

Jonathan Lees

List of Publications by Year in descending order

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111
papers

5,942
citations

101384

36
h-index

76769

74
g-index

115
all docs

115
docs citations

115
times ranked

4956
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Robust estimation of background noise and signal detection in climatic time series. <i>Climatic Change</i> , 1996, 33, 409-445. | 1.7 | 1,053 |
| 2 | Deploying a wireless sensor network on an active volcano. <i>IEEE Internet Computing</i> , 2006, 10, 18-25. | 3.2 | 893 |
| 3 | Geochemical evidence for the melting of subducting oceanic lithosphere at plate edges. <i>Nature</i> , 2001, 409, 500-504. | 13.7 | 451 |
| 4 | Tomographic inversion for three-dimensional velocity structure at Mount St. Helens using earthquake data. <i>Journal of Geophysical Research</i> , 1989, 94, 5716-5728. | 3.3 | 201 |
| 5 | Seismic tomography of magmatic systems. <i>Journal of Volcanology and Geothermal Research</i> , 2007, 167, 37-56. | 0.8 | 187 |
| 6 | Mantle flow at a slab edge: Seismic anisotropy in the Kamchatka Region. <i>Geophysical Research Letters</i> , 2001, 28, 379-382. | 1.5 | 155 |
| 7 | Plugs and chugs—seismic and acoustic observations of degassing explosions at Karymsky, Russia and Sangay, Ecuador. <i>Journal of Volcanology and Geothermal Research</i> , 2000, 101, 67-82. | 0.8 | 122 |
| 8 | Multiple-taper spectral analysis: A stand-alone C-subroutine. <i>Computers and Geosciences</i> , 1995, 21, 199-236. | 2.0 | 108 |
| 9 | The magma system of Mount St. Helens: non-linear high-resolution P-wave tomography. <i>Journal of Volcanology and Geothermal Research</i> , 1992, 53, 103-116. | 0.8 | 100 |
| 10 | Long-period earthquakes and co-eruptive dome inflation seen with particle image velocimetry. <i>Nature</i> , 2008, 456, 377-381. | 13.7 | 87 |
| 11 | Three-dimensional attenuation tomography at Loma Prieta: Inversion of t^* for Q . <i>Journal of Geophysical Research</i> , 1994, 99, 6843. | 3.3 | 85 |
| 12 | Crust and upper mantle of Kamchatka from teleseismic receiver functions. <i>Tectonophysics</i> , 2002, 358, 233-265. | 0.9 | 84 |
| 13 | Interpretation and utility of infrasonic records from erupting volcanoes. <i>Journal of Volcanology and Geothermal Research</i> , 2003, 121, 15-63. | 0.8 | 77 |
| 14 | Acoustic source inversion to estimate volume flux from volcanic explosions. <i>Geophysical Research Letters</i> , 2015, 42, 5243-5249. | 1.5 | 72 |
| 15 | Tomographic images of P wave velocity variation at Parkfield, California. <i>Journal of Geophysical Research</i> , 1990, 95, 21793-21804. | 3.3 | 71 |
| 16 | Shortest path ray tracing with sparse graphs. <i>Geophysics</i> , 1993, 58, 987-996. | 1.4 | 71 |
| 17 | Seismic tomography constrained by bouguer gravity anomalies: Applications in western Washington. <i>Pure and Applied Geophysics</i> , 1991, 135, 31-52. | 0.8 | 64 |
| 18 | Poisson's ratio and porosity at Coso geothermal area, California. <i>Journal of Volcanology and Geothermal Research</i> , 2000, 95, 157-173. | 0.8 | 59 |

