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**EDUCATION**

1996 Ph.D., Seismology, Columbia University

1988 Diploma with honors (M.E. equivalent), Exploration Geophysics,  
Gubkin Russian State University of Oil & Gas.

**PROFESSIONAL EXPERIENCE**

07/16 – present Professor,

01/09 – 06/16 Associate Professor,  
Department. of Earth and Planetary Sciences

09/02-12/08: Assistant Research Professor,  
Department of Geological Sciences, Rutgers University

06/01-08/02: Research Scientist,

11/97-05/01: Associate Research Scientist,

11/95-10/97: Postdoctoral Research Associate,  
Department of Geology and Geophysics, Yale University.

9/90 - 10/95: Graduate Research Assistant,  
Department of Geological Sciences, Columbia Univ., New York, NY

1/89 - 8/90: Senior Research Staff Assistant,  
Lamont-Doherty Geological Observatory, Palisades, NY

**SOCIETIES:** American Geophysical Union, IRIS Consortium (Rutgers representative);

**HONORS:** Heezen Prize, Department of Geological Sciences, Columbia University,  
1995

**SERVICE AT RUTGERS**

2009 – 2012 Appointments and Promotions Advisory Committee for non-tenured faculty,  
Math & Physics, SAS

2012 - 2015 Undergraduate Program Director, Earth and Planet. Sci. Dept.

2013 - 2018 Online Education Steering Committee, SAS

2016 - present Language Requirement Task Force, Language Engagement  
implementation committee

2017 - 2018 Learning Management System Task Force

2018- present Faculty Director, Aresty Research Center

2021 – Undergraduate Program Director, Earth and Planetary Sciences

## **SERVICE OUTSIDE RUTGERS**

2015 – 2018 member of the *Data Services Standing Committee*, IRIS consortium

2010 – 2016 Associate Editor, *JGR-Solid Earth*

2011-2014, member of *USArray Advisory Committee*

2014, member of IRIS Electromagnetic Advisory Committee

2005-2012, editorial board member, *Tectonophysics*

## **WORKSHOPS & MEETINGS**

1999: USArray planning workshops I and II; 2000: MARGINS TEI Subduction Factory, ANSS (Northeastern Region) Working Group; 2001: ANSS (Northeastern Region) planning workshop, EarthScope Science Goals workshop; 2002: Ocean Mantle Dynamics workshop. 2003: Structure and Evolution of the Antarctic Plate workshop; 2006: InterRidge Polar Ridges meeting; 2009: Earthscope Science Plan workshop; 2010 Cascadia workshop 2011: GEOPRISMS Eastern North America Workshop; 2014 Amphibious Array workshop; 2016 Earthscope 4-D Synthesis workshop.

Convened special sessions at 1998, 2001, 2003, 2010, 2015, 2016, 2017, 2018, 2021 Fall AGU conferences, 2008 33<sup>rd</sup> International Geological Congress.

## **REVIEW and PANEL SERVICE**

Manuscripts reviewed for JGR, G3, GJI, PAGEOPH, Tectonophysics, GSA Special Paper, GRL, SRL, BSSA, EPSL, PEPI, Nature; Funding proposal review service for NSF, DOE, Petroleum Fund, NSERC (Canada); NSF Panelist 2015, 2017.

Since 2010 – annual review of applications for Fulbright-Russia program that brings Russian students and scholars to US research institutions.

## **ADVISING**

### ***Graduate students:***

Alissa Henza (MS, HP Billiton) 2005; Alex Nikulin (PhD, SUNY Binghamton) 2011; Ayda Shokoohi Razi (PhD) 2016, Benjamin Dunham (MS, USGS, CA) 2016, Yiran Li (MS; PhD candidate @ SUNY Binghamton) 2019, Xiaoran Chen (PhD, software industry) 2020, James Bourke (PhD candidate, current), Roberto Masis (PhD candidate, current), Maryam Abbasian (PhD candidate, current)

