33-40.pdf](#).
68. Nuttli, O. W., G. A. Bollinger and R. B. Herrmann (1986). The 1886 Charleston, South Carolina, Earthquake - A 1986 Perspective U. S. Geological Survey Circular 985, 52 pp.

69. Woods, M. T. and R. B. Herrmann (1989). A surface wave reconnaissance of the Ozark Uplift and Illinois Basin, *Seism. Res. Letters* **60**, 111-118 [SRL 60 3 111-118.pdf](#).
70. Wang, C.-Y. and R. B. Herrmann (1988). Synthesis of Coda Waves in Layered Media, *PAGEOPH* **128**, 7-42.
71. Mokhtar, T. A., R. B. Herrmann, and D. R. Russell (1988). Seismic velocity and Q model for the shallow structure of the Arabian shield from shortperiod Rayleigh waves, *Geophysics* **53**, 1379-1387.
72. Burger, R. W., P. G. Somerville, J. S. Barker, R. B. Herrmann and D. V. Helmberger (1987). The effect of crustal structure on strong ground motion attenuation relations in eastern North America, *Bull. Seism. Soc. Am.* **77**, 420-439.
73. Herrmann, R. B. (1987). Broadband Lg magnitude, *Seism. Res. Letters* **58**, 125-133 [SRL 58 4 125-133.pdf](#).
74. Russell, D. R., R. B. Herrmann and H.-J. Hwang (1988). Application of frequency variable filters to surface wave amplitude analysis, *Bull. Seism. Soc. Am.* **78**, 339-354.
75. Herrmann, R. B., and M. Jost (1988). Simulation of long period ground motions for a large New Madrid earthquake, in *Seismic Design and Construction of Complex Civil Engineering Systems*, M. A. Cassaro and J. D. Cooper (ed), Amer. Soc. Civ. Engr, New York, pp 1-15.
76. Mitchell, B. J., O. W. Nuttli, R. B. Herrmann, and W. Stauder (1989). Seismotectonics of the Central United States, in *DNAG Neotectonics of North America*, D. B. Slemmons, E. R. Engdahl, M. D. Zoback and D. D. Blackwell, eds., Geological Society of America, Boulder, pp 245-260.
77. Himes, L., W. Stauder and R. B. Herrmann (1988). Indication of active faults in the New Madrid Seismic Zone from precise location of hypocenters, *Seism. Res. Letters* **59**, 123-132.
78. Taylor, K. B., R. B. Herrmann, M. W. Hamburger, G. L. Pavlis, A. Johnston, C. Langer and C. Lam (1989). The southeastern Illinois earthquake of 10 June 1987, *Seism. Res. Letters* **60**, 101-110. [SRL 60 3 101-110.pdf](#).
79. Nuttli, O. W., M. L. Jost, R. B. Herrmann and G. A. Bollinger, Numerical models of the rupture mechanics and far-field ground motion of the 1886 South Carolina earthquake, (unpublished manuscript).
80. Hasegawa, H. S., and R. B. Herrmann (1989). A comparison of the source mechanisms of the 1975 Laurentian Channel earthquake and the Tsunamiogenic 1929 Grand Banks event, in *Earthquakes at North-Atlantic Passive Margins: Neotectonics and Postglacial Rebound*, S. Gregersen and P.W. Basham, eds., Kluwer Academic, Dordrecht, 547-562.
81. Jost, M. L., and R. B. Herrmann (1989). A student's guide to and review of moment tensors, *Seism. Res. Letters* **60**, 37-57. [SRL 60 2 37-57.pdf](#)
82. Herrmann, R. B., and D. R. Russell (1990). Ground roll: rejection using adaptive phase matched filters, *Geophysics* **55**, 776-781.
83. Shieh, C.-F., and R. B. Herrmann (1990). Ground roll: rejection using polarization filters, *Geophysics* **55**, 1216-1222.
84. Ou, G.-B. and R. B. Herrmann (1990). Estimation theory for strong ground motion, *Seism. Res. Letters* **61**, 99-107 [SRL 61 2 99-107.pdf](#).
85. Ou, G.-B. and R. B. Herrmann (1990). A statistical model for peak ground motion from local to regional distances, *Bull. Seism. Soc. Am.* **80**, 1397-1417.