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|----|--|-----|-----------|
| 19 | Explosions and periodic tremor at Karymsky volcano, Kamchatka, Russia. <i>Geophysical Journal International</i> , 2004, 158, 1151-1167. | 1.0 | 59 |
| 20 | Acoustic multipole source model for volcanic explosions and inversion for source parameters. <i>Geophysical Journal International</i> , 2012, 191, 1192-1204. | 1.0 | 57 |
| 21 | Degassing explosions at Karymsky Volcano, Kamchatka. <i>Geophysical Research Letters</i> , 1998, 25, 3999-4002. | 1.5 | 56 |
| 22 | Source constraints of Tungurahua volcano explosion events. <i>Bulletin of Volcanology</i> , 2006, 68, 480-490. | 1.1 | 56 |
| 23 | Tomographic P-wave velocity images of the Loma Prieta Earthquake asperity. <i>Geophysical Research Letters</i> , 1990, 17, 1433-1436. | 1.5 | 53 |
| 24 | Finite-difference time-domain modeling of transient infrasonic wavefields excited by volcanic explosions. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a. | 1.5 | 52 |
| 25 | Three-dimensional tomography of the 1992 southern California earthquake sequence: Constraints on dynamic earthquake rupture?. <i>Geology</i> , 1993, 21, 387. | 2.0 | 51 |
| 26 | Thermal modeling of subducted plates: tear and hotspot at the Kamchatka corner. <i>Earth and Planetary Science Letters</i> , 2004, 226, 293-304. | 1.8 | 50 |
| 27 | Tilt prior to explosions and the effect of topography on ultra-long-period seismic records at Fuego volcano, Guatemala. <i>Geophysical Research Letters</i> , 2012, 39, . | 1.5 | 50 |
| 28 | Tomographic imaging of local earthquake delay times for three-dimensional velocity variation in western Washington. <i>Journal of Geophysical Research</i> , 1990, 95, 4763-4776. | 3.3 | 46 |
| 29 | The Hilbert-Huang Transform: A High Resolution Spectral Method for Nonlinear and Nonstationary Time Series. <i>Seismological Research Letters</i> , 2013, 84, 1074-1080. | 0.8 | 46 |
| 30 | P-wave crustal velocity structure in the greater Mount Rainier area from local earthquake tomography. <i>Journal of Geophysical Research</i> , 1999, 104, 10775-10786. | 3.3 | 45 |
| 31 | Late Pleistocene-Holocene volcanism on the Kamchatka Peninsula, Northwest Pacific Region. <i>Geophysical Monograph Series</i> , 2007, , 165-198. | 0.1 | 43 |
| 32 | Explosive dome eruptions modulated by periodic gas-driven inflation. <i>Geophysical Research Letters</i> , 2014, 41, 6689-6697. | 1.5 | 43 |
| 33 | Microseismicity, stress, and fracture in the Coso geothermal field, California. <i>Tectonophysics</i> , 1998, 289, 221-238. | 0.9 | 42 |
| 34 | Local Volcano Infrasonic and Source Localization Investigated by 3D Simulation. <i>Seismological Research Letters</i> , 2014, 85, 1177-1186. | 0.8 | 42 |
| 35 | Volcanic earthquake timing using wireless sensor networks. , 2013, , . | | 40 |
| 36 | Travel-time tomography in the northern Coachella Valley using aftershocks of the 1986 M _L 5.9 North Palm Springs Earthquake. <i>Geophysical Research Letters</i> , 1992, 19, 1-4. | 1.5 | 38 |