### ***Service on committees***

Mark Baum (Rutgers PhD; Exxon) 2006, Brian Zurek (Lehigh PhD, Exxon) 2008, Isabelle Hong (Rutgers, 2019), Zhongxiong Cui (Lehigh PhD) 2020, Cong Li (UMass Amherst PhD), 2020, Alex Burky (Princeton PhD) 2022, Katelyn Frizzell (PhD candidate, Rutgers)

***Postgraduate-Scholar Sponsor:*** Guochin (Dino) Huang, 2007-2011 (now at Texas Seismic Network); Xiaoran Chen (2020-2021, now in software industry, California)

### ***Undergraduate Advisees at Rutgers (independent research, honors, Aresty Research Assistants):***

Peter Graham (Colorado School of Mines, MS; Golder Associates, NJ), Benjamin Marshall (IT industry, NJ), Helen Janiszewski (Columbia U. PhD, 2017; Univ. of Hawaii, Manoa), Maria Shakhnovich (software start-up, California), Michael Klaser (Rutgers MS 2017; environmental consulting, NJ), Andrea Servali (data analytics industry, California), Yiran Li

(Rutgers MS; Binghamton PhD program), Peter Skryzalin (US Army), Janine Hlavaty (environmental consulting, NJ), Steven Elkington (environmental consulting, NJ), Mariya Galochkina (PhD candidate, MIT), Joyce Franco, Renée Ghosh.

### **FIELDWORK:**

*1989,1990,1991:* Shumagin Islands, Alaska - periodic maintenance of short-period seismic network, geodetic measurements for a crustal deformation project;  
*1994:* Krafla volcano, Iceland - active/passive source portable short-period seismic array deployment;  
*1994-1995:* Vermont, Maine - deployment and operation of portable broad band seismic stations;  
*1997,1998:* Kamchatka, Russia - site survey, deployment of 15-node passive broad band seismometric array, training local personnel.  
*2000:* Long Island, NY - broadband data acquisition in coastal area for a feasibility experiment.  
*2004, 2006:* Northern Apennines, Italy: survey, installation and retrieval of 25-node broadband passive array.  
*2005:* Costa Rica: deployment of 3-element portable broad-band passive array.  
*2007, 2011:* Western Tibet, deployment and retrieval of 30-element portable broad band seismic array.  
*2012, 2013, 2014, 2015, 2016, 2017:* Deployment and service of passive seismic arrays in Maine, Quebec and Nova Scotia.  
*2018, 2019, 2020* operation of six portable seismographs in collaboration with the University of Costa Rica.  
*2018, 2019, 2020, 2021,2022* New England Seismic Transect (NEST) in collaboration with Yale, ~15 portable seismic stations.

### **INVITED PRESENTATIONS SINCE 2015**

Peking University, “Seismic structure of the crust as a record of continental evolution: examples from stable North America”, May 30, 2019  
China Earthquake Administration, “Geodynamics of Western Tibet”, May 28, 2019  
University of Science and Technology of China, School of Earth and Space Sciences, “Seismic structure of the crust as a record of continental evolution: examples from stable North America”, May 25, 2019  
China Academy of Sciences, Institute of Geology and Geophysics, “Geodynamics of Western Tibet”, May 21, 2019  
“Seismic structure of the crust as a record of continental evolution: examples from stable North America”, May 23, 2019  
Brown University, “Recently Formed Mantle Upwelling Beneath New England: How Vadim got his plume back”, May 9, 2019  
University of Minnesota, Department of Earth Sciences, “Recently Formed Mantle Upwelling Beneath New England: How Vadim got his plume back”, April 18, 2019  
Rutgers Retired Faculty Association, “Science in the public eye – how a study of physical properties in the Earth becomes a threat of volcanic catastrophe...”, December 7, 2018  
University of Costa Rica School of Geology, “Gigantesca burbuja de magma.: Recently Formed Mantle Upwelling Beneath New England”, February 26, 2018

Rutgers University, Department of Earth and Planetary Sciences, "Should you sell your slope-side condo? Recently Formed Mantle Upwelling Beneath New England" January 31, 2018  
SUNY Binghamton, Department of Geological Sciences, "Geodynamics of western Tibet"  
November 10, 2017  
University of Massachusetts - Amherst, Department of Geosciences, "Seismic structure and geodynamics of western Tibet", 23 January 2015

## PUBLICATIONS

(\* denotes papers authored by my students and postdocs)

78. Vadim Levin, Huaiyu Yuan, Andrew Hynes, Continents never forget: seismological record of lithospheric deformation 1 billion years ago, *accepted, Geological Society of London Special Publications*.