86. Pujol, J., and R. B. Herrmann (1990). A student's guide to point sources in homogeneous media, *Seism. Res. Letters* **61**, 209-224 [SRL 61 3-4 209-224.pdf](#).
87. Xie, J., Z. Liu, R. B. Herrmann, and E. Cranswick (1991). Source processes of three aftershocks of the 1983 Goodnow, New York earthquake: High resolution images of small, symmetric ruptures, *Bull. Seism. Soc. Am.* **81**, 818-843.
88. Liu, Z., R. B. Herrmann, J. Xie, and E. D. Cranswick (1991). Waveform characteristics and focal mechanisms of five aftershocks of the 1983 Goodnow, New York, earthquake by polarization analysis and waveform modeling, *Seism. Res. Letters* **62**, 123-133. [SRL 62 2 123-133.pdf](#).

89. Herrmann, R. B., and G. Al-Eqabi (1991). Surface waves: Inversion for shear wave velocity, in *Shear Waves in Marine Sediments*, Hovem et al (eds), Kluwer, Dordrecht, pp 545-556.
90. Herrmann, R. B. (1992). A Student's introduction to wave propagation in a homogeneous fluid sphere, *Seism. Res. Letters* **63**, 161-167 [SRL 63 2 161-167.pdf](#).
91. Al-Eqabi, G. I., and R. B. Herrmann (1993). Ground-roll: a potential tool for constraining shallow shear-wave structure, *Geophysics* **58**, 713-719.
92. Al-Eqabi, G. I., and R. B. Herrmann (1992). Geophysical techniques for characterizing shallow velocity-attenuation models, SAGEEP Conference, Chicago.
93. Toro, G. R., W. J. Silva, R. K. McGuire and R. B. Herrmann (1992). Probabilistic seismic hazard mapping of the Mississippi Embayment, *Seism. Res. Letters* **63**, 449-475 [SRL 63 3 449-475.pdf](#).
94. Nguyen, B. V., and R. B. Herrmann (1992). Determination of source parameters for central and eastern North American earthquakes (1982-1986), *Seism. Res. Letters* **63**, 567-586. [SRL 64 4 567-586.pdf](#)
95. Boore, D. M., K. W. Campbell, and R. B. Herrmann (1993). Estimation of Ground Motion in Eastern North America, Chapter 3 in *Hazard Assessment*, Central United States Earthquake Consortium Monograph 1, 81-129.
96. Liu, Z., M. Wuenschel and R. B. Herrmann (1994). Attenuation of body waves in the central New Madrid seismic zone, *Bull. Seism. Soc. Am.* **84**, 1112-1122.
97. Herrmann, R. B. (1993). *New Madrid earthquake catalog display*, Saint Louis University, 31pp plus floppy disk.
98. Spence, W., R. B. Herrmann, A. C. Johnston, and G. Reagor (1993). *Responses to Iben Browning's prediction of a 1990 New Madrid, Missouri, earthquake*, U. S. Geological Survey Circular 1083, Washington, D.C., 248pp.
99. Hutchenson, K. D., and R. B. Herrmann (1993). Spectral examination of the 16 June 1992 earthquake and quarry blast near Evansville, Indiana, *Seism. Res. Letters* **64**, 169-184 [SRL 64 2 169-184.pdf](#).
100. Malagnini, L., R. B. Herrmann, G. Biella, and R. de Franco (1995). Rayleigh waves in Quaternary alluvium from explosive sources: determination of shear-wave velocity and Q structure, *Bull. Seism. Soc. Am.* **85**, 900-922.
101. Herrmann, R. B. (1995). Broadband seismology and small regional seismic networks in, K. M. Shedlock and A. C. Johnston, eds., *Investigations of the New Madrid Seismic Zone*, U. S. Geological Survey Prof. Paper 1538 pp S1-15.
102. Malagnini, L., P. Tricarico, A. Rovelli, R. B. Herrmann, S. Opice, and G. Biella (1996). Explosion, earthquake and ambient noise recordings in a Pliocene sediment-filled valley: Inferences on seismic response properties by reference- and non reference-site techniques, *Bull. Seism. Soc. Am.* **86**, 670-682.