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|----|--|-----|-----------|
| 37 | Three-dimensional P and S wave velocity structures of the Coso Geothermal Area, California, from microseismic travel time data. <i>Journal of Geophysical Research</i> , 1999, 104, 13217-13233. | 3.3 | 38 |
| 38 | Reventador Volcano 2005: Eruptive activity inferred from seismo-acoustic observation. <i>Journal of Volcanology and Geothermal Research</i> , 2008, 176, 179-190. | 0.8 | 38 |
| 39 | Geochemistry of primitive lavas of the Central Kamchatka Depression: Magma generation at the edge of the Pacific Plate. <i>Geophysical Monograph Series</i> , 2007, , 199-239. | 0.1 | 36 |
| 40 | Viewing the tectonic evolution of the Kamchatka-Aleutian (KAT) connection with an Alaska crustal extrusion perspective. <i>Geophysical Monograph Series</i> , 2007, , 3-35. | 0.1 | 33 |
| 41 | A Dangling Slab, Amplified Arc Volcanism, Mantle Flow and Seismic Anisotropy in the Kamchatka Plate Corner. <i>Geodynamic Series</i> , 2013, , 295-324. | 0.1 | 31 |
| 42 | Modeling Strombolian eruptions of Karymsky volcano, Kamchatka, Russia. <i>Journal of Volcanology and Geothermal Research</i> , 2003, 122, 265-280. | 0.8 | 30 |
| 43 | Ultra-long period seismic signals and cyclic deflation coincident with eruptions at Santiaguito volcano, Guatemala. <i>Journal of Volcanology and Geothermal Research</i> , 2010, 198, 35-44. | 0.8 | 30 |
| 44 | The South Fossa Magna, Japan, revealed by high-resolution P- and S-wave travel time tomography. <i>Tectonophysics</i> , 1992, 208, 377-396. | 0.9 | 28 |
| 45 | The origin of the modern Kamchatka Subduction Zone. <i>Geophysical Monograph Series</i> , 2007, , 57-64. | 0.1 | 28 |
| 46 | Evolution of the Kurile-Kamchatkan volcanic arcs and dynamics of the Kamchatka-Aleutian Junction. <i>Geophysical Monograph Series</i> , 2007, , 37-55. | 0.1 | 27 |
| 47 | In situ biomonitoring shows seasonal patterns and environmentally mediated gaping activity in the bivalve, <i>Pinna nobilis</i> . <i>Marine Biology</i> , 2016, 163, 1. | 0.7 | 26 |
| 48 | Cartesian parametrization of anisotropic traveltimes tomography. <i>Geophysical Journal International</i> , 1999, 137, 64-80. | 1.0 | 25 |
| 49 | Sound produced by the rapidly inflating Santiaguito lava dome, Guatemala. <i>Geophysical Research Letters</i> , 2010, 37, . | 1.5 | 25 |
| 50 | Eruption dynamics of the SW crater of Stromboli volcano, Italy – An interdisciplinary approach. <i>Journal of Volcanology and Geothermal Research</i> , 2008, 176, 565-570. | 0.8 | 24 |
| 51 | Infrasound in the middle stratosphere measured with a free-flying acoustic array. <i>Geophysical Research Letters</i> , 2015, 42, 10,010. | 1.5 | 24 |
| 52 | Volcanic eruptions, lightning, and a waterfall: Differentiating the menagerie of infrasound in the Ecuadorian jungle. <i>Geophysical Research Letters</i> , 2006, 33, . | 1.5 | 23 |
| 53 | Non-linear explosion tremor at Sangay, Volcano, Ecuador. <i>Journal of Volcanology and Geothermal Research</i> , 2008, 176, 170-178. | 0.8 | 23 |
| 54 | Intrinsic and scattering attenuation of the Mt Fuji Region, Japan. <i>Geophysical Journal International</i> , 2009, 177, 1366-1382. | 1.0 | 23 |

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|----|--|-----|-----------|
| 55 | Three-dimensional P- and S-wave velocity structure below Unzen volcano. <i>Journal of Volcanology and Geothermal Research</i> , 1995, 65, 1-26. | 0.8 | 22 |
| 56 | Switching between seismic and seismoacoustic harmonic tremor simulated in the laboratory: Insights into the role of open degassing channels and magma viscosity. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 277-289. | 1.4 | 22 |
| 57 | Pwave anisotropy, stress, and crack distribution at Coso geothermal field, California. <i>Journal of Geophysical Research</i> , 1999, 104, 17955-17973. | 3.3 | 21 |
| 58 | Distributed travel-time seismic tomography in large-scale sensor networks. <i>Journal of Parallel and Distributed Computing</i> , 2016, 89, 50-64. | 2.7 | 21 |
| 59 | Vent discrimination at Stromboli Volcano, Italy. <i>Journal of Volcanology and Geothermal Research</i> , 2004, 137, 169-185. | 0.8 | 20 |
| 60 | Holocene eruptive history of Shiveluch Volcano, Kamchatka Peninsula, Russia. <i>Geophysical Monograph Series</i> , 2007, , 263-282. | 0.1 | 20 |
| 61 | Dissection of a composite volcanic earthquake at Santiaguito, Guatemala. <i>Geophysical Research Letters</i> , 2009, 36, . | 1.5 | 20 |
| 62 | The acoustic signatures of ground acceleration, gas expansion, and spall fallback in experimental volcanic explosions. <i>Geophysical Research Letters</i> , 2014, 41, 1916-1922. | 1.5 | 20 |
| 63 | Tomographic images of Klyuchevskoy Volcano P-wave velocity. <i>Geophysical Monograph Series</i> , 2007, , 293-302. | 0.1 | 19 |
| 64 | Detecting Lightning Infrasound Using a HighAltitude Balloon. <i>Geophysical Research Letters</i> , 2018, 45, 7176-7183. | 1.5 | 19 |
| 65 | Geotouch: software for three and four dimensional GIS in the earth sciences. <i>Computers and Geosciences</i> , 2000, 26, 751-761. | 2.0 | 18 |
| 66 | Poor scaling between elastic energy release and eruption intensity at Tungurahua Volcano, Ecuador. <i>Geophysical Research Letters</i> , 2005, 32, . | 1.5 | 17 |
| 67 | A Study of the Regional Variation of Low-Frequency around the Korean Peninsula. <i>Bulletin of the Seismological Society of America</i> , 2007, 97, 2190-2197. | 1.1 | 17 |
| 68 | Source mechanism of Vulcanian eruption at Tungurahua Volcano, Ecuador, derived from seismic moment tensor inversions. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 1145-1164. | 1.4 | 17 |
| 69 | Near real time weather and ocean model data access with rNOMADS. <i>Computers and Geosciences</i> , 2015, 78, 88-95. | 2.0 | 17 |
| 70 | Seismicity, earthquakes and structure along the Alaska-Aleutian and Kamchatka-Kurile Subduction Zones: A review. <i>Geophysical Monograph Series</i> , 2007, , 129-144. | 0.1 | 16 |
| 71 | Ecological information and water mass properties in the Mediterranean recorded by stable isotope ratios in <i>Pinna nobilis</i> shells. <i>Journal of Geophysical Research</i> , 2011, 116, . | 3.3 | 16 |
| 72 | Characterizing complex eruptive activity at Santiaguito, Guatemala using infrasound semblance in networked arrays. <i>Journal of Volcanology and Geothermal Research</i> , 2011, 199, 1-14. | 0.8 | 16 |