77\*. Chen, X., Levin, V., & Yuan, H. (2021). Small shear wave splitting delays suggest weak anisotropy in cratonic mantle lithosphere. *Geophysical Research Letters*, 48, e2021GL093861. <https://doi.org/10.1029/2021GL093861>

76\*. Y. Li, V. Levin, A. Nikulin, X. Chen, Systematic Mapping of Upper Mantle Seismic Discontinuities Beneath Northeastern North America, *G-cubed*, June 23, 2021 [DOI 10.1029/2021GC009710](https://doi.org/10.1029/2021GC009710)

75\*. Chen, X., Levin, V., Yuan, H., Klaser, M., & Li, Y. (2021). Seismic anisotropic layering in the Yilgarn and Superior cratonic lithosphere. *Journal of Geophysical Research: Solid Earth*, 126, e2020JB021575. <https://doi.org/10.1029/2020JB021575>

74\*. Chen, X., Park, J. & Levin, V. Anisotropic Layering and Seismic Body Waves: Deformation Gradients, Initial S-Polarizations, and Converted-Wave Birefringence. *Pure Appl. Geophys.* **178**, 2001–2023 (2021). <https://doi.org/10.1007/s00024-021-02755-6>

73. \*Bourke, J., Levin, V., Linkimer, L., & Arroyo, I. (2020). A recent tear in subducting plate explains seismicity and upper mantle structure of southern Costa Rica. *Geochemistry, Geophysics, Geosystems*, 21, e2020GC009384. <https://doi.org/10.1029/2020GC009300>

72. Levin, V. S. Elkington, J. Bourke, I. Arroyo and L. Linkimer, Seismic anisotropy in southern Costa Rica confirms upper mantle flow from the Pacific to the Caribbean., *Geology*, *accepted* Bastille Day (July 14) published September 4, 2020; [DOI 10.1130/G47826.1](https://doi.org/10.1130/G47826.1)

71. Xie, Z., V. Levin, Q. Wu, Crustal anisotropy beneath northeastern Tibetan Plateau from the harmonic decomposition of receiver functions, *GJI*, Volume 220, Issue 3, March 2020, Pages 1585–1603, <https://doi.org/10.1093/gji/ggz526>

70. \*Yiran Li, Vadim Levin, Stephen Elkington, Janine Hlavaty, Localized Anisotropic Domains Beneath Eastern North America, *G-cubed*, 20, 5499– 5521. <https://doi.org/10.1029/2019GC008518>

69. \*Chen, X., Y. Li and V. Levin, Shear Wave Splitting Beneath Eastern North American Continent: Evidence for a Multi-layered and Laterally Variable Anisotropic Structure, *G-cubed*, *published August, 02, 2018* <https://doi.org/10.1029/2018GC007646>

68. Li, C., Gao, H., Williams, M. L. and Levin, V., Crustal thickness variation in the northern Appalachian Mountains: Implications for the geometry of 3D tectonic boundaries within the crust, *GRL*, *published online June 19, 2018* <https://doi.org/10.1029/2018GL078777>