103. Yamamoto, J., L. Quintanar, R. B. Herrmann, and C. Fuentes (1995). Lateral variations of Lg coda in southern Mexico, *PAGEOPH* 149, No. 3, 575-599.
104. Ammon, C. J., R. B. Herrmann, C. A. Langston, and H. Benz (1998). Source parameters of the January 16, 1994 Wyoming Hills, Pennsylvania earthquakes, *Seism. Res. Letters* **69**, No. 3, 261-269. [SRL 69 3 261-269.pdf](#).
105. Malagnini, L., R. B. Herrmann, A. Mercuri, S. Opice, G. Biella, and R. de Franco (1997). Shear-wave velocity structure of sediments from the inversion of explosion-induced Rayleigh waves: comparison with cross-hole measurements, *Bull. Seism. Soc. Am.* **87**, 1413-1421.
106. Herrmann, R. B., and C. J. Ammon (1997). Faulting parameters of earthquakes in the New Madrid, Missouri region, *Engineering Geology* **46**, 299-311.
107. Campillo, M., S. K. Singh, N. Shapiro, J. Pacheco, and R. B. Herrmann (1996). Crustal structure south of the Mexican volcanic belt, based on group velocity dispersion, *Geofisica Internacional* **35**, No. 4, 361-370.
108. Xie, J., Z. Liu, L. Cong, R. B. Herrmann and J.-M., Chiu (1997). Rupture properties of clustered microearthquakes near intersecting intraplate faults of New Madrid Seismic Zone: Implication on fault weakening *J. Geophys. Res.* **102**, 8187-8202.



109. 109.Missouri Seismic Safety Commission (1997) A Strategic Plan for Seismic Safety in Missouri. 76 pages (R. B. Herrmann, chair and editor of report).
110. 110.Pujol, J., R. Herrmann, S. Chiu, and J. Chiu (1998). Constrained joint location of New Madrid seismic zone earthquakes, *Seism. Res. Letters* **69**, 56-68. [SRL 69 1 56-68.pdf](#).
111. 111.Raof, M., R. B. Herrmann and L. Malagnini (1999). Attenuation and excitation of three-component ground motion in southern California, *Bull. Seism. Soc. Am.* **89**, 888-902.
112. 112.Malagnini, L., R. B. Herrmann, and K. Koch (2000). Ground motion scaling in Germany, *Bull. Seism. Soc. Am.* **90**, 1052-1061.
113. 113.Malagnini, L., R. B. Herrmann and M. Di Bona (2000). Ground motion scaling in the Apennines (Italy), *Bull. Seism. Soc. Am.* **90**, 1062-1081.
114. 114.Malagnini, L., and R. B. Herrmann (2000). Ground motion scaling in the region of the 1997 Umbria-Marche earthquake (Italy), *Bull. Seism. Soc. Am.* **90**, 1041-1051.
115. 115.Julia, J., C. J. Ammon, R. B. Herrmann and Am. M. Correig (2000). Joint inversion of receiver function and surface-wave dispersion observations, *Geophys. J. Int.* **143**, 99-112.
116. 116.Mokhtar, T.A., Ammon, C.J., Herrmann, R.B., and Ghalib, H.A.A. (2001). Surface wave velocities across Arabia. *PAGEOPH* **158**, No. 8, pp. 1425-1444.
117. 117.Missouri Seismic Safety Commission, December, 1999. *Earthquakes and Missouri: 1999 Report to the Governor*, (editor).
118. 118.Missouri Seismic Safety Commission, May, 1998. *Earthquakes and Missouri: 1998 Report to the Governor*, (editor).
119. 119.Maceira, M., C. J. Ammon and R. B. Herrmann (2000). Faulting parameters of the September 25, 1998 Pymatuning, Pennsylvania earthquake, *Seism. Res. Letters* **71**, No. 6, pp 742-752. [SRL 71 6 742-752.pdf](#).
120. 120.Akinci, A., L. Malagnini, R. B. Herrmann, N. A. Pino, L. Scognamiglio, and H. Eyidogan (2001). High frequency ground motion in the Erzincan Region, Turkey: Inferences from small earthquakes, *Bull. Seism. Soc. Am.* **91**, 1446-1455.