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|----|--|-----|-----------|
| 73 | XMAPS8: A FREE PROGRAM FOR THE THREE-DIMENSIONAL GIS. <i>Seismological Research Letters</i> , 1995, 66, 33-37. | 0.8 | 15 |
| 74 | Seismic imaging of the geothermal field at Krafla, Iceland using shear-wave splitting. <i>Journal of Volcanology and Geothermal Research</i> , 2008, 176, 315-324. | 0.8 | 15 |
| 75 | A Comparison of the Ocean Microbarom Recorded on the Ground and in the Stratosphere. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 9773-9782. | 1.2 | 15 |
| 76 | Open and Free: Software and Scientific Reproducibility. <i>Seismological Research Letters</i> , 2012, 83, 751-752. | 0.8 | 14 |
| 77 | Upper Atmosphere Heating From Ocean-Generated Acoustic Wave Energy. <i>Geophysical Research Letters</i> , 2018, 45, 5144-5150. | 1.5 | 14 |
| 78 | Shear-wave splitting: A diagnostic tool to monitor fluid pressure in geothermal fields. <i>Geophysical Research Letters</i> , 2005, 32, . | 1.5 | 13 |
| 79 | Explosion-Generated Infrasond Recorded on Ground and Airborne Microbarometers at Regional Distances. <i>Seismological Research Letters</i> , 2018, 89, 1497-1506. | 0.8 | 13 |
| 80 | Bayesian ART versus conjugate gradient methods in tomographic seismic imaging: an application at Mount St. Helens, Washington. <i>Lecture Notes-monograph Series / Institute of Mathematical Statistics</i> , 1991, , 186-208. | 1.0 | 13 |
| 81 | Sensor networks for high-resolution monitoring of volcanic activity. , 2005, , . | | 12 |
| 82 | Three dimensional images of the Kamchatka-Pacific Plate cusp. <i>Geophysical Monograph Series</i> , 2007, , 65-75. | 0.1 | 12 |
| 83 | Acoustic and Seismic Fields of Hydraulic Jumps at Varying Froude Numbers. <i>Geophysical Research Letters</i> , 2017, 44, 9734-9741. | 1.5 | 10 |
| 84 | Lithospheric structure of an incipient rift basin: Results from receiver function analysis of Bransfield Strait, NW Antarctic Peninsula. <i>Polar Science</i> , 2018, 16, 47-58. | 0.5 | 10 |
| 85 | Monitoring changes in human activity during the COVID-19 shutdown in Las Vegas using infrasond microbarometers. <i>Journal of the Acoustical Society of America</i> , 2021, 149, 1796-1802. | 0.5 | 10 |
| 86 | Imaging volcanic infrasond sources using time reversal mirror algorithm. <i>Geophysical Journal International</i> , 2015, 202, 1663-1676. | 1.0 | 9 |
| 87 | Reshaping spectrum estimates by removing periodic noise: Application to seismic spectral ratios. <i>Geophysical Research Letters</i> , 1995, 22, 513-516. | 1.5 | 8 |
| 88 | Effects of the Iceland plume on Greenland's lithosphere: New insights from ambient noise tomography. <i>Polar Science</i> , 2018, 17, 75-82. | 0.5 | 8 |
| 89 | Seismicity and seismic stress in the Coso Range, Coso geothermal field, and Indian Wells Valley region, southeast-central California. , 2002, , . | | 7 |
| 90 | A Sensor Network for Real-Time Volcano Tomography: System Design and Deployment. , 2017, , . | | 7 |