67. Levin, V., M. D. Long, P. Skryzalin, Y. Li, and I. Lopez, 2017, Seismic evidence for a recently formed mantle upwelling beneath New England, *Geology*, <https://doi.org/10.1130/G39641.1>
66. Levin, V., Servali, A., VanTongeren, J., Menke, W., and Darbyshire, F., 2017, Crust-mantle boundary in eastern North America, from the (oldest) craton to the (youngest) rift, in Bianchini, G., Bodinier, J.-L., Braga, R., and Wilson, M., eds., *The Crust-Mantle and Lithosphere-Asthenosphere Boundaries: Insights from Xenoliths, Orogenic Deep Sections, and Geophysical Studies: Geological Society of America Special Paper 526*, p. 107-131, doi:10.1130/2017.2526(06).
65. Menke, W., P. Skryzalin, V. Levin, T. Harper, F. Darbyshire, and T. Dong (2016), The Northern Appalachian Anomaly: A modern asthenospheric upwelling, *Geophys. Res. Lett.*, 43, 10, 173–10, 179, doi:10.1002/2016GL070918.
64. \*Huang, G. D, S. W. Roecker, V. Levin, H. Wang and Z. Li, Dynamics of intracontinental convergence between the western Tarim basin and central Tien Shan constrained by centroid moment tensors of regional earthquakes, *GJI*, v. 208, pp. 561-576, online November 3 2016 doi: 10.1093/gji/ggw415
63. Park, J. and V. Levin Anisotropic shear zones revealed by back-azimuthal harmonics of teleseismic receiver functions *Geophys. J. Int.* first published online August 26, 2016 [doi:10.1093/gji/ggw323](https://doi.org/10.1093/gji/ggw323)
62. Park, J., and V. Levin, Statistics and frequency-domain moveout for multiple-taper receiver functions, (2016), *Geophys. J. Int.*, 207, 512-527, [doi:10.1093/gji/ggw291](https://doi.org/10.1093/gji/ggw291).
61. Boyce, A., I. D. Bastow, F. A. Darbyshire, A. G. Ellwood, A. Gilligan, V. Levin, and W. Menke (2016), Subduction beneath Laurentia modified the eastern North American cratonic edge: Evidence from *P* wave and *S* wave tomography, *J. Geophys. Res. Solid Earth*, 121, 5013–5030, doi:10.1002/2016JB012838.
60. Gilligan, A., I. D. Bastow, E. Watson, F. A. Darbyshire, V. Levin, W. Menke, V. Lane, D. Hawthorn, A. Boyce, M. V. Liddell and L. Petrescu, Lithospheric deformation in the Canadian Appalachians: evidence from shear wave splitting, *Geophys. J. Int.* (2016) Volume 206, Issue 2, pp. 1273-1280. [DOI:10.1093/gji/ggw207](https://doi.org/10.1093/gji/ggw207)
59. Levin, V., J. A. VanTongeren, and A. Servali (2016), How sharp is the sharp Archean Moho? Example from eastern Superior Province, *Geophys. Res. Lett.*, 43, [LINK](#), doi:10.1002/2016GL067729
58. \* Razi, Ayda S., Roecker, Steven W., Levin, Vadim, The Fate of the Indian Lithosphere beneath western Tibet: Upper mantle elastic wavespeed structure from a joint teleseismic and regional body wave tomographic study *Physics of the Earth and Planetary Interiors*, (2016), pp. 11-23, [DOI: 10.1016/j.pepi.2015.12.001](https://doi.org/10.1016/j.pepi.2015.12.001)
57. Gilligan, A., K. F. Priestley, S. W. Roecker, V. Levin, and S. S. Rai (2015), The crustal structure of the western Himalayas and Tibet. *J. Geophys. Res. Solid Earth*, 120, 3946–3964. doi: 10.1002/2015JB011891.
56. Salimbeni, S., S. Pondrelli, L. Margheriti, V. Levin, J. Park, (2014), Looking for layered anisotropic structures in the mantle beneath the northern Apennines *Journal of Geodynamics*, Volume 82, Pages 39–51, [doi: 10.1016/j.jog.2014.09.001](https://doi.org/10.1016/j.jog.2014.09.001)
55. Margheriti, L., Lucente, F.P., Park, J., Pondrelli, S., Levin, V., Steckler, M.S., Baccheschi, P., Salimbeni, S., (2014), Large-scale coherent anisotropy of upper mantle beneath the Italian peninsula comparing quasi-Love waves and SKS splitting., *Journal of Geodynamics*, Volume 82, Pages 26–38 [doi: 10.1016/j.jog.2014.07.007](https://doi.org/10.1016/j.jog.2014.07.007)
54. Levin, V., S. Droznina, M. Gavrilenko, M. Carr, S. Senyukov, (2014), Seismically active sub-

crustal magma source of the Klyuchevskoy volcano in Kamchatka, *Geology*, 42(11):983, [doi:10.1130/G35972.1](https://doi.org/10.1130/G35972.1)