121. 121.Herrmann, R. B. (2002). Comment on "Attenuative Dispersion of P waves in and near the New Madrid Seismic Zone" by L. Cong, J. Mejia, and B.J. Mitchell, *Bull. Seism. Soc. Am.* **92**, 2049-2053.
122. 122.Malagnini, L., A. Akinci, R. B. Herrmann, N. A. Pino and L. Scognamiglio (2002). Characteristics of the ground motion in northeastern Italy, *Bull. Seism. Soc. Am.* **92**, 2186-2204.
123. 123.Mancilla, F., C. J. Ammon, R. B. Herrmann and J. Morales (2003). Faulting parameters of the 1999 Mula earthquake, southeastern Spain, *Tectonophysics* **354** No (1-2) 139-155.
124. 124.Julia, J. C. J. Ammon and R. B. Herrmann (2003). Lithospheric structure of the Arabian Shield from the joint inversion of receiver functions and surface-wave group velocities, *Tectonophysics*, **371**, 1-21.
125. 125.Ortega, R., R. B. Herrmann and L. Quintinar (2003). High frequency earthquake ground motion scaling in central Mexico between 0.7 and 7.0 Hz, *Bull. Seism. Soc. Am.* **93**, 397-413.
126. 126.Jeon, Y.-S., and R. B. Herrmann (2004). Vertical component high frequency earthquake ground motion scaling in Utah and Yellowstone, *Bull. Seism. Soc. Am.* **94**, 1644-1657.
127. 127. Herrmann, R. B. and L. Malagnini (2006). Interpretation of high frequency ground motion from regional seismic network observations, *Bull. Seism. Soc. Am.* **94** (in revision).
128. 128.Julia, J. C. J. Ammon and R. B. Herrmann (2003). Lithospheric structure of the Arabian Shield from the joint inversion of receiver functions and surface-wave group velocities, *Tectonophysics*, **371**, 1-21.
129. 129.Julia, J., R. B. Herrmann, A. Akinci, and C. J. Ammon (2004). Evaluation of Deep Sediment Velocity Structure in the New Madrid Seismic Zone, *Bull. Seism. Soc. Am.* **94**, 334 – 340
130. 130.Jeon, Y. S., R. B. Herrmann and D. K. Lee (2006). High frequency earthquake ground motion scaling for the Korean Peninsula, *Bull. Seism. Soc. Am.*, (in review).

131. 131.Akinci, A., L. Malagnini, R. B. Herrmann, R. Gok, and M. B. Sorensen (2006). Ground motion scaling in the Marmara Region,Turkey, *Geophys. J.Int.* **166**, 635-651.
132. 132. Morasca, P., L. Malagnini, A. Akinci, D. Spallarossa and R. B. Herrmann (2006). Ground-motion scaling in the western Alps, *J. Seismology* **10**,315-333, doi: 10.1007/s10950-006-9019-x
133. 133.Bonner, J. L., D. R. Russell, D. R. Harkrider, D. T. Reiter and R. B. Herrmann (2006). Magnitude measurement procedure for application at regional and teleseismic distances, *Bull. Seis. Am.* **96**, 678 - 696.
134. 134.Cho, K. H., R. B. Herrmann, C. J. Ammon and K. Lee (2007). Imaging the upper crust of the Korean peninsula by surface-wave tomography, *Bull.Seism. Soc. Am.* **97**, 198-207
135. 135.Yoo, H. J., R. B. Herrmann, K. H. Cho and K. Lee (2007). Imaging the three-dimensional crust of the Korean peninsula by joint inversion of surface-wave dispersion and teleseismic receiver functions, *Bull. Seism. Soc. Am.* **97**, 1002-1011.
136. 136.Zhou, R. M., B. W. Stump, R. B. Herrmann, Y.-T. Chen and Z.-X. Yang (2009). Teleseismic Receiver Function and Surface Wave Study of Velocity Structure Beneath the Yanqing-Huailai Basin, NW of Beijing, *Bull. Seism. Soc. Am.* **99**, 1937-1952.
137. 137.Williams, R. A., J. K. Odum, W. J. Stephenson, and R. B. Herrmann (2007). Shallow P- and S-wave Velocities and Site Resonances in the St. Louis Region, Missouri-Illinois, *Earthquake Spectra* **23**, 711-726.