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|-----|---|-----|-----------|
| 91 | Audible acoustics from low-magnitude fluid-induced earthquakes in Finland. <i>Scientific Reports</i> , 2021, 11, 19206. | 1.6 | 7 |
| 92 | Recent earthquake sequences at Coso: Evidence for conjugate faulting and stress loading near a geothermal field. <i>Bulletin of the Seismological Society of America</i> , 1999, 89, 785-795. | 1.1 | 7 |
| 93 | Thermal models beneath Kamchatka and the Pacific Plate rejuvenation from a mantle plume impact. <i>Geophysical Monograph Series</i> , 2007, , 77-89. | 0.1 | 6 |
| 94 | Imaging seismic tomography in sensor network. , 2013, , . | | 6 |
| 95 | Three-dimensional attenuation model of Sierra Negra Volcano, Galpagos Archipelago. <i>Geophysical Research Letters</i> , 2016, 43, 6259-6266. | 1.5 | 6 |
| 96 | Topographically Scattered Infrasound Waves Observed on Microbarometer Arrays in the Lower Stratosphere. <i>Earth and Space Science</i> , 2022, 9, . | 1.1 | 6 |
| 97 | Three-dimensional anatomy of a geothermal field, Coso, southeast-central California. , 2002, , . | | 5 |
| 98 | ClamR: A statistical evaluation of isotopic and temperature records in sclerochronologic studies. <i>Palaeogeography, Palaeoclimatology, Palaeoecology</i> , 2015, 437, 26-32. | 1.0 | 5 |
| 99 | Direct measurement of the acoustic wave field in the stratosphere. , 2016, , . | | 5 |
| 100 | Boundary conditions on a finite grid: Applications with pseudospectral wave propagation. <i>Geophysics</i> , 1997, 62, 1544-1557. | 1.4 | 4 |
| 101 | Source and Propagation Effects on Near-Field Co-Eruptive Ground Motion at Santiaguito Volcano, Guatemala. <i>Bulletin of the Seismological Society of America</i> , 2012, 102, 696-706. | 1.1 | 4 |
| 102 | Active faulting in the Kamchatsky Peninsula, Kamchatka-Aleutian Junction. <i>Geophysical Monograph Series</i> , 2007, , 107-116. | 0.1 | 3 |
| 103 | Investigating potential icequakes at Llaima volcano, Chile. <i>Volcanica</i> , 2020, 3, 29-42. | 0.6 | 3 |
| 104 | Earthquake source parameters at the sumatran fault zone: Identification of the activated fault plane. <i>Open Geosciences</i> , 2010, 2, . | 0.6 | 2 |
| 105 | Instrument Corrections by Time-Domain Deconvolution. <i>Seismological Research Letters</i> , 2014, 85, 197-201. | 0.8 | 2 |
| 106 | Scattering from a fault interface in the Coso geothermal field. <i>Journal of Volcanology and Geothermal Research</i> , 2004, 130, 61-75. | 0.8 | 1 |
| 107 | Modeling source parameters of quasi-periodic tremor. <i>Volcanica</i> , 2020, 3, 251-262. | 0.6 | 1 |
| 108 | Persistent shallow micro-seismicity at Llaima volcano, Chile, with implications for long-term monitoring. <i>Journal of Volcanology and Geothermal Research</i> , 2022, 426, 107528. | 0.8 | 1 |

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|-----|---|-----|-----------|
| 109 | System-on-Chip Architecture Design for Intelligent Sensor Networks. , 2006, , . | | 0 |
| 110 | Synthesizing knowledge of ocean islands. Eos, 2011, 92, 388-388. | 0.1 | 0 |
| 111 | Observations and Analyses of Shear-Wave Splitting in the Geothermal Field at Hengill, Iceland. Seismological Research Letters, 2015, 86, 424-430. | 0.8 | 0 |