53. Yuan, H., V. Levin, (2014), Stratified seismic anisotropy and the lithosphere-asthenosphere boundary beneath Eastern North America, *J. Geophys. Res.*, 119-4, pp. 3096-3114, [doi: 10.1002/2013JB010785](https://doi.org/10.1002/2013JB010785)

52. \*Shokoohi Razi, A., V. Levin, S. Roecker, G.-C. Dino Huang, (2014), Crustal and uppermost mantle structure beneath western Tibet using seismic traveltome tomography, *Geochem. Geophys. Geosyst.*, 15, pp. 434-452, [doi: 10.1002/2013GC005143](https://doi.org/10.1002/2013GC005143)

51. Iwasaki T., Levin, V., Nikulin, A., Iidaka, I., (2013), Constraints on the Moho in Japan and Kamchatka, *Tectonophysics*, v. 609, pp. 184-201.

50. Levin, V., G.-C. Huang and S. Roecker, (2013), Crust-mantle coupling at the northern edge of the Tibetan plateau: evidence from focal mechanisms and observations of seismic anisotropy, *Tectonophysics*, Volume 584, pp. 221–229, [doi:10.1016/j.tecto.2012.05.013](https://doi.org/10.1016/j.tecto.2012.05.013)

49. \*Nikulin, A., V. Levin, M. Carr, C. Herzberg, M. West, (2012), Evidence for two upper mantle sources driving volcanism in Central Kamchatka, *Earth and Plan. Sci. Lett.*, vol. 321-322, pp. 14-19 [doi: 10.1016/j.epsl.2011.12.039](https://doi.org/10.1016/j.epsl.2011.12.039)

48. Benoit, M. H., M. Torpey, K. Liszewski, V. Levin and J. Park, (2011), P and S wave Upper Mantle Seismic Velocity Structure beneath the Northern Apennines: New Evidence for the End of Subduction, *Geochem. Geophys. Geosyst.*, vol. 12, Q06004, 19 pp., [doi:10.1029/2010GC003428](https://doi.org/10.1029/2010GC003428)

47. \*Huang, G., S. Roecker, V. Levin, (2011), Intermediate-depth earthquakes in the West Kunlun range, *Geoph. Res. Lett.*, vol. 38, L01314, 5 pp., [doi:10.1029/2010GL045893](https://doi.org/10.1029/2010GL045893)

46. Bianchi, I., J. Park, N. Piana Agostinetti and V. Levin, (2010), Mapping seismic anisotropy using harmonic decomposition of Receiver Functions: an application to Northern Apennines, Italy; *J. Geophys. Res.*, vol. 115, B12317, 14 pp., [doi:10.1029/2009JB007061](https://doi.org/10.1029/2009JB007061)

45. Duret, F., N.M. Shapiro, Z. Cao, V. Levin, P. Molnar, S. Roecker, (2010), Surface wave dispersion across Tibet: direct evidence for radial anisotropy in the crust, *Geophys. Res. Lett.*, vol. 37, L16306, [doi:10.1029/2010GL043811](https://doi.org/10.1029/2010GL043811)

44. \*Nikulin, A., V. Levin, A. Shuler, M. West, (2010), Anomalous seismic structure beneath the Klyuchevskoy Group, Kamchatka, *Geophys. Res. Lett.*, vol. 37, L14311, [doi:10.1029/2010GL043904](https://doi.org/10.1029/2010GL043904)

43. Piccinini, D., M. Di Bona, F. P. Lucente, V. Levin, and J. Park (2010), Seismic attenuation and mantle wedge temperature in the northern Apennines subduction zone (Italy) from teleseismic body wave spectra, *J. Geophys. Res.*, vol. 115, B09309, [doi:10.1029/2009JB007180](https://doi.org/10.1029/2009JB007180).

42. Linkimer, L., S. L. Beck, S. Y. Schwartz, G. Zandt, and V. Levin (2010), Nature of crustal terranes and the Moho in northern Costa Rica from receiver function analysis, *Geochem. Geophys. Geosyst.*, vol. 11, Q01S19, [doi:10.1029/2009GC002795](https://doi.org/10.1029/2009GC002795).