138. 138.Malagnini, L., K. Mayeda, R. Urhammer, A. Akinci and R. B. Herrmann (2007). A regional ground motion excitation/attenuation model for the San Francisco region, *Bull. Seism. Soc. Am* **97**, 843-862.
139. 139.Fatehi, A., and R. B. Herrmann (2008). High frequency ground motion scaling in the Pacific Northwest, Northern and Central California, *Bull.Seism. Soc. Am.* **98**, 709-721.
140. 140.Mancilla, F., R. B. Herrmann, J. Morales and D. Stich (2008). Vertical ground motion in southern Spain, *Bull. Seism. Soc. Am.* **98**, 733-745.
141. 141.Koper, K. D., R. B. Herrmann and H. Benz (2007). Overview of Open Seismic Data from the North Korea Event of 9 October 2006, *Seism. Res.Letters* **79**, 178-185.
142. 142.Xu, Y., D. Crossley and R. B. Herrmann (2008). Amplitude and Q of OS0 from the Sumatra earthquake as recorded on superconducting gravimeters and seismometers, *Seism. Res. Letters* **79**, 797-805.
143. 143.Bonner, J., R. B. Herrmann and D. Harkrider (2008). The surface wave magnitude for the 09 October 2006 North Korean nuclear explosion, *Bull.Seism. Soc. Am.* **98**, 2498-2506.
144. 144.Herrmann, R. B., M. Withers and H. Benz (2008). The April 18, 2008 Illinois earthquake – an ANSS monitoring success, *Seism. Res. Letters* **79**,830-843.
145. 145.Xu, Y., R. B. Herrmann and K. D. Koper (2010). Source parameters of regional small-to-moderate earthquakes in Yunnan-Sichuan region, China,*Bull. Seismo. Soc. Am.* **100**, 2518-2531.
146. 146.Xu, Y., R. B. Herrmann, C.-Y. Wang, and S. Cai (2010). High frequency ground motion scaling in Yunnan and Sichuan, China, *Bull. Seism. Soc. Am.* **100**, 2508-2517.
147. 147. D’Amico S., Orecchio B., Presti D., Zhu L., Herrmann R. B., Neri G., )2010). Broadband waveform inversion of moderate earthquakes in the Messina straits, Southern Italy, *Physics of Earth and Planetary Interiors*, **179**, 97-106, doi: 10.1016/j.pepi.2010.01.012
148. 148.D’Amico S., Koper K. D., Herrmann R. B., Akinci A., Malagnini L. (2010) Imaging the rupture of the Mw 6.3 April 6, 2009 L’Aquila, Italy earthquake using back-projection of teleseismic P-waves. *Geophysical Research Letters*, **37**, L03301, doi:10.1029/2009GL042156
149. 149.Bonner, J., R. Herrmann and H. Benz (2010). Variable-period surface wave magnitudes: a rapid and robust estimator of seismic moments, *Bull.Seism. Soc. Am.* **100**, 2301-2309.
150. 150.Malagnini, L., A. Akinci, K.Mayeda, I. Munafò, R. B. Herrmann and A. Mercuri (2011). Characterization of earthquake-induced ground motion from the L’Aquila seismic sequence of 2009, Italy, *Geophys. J. Int.* **184**, 325-337.



151. 151.Herrmann, R. B. . L. Malagnini and I. Munafò (2011). Regional moment tensors of the 2009 L'Aquila earthquake sequence, *Bull. Seism. Soc. Am.***101**, 975-993.
152. 152.Herrmann, R. B., H. Benz, and C. J. Ammon (2011). Monitoring the earthquake process in North America, *Bull. Seism. Soc. Am.* **101**, 2609-2625,doi:10.1785/0120110095 .
153. 153.Herrmann, R. B. (2013) Computer programs in seismology: An evolving tool for instruction and research, *Seism. Res. Lettr.* 84, 1081-1088,doi:10.1785/0220110096
154. 154.D'Amico S., Orecchio B., Presti D., Gervasi A., Guerra I., Neri G., Zhu L., Herrmann R. B. (2011). Testing the stability of moment tensor solutions for small and moderate earthquakes in the Calabrian - Peloritan arc region. *Boll. Geo. Teor. Appl.*, 52, 283-298 doi:10.4430/bgta0009
155. 155.Qiao, L., R. B. Herrmann, and Z. Pan (2013). Parameter uncertainty reduction for SWAT using GRACE, streamflow and groundwater table data for Lower Missouri River basin, *J. Amer. Water Res. Assoc* 49, 343-358 April 2013, DOI: 10.1111/jawr.12021
156. 156.Malagnini, L., R. B. Herrmann, I. Munafó, M. Buttinelli, M. Anselmi, A. Akinci and E. Boschi (2013), Earthquake source, crustal structure, and seismic hazards of the 2012 Ferrara seismic sequence, *Geophys. Res. Letters* **39**, L19302 6pp, doi:10.1029/2012GL053214
157. 157.Benz, H., and R. Herrmann (2014). Rapid estimates of the source-time function and Mw using empirical green's function deconvolution, *Bull. Seism. Soc. Am.* 104, 1812-1819, doi:10.1785/0120130325
158. 158.Jordan, Y. C., A. Ghulan and R. B. Herrmann (2012). Floodplain ecosystem response to climate variability and land-cover and land-use in Lower Missouri River basin, *Landscape Ecol.* **27**, 843-857, DOI 10.1007/s10980-012-9748-x
159. 159.D'Amico, S., B. Orecchio, D. Presti, G. Neri, W.-N. Wu, I. Sandu, L. Zhu and R. B. Herrmann (2013). Source parameters of small and moderate earthquakes in the area of the 2009 L'Aquila earthquake sequence (Central, Italy), *Phys. And Chemistry of the Earth*, 63, 77-91, <http://dx.doi.org/10.1016/j.pce.2013.02.005>
160. 160. Akinci, A., L. Malagnini and R. B. Herrmann (2014). High-frequency attenuation in the Van Lake region, eastern Turkey, *Bull. Seism. Soc. Am.*, 104, 1400-1409, doi:10.1785/0120130102.
161. 161.Rigsby, C., R. B. Herrmann and H. Benz (2013). An investigation of mb\_Lg vs Mw for Eastern North America, *Seism. Res. Letters*, 85, 625-630, doi:10.1785/0220130138.
162. 162. McNamara, D. E., H. M. Benz, R. B. Herrmann, E. A. Bergman and M. Chapman (2014). The Mw5.8 Mineral, Virginia earthquake of 23 August 2011 and aftershock sequence: Constraints on earthquake source parameters and fault geometry, *Bull. Seism. Soc. Am.* 104, 40-54,doi:10.1785/0120130058
163. 163. Qiao, L., Z. Pan, R. Herrmann, Y. Hong (2013). Hydrological variability and uncertainty in the Lower Missouri River Basin based on NARCCAP simulations and SWAT model, *J. Amer. Water Resources Assoc*, 50, 246-260, 8 Oct 2013 DOI: 10.1111/jawr.12126
164. 164. Herman, M. W., R. B. Herrmann, H. M. Benz and K. P. Furlong (2014). Using Regional Moment Tensors to Constrain the Kinematics and Stress Evolution of the 2010-2013 Canterbury Earthquake Sequence, South Island, New Zealand, *Tectonophysics* 633, 1-15, October 21, 2014 doi: 10.1016/j.tecto.2014.06.019
165. 165. Sosa, A., Thompson, L., Velasco, A.A., Romero, R., Herrmann, R.B., 2014. 3-D structure of the Rio Grande Rift from 1-D constrained joint inversion of receiver functions and surface wave dispersion, *Earth Planet. Sci. Lett.* 402, 127-137, 15 September 2014 <http://dx.doi.org/10.1016/j.epsl.2014.06.002>.
166. 166.Chai, C., C. J. Ammon, M. Maceira and R. B. Herrmann (2014). Inverting interpolated receiver functions with surface-wave dispersion and gravity – Application to the western US and adjacent Canada and Mexico, *Geophys. Res. Ltrs* (submitted)
167. 167. Frohlich, C., W. Gan and R. B. Herrmann (2014). Two deep earthquakes in Wyoming, *Seismological Research Letters* (submitted)
168. 168. McNamara, D., H. M. Benz, R. B. Herrmann, A. Gassner, E. A. Bergman, P. Earle, R. Baldwin and A. Holland (2015). Earthquake source parameters in Central Oklahoma, *Seismological Research Letters* (submitted)