41. \*Nikulin, A., Levin, V. and Park, J., (2009), Receiver function study of the Cascadia megathrust: evidence for localized serpentinization, *Geochem. Geophys. Geosyst.*, vol. 10, Q07004, [doi:10.1029/2009GC002376](https://doi.org/10.1029/2009GC002376)

40. Piana Agostinetti, N., V. Levin and J. Park, (2008), Crustal structure above a retreating trench: Receiver function study of the northern Apennines orogen, *Earth and Plan. Sci. Lett.*, vol. 275, Issues 3–4, pp. 211–220, [doi:10.1016/j.epsl.2008.06.022](https://doi.org/10.1016/j.epsl.2008.06.022)

39. Levin, V., Roecker, S., Graham, P. and Hosseini, A., (2008), Seismic Anisotropy Indicators in Western Tibet: Shear Wave Splitting and Receiver Function Analysis, *Tectonophysics*, vol. 462, Issues 1–4, pp. 99–108, [doi:10.1016/j.tecto.2008.03.019](https://doi.org/10.1016/j.tecto.2008.03.019)

38. Salimbeni S., Pondrelli S., Margheriti L., Park J., and Levin V., (2008), SKS splitting measurements beneath the Northern Apennines region: a case of oblique trench retreat, *Tectonophysics*, vol. 462, issues 1-4, pp. 68–82, [doi:10.1016/j.tecto.2007.11.075](https://doi.org/10.1016/j.tecto.2007.11.075)
37. Salimbeni, S., S. Pondrelli, L. Margheriti, V. Levin, J. Park, J. Plomerova, and V. Babuska (2007), Abrupt change in mantle fabric across northern Apennines detected using seismic anisotropy, *Geophys. Res. Lett.*, vol. 34, L07308, [doi:10.1029/2007GL029302](https://doi.org/10.1029/2007GL029302).
36. Lees, J. L., J. Vandecar, E. Gordeev, A. Ozerov, M. T. Brandon, J. Park and V. Levin, (2007), Three-dimensional images of the Kamchatka-Pacific plate cusp, in *Volcanism and Tectonics of the Kamchatka Peninsula and Adjacent Arcs*, Editors: J. Eichelberger, P. Izbekov, N. Ruppert, J. Lees, E. Gordeev, pp. 65-75, American Geophysical Union, Washington, D.C.
35. Levin, V., J. Park, F. P. Lucente, L. Margheriti, S. Pondrelli, (2007), The end of subduction in Northern Apennines confirmed by observations of quasi-Love waves from the great 2004 Sumatra-Andaman earthquake. *Geophys. Res. Lett.*, vol. 34, L04304, [doi:10.1029/2006GL028860](https://doi.org/10.1029/2006GL028860)
34. Levin. V., D. Okaya and J. Park, (2007), Shear wave birefringence in wedge-shaped anisotropic regions. *Geoph. Journ. Int.*, vol. 168 (1), pp. 275–286, [doi: 10.1111/j.1365-246X.2006.03224.x](https://doi.org/10.1111/j.1365-246X.2006.03224.x)
33. Menke, W., H. Abend, D. Bach, K. Newman and V. Levin, (2006), Review of the Source Characteristics of the Great Sumatra-Andaman Islands Earthquake of 2004, *Surveys in Geophysics*, vol. 27, pp. 603-613, 2006, [doi:10.1007/s10712-006-9013-4](https://doi.org/10.1007/s10712-006-9013-4)
32. Plomerova, J., L. Margheriti, J. Park, V. Babuska, S. Pondrelli, L. Vecsey, D. Piccinini, V. Levin, P. Baccheschi, and S. Salimbeni, (2006), Seismic anisotropy beneath the Northern Apennines (Italy): Mantle flow or lithosphere fabric? *Earth Planet. Sci. Letts.*, vol. 247, pp. 157- 170, [doi:10.1016/j.epsl.2006.04.023](https://doi.org/10.1016/j.epsl.2006.04.023).
31. Margheriti, L., S. Pondrelli, D. Piccinini, N. Piana Agostinetti, F. P. Lucente, A. Amato, P. Baccheschi, L. Giovani, S. Salimbeni, J. Park, M. T. Brandon, V. Levin, J. Plomerova, P. Jedlicka, L. Vecsey, V. Babuska, A. Fiaschi, B. Carpani, and P. Ulbricht, (2006), The subduction structure of the Northern Apennines: results from the RETREAT seismic deployment, *Annali di Geofisica.*, vol. 49, pp. 1119-1131, [doi: 2010.4401:ag-3107](https://doi.org/2010.4401:ag-3107)
30. Levin, V., A. Henza, J. Park and A. Rodgers, (2006), Texture of mantle lithosphere along the Dead Sea Rift: recently imposed or inherited? *Phys. Earth Planet. Int.*, vol. 158, pp. 174-189, [doi:10.1016/j.pepi.2006.05.007](https://doi.org/10.1016/j.pepi.2006.05.007)
29. Menke, W. and V. Levin, (2005), A Strategy to Rapidly Determine the Magnitude of Great Earthquakes, *EOS*, 86, 19
28. Levin, V., N. M. Shapiro, J. Park, M. H. Ritzwoller, (2005), The Slab Portal Beneath the Western Aleutians , *Geology*, vol. 33, No. 4, pp. 253-256, [doi: 10.1130/G20863.1](https://doi.org/10.1130/G20863.1)
27. Shapiro, N. M., M. H. Ritzwoller, P. Molnar and V. Levin, (2004), Thinning and Flow in Tibetan Crust Constrained by Seismic Anisotropy, *Science*, vol. 305, pp. 233-236, [DOI: 10.1126/science.1098276](https://doi.org/10.1126/science.1098276)
26. Park, J., H. Yuan, and V. Levin, (2004) Subduction-zone anisotropy under Corvallis, Oregon: A serpentinite skidmark of trench-parallel terrane migration? *J. Geoph. Res.*, vol. 109, B10306, [doi:10.1029/2003JB002718](https://doi.org/10.1029/2003JB002718)
25. Levin, V., D. Droznin, J. Park, E. Gordeev, (2004), Detailed mapping of seismic anisotropy with local shear waves in southeastern Kamchatka, *Geoph. J. Int.*, vol. 158, pp. 1009-1023 [doi: 10.1111/j.1365-246X.2004.02352.x](https://doi.org/10.1111/j.1365-246X.2004.02352.x)

24. Studinger, M., G. D. Karner, R. E. Bell, V. Levin, C. A. Raymond, A. A. Tikku, (2003), Geophysical Models for the Tectonic Framework of the Lake Vostok Region, East Antarctica, *Earth Planet. Sci. Lett.*, vol. 216, pp. 663 - 677, [doi:10.1016/S0012-821X\(03\)00548-X](https://doi.org/10.1016/S0012-821X(03)00548-X)
23. Menke, W. and V. Levin, (2003), The cross-convolution method for interpreting SKS splitting observations, with application to one and two-layer anisotropic earth models, *Geoph. J. Int.*, vol. 154, pp. 379-392, [doi: 10.1046/j.1365-246X.2003.01937.x](https://doi.org/10.1046/j.1365-246X.2003.01937.x)
22. Levin, V., L. Margheriti, J. Park, and A. Amato, (2002), Anisotropic seismic structure of the lithosphere beneath the Adriatic coast of Italy constrained with mode-converted body waves, *Geophys. Res. Lett.*, vol. 29, pp. 15-1-15-4, [doi:10.1029/2002GL015438](https://doi.org/10.1029/2002GL015438)
21. Levin, V., N. Shapiro, J. Park and M. Ritzwoller, (2002), Seismic Evidence for Catastrophic Slab Loss Beneath Kamchatka, *Nature*, vol. 418, pp. 763-767, [doi:10.1038/nature00973](https://doi.org/10.1038/nature00973)
20. Park, J. and V. Levin, (2002), Seismic Anisotropy: Tracing Plate Dynamics in the Mantle, *Science*, vol. 296, pp. 485-489, [doi: 10.1126/science.1067319](https://doi.org/10.1126/science.1067319)
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