

# Jonathan Ajo-Franklin

## List of Publications by Year in descending order

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Version: 2024-02-01

113  
papers

4,742  
citations

136950

32  
h-index

110387

64  
g-index

142  
all docs

142  
docs citations

142  
times ranked

3317  
citing authors

#	ARTICLE	IF	CITATIONS
1	From Fluid Flow to Coupled Processes in Fractured Rock: Recent Advances and New Frontiers. <i>Reviews of Geophysics</i> , 2022, 60, e2021RG000744.	23.0	61
2	Watching the Cryosphere Thaw: Seismic Monitoring of Permafrost Degradation Using Distributed Acoustic Sensing During a Controlled Heating Experiment. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	9
3	The Imperial Valley Dark Fiber Project: Toward Seismic Studies Using DAS and Telecom Infrastructure for Geothermal Applications. <i>Seismological Research Letters</i> , 2022, 93, 2906-2919.	1.9	9
4	Real-time and post-hoc compression for data from Distributed Acoustic Sensing. <i>Computers and Geosciences</i> , 2022, 166, 105181.	4.2	4
5	Testing of a permanent orbital surface source and distributed acoustic sensing for monitoring of unconventional reservoirs: Preliminary results from the Eagle Ford Shale. <i>Geophysics</i> , 2021, 86, P1-P12.	2.6	12
6	Flow and Permeability Evolution during Microbial Sulfate Reduction and Inhibition in Fractured Rocks. <i>Energy &amp; Fuels</i> , 2021, 35, 1989-1997.	5.1	3
7	Utilizing distributed acoustic sensing and ocean bottom fiber optic cables for submarine structural characterization. <i>Scientific Reports</i> , 2021, 11, 5613.	3.3	49
8	Distributed Acoustic Sensing Using Dark Fiber for Array Detection of Regional Earthquakes. <i>Seismological Research Letters</i> , 2021, 92, 2441-2452.	1.9	27
9	Phase-weighted slant stacking for surface wave dispersion measurement. <i>Geophysical Journal International</i> , 2021, 226, 256-269.	2.4	15
10	Aquifer Monitoring Using Ambient Seismic Noise Recorded With Distributed Acoustic Sensing (DAS) Deployed on Dark Fiber. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB021004.	3.4	31
11	Close Observation of Hydraulic Fracturing at EGS Collab Experiment 1: Fracture Trajectory, Microseismic Interpretations, and the Role of Natural Fractures. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB020840.	3.4	28
12	Measurement of Surface-Wave Phase-Velocity Dispersion on Mixed Inertial Seismometer “ Distributed Acoustic Sensing Seismic Noise Cross-Correlations. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 3432-3450.	2.3	12
13	High-Resolution Ambient Noise Imaging of Geothermal Reservoir Using 3C Dense Seismic Nodal Array and Ultra-Short Observation. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB021827.	3.4	23
14	Tracking surficial aquifer state using DAS and ballistic Rayleigh waves. , 2021, , .		0
15	Continuous active-source seismic monitoring of brine injections directly in the main fault at Mont Terri, Switzerland. , 2021, , .		1
16	Modeling heat transport processes in enhanced geothermal systems: A validation study from EGS Collab Experiment 1. <i>Geothermics</i> , 2021, 97, 102254.	3.4	9
17	Dynamic Processes of CO <sub>2</sub> Storage in the Field: 1. Multiscale and Multipath Channeling of CO <sub>2</sub> Flow in the Hierarchical Fluvial Reservoir at Cranfield, Mississippi. <i>Water Resources Research</i> , 2020, 56, e2019EF001360.	4.2	13
18	Creation of a Mixed-Mode Fracture Network at Mesoscale Through Hydraulic Fracturing and Shear Stimulation. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2020JB019807.	3.4	36

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19	Improving Long-term Monitoring of Contaminated Groundwater at Sites where Attenuation-based Remedies are Deployed. <i>Environmental Management</i> , 2020, 66, 1142-1161.	2.7	4
20	The Eagle Ford Shale Laboratory: A Field Study of the Stimulated Reservoir Volume, Detailed Fracture Characteristics, and EOR Potential. , 2020, , .		4
21	The Sealing Mechanisms of a Fracture in Opalinus Clay as Revealed by in situ Synchrotron X-Ray Micro-Tomography. <i>Frontiers in Earth Science</i> , 2020, 8, .	1.8	17
22	On the Broadband Instrument Response of Fiber-Optic DAS Arrays. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB018145.	3.4	138
23	Evolution of propped fractures in shales: The microscale controlling factors as revealed by in situ X-Ray microtomography. <i>Journal of Petroleum Science and Engineering</i> , 2020, 188, 106861.	4.2	14
24	Deep Learning for Surface Wave Identification in Distributed Acoustic Sensing Data. , 2020, , .		11
25	Biofilm Feedbacks Alter Hydrological Characteristics of Fractured Rock Impacting Sulfidogenesis and Treatment. <i>Energy &amp; Fuels</i> , 2019, 33, 10476-10486.	5.1	4
26	The Potential of DAS in Teleseismic Studies: Insights From the Goldstone Experiment. <i>Geophysical Research Letters</i> , 2019, 46, 1320-1328.	4.0	82
27	Dynamics of geologic CO <sub>2</sub> storage and plume motion revealed by seismic coda waves. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 2464-2469.	7.1	25
28	The Seismic Response to Injected Carbon Dioxide: Comparing Observations to Estimates Based Upon Fluid Flow Modeling. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 6880-6907.	3.4	12
29	Distributed Acoustic Sensing Using Dark Fiber for Near-Surface Characterization and Broadband Seismic Event Detection. <i>Scientific Reports</i> , 2019, 9, 1328.	3.3	291
30	The effect of CO <sub>2</sub> -induced dissolution on flow properties in Indiana Limestone: An in situ synchrotron X-ray micro-tomography study. <i>International Journal of Greenhouse Gas Control</i> , 2019, 82, 38-47.	4.6	18
31	A new mini-triaxial cell for combined high-pressure and high-temperature <i>in situ</i> synchrotron X-ray microtomography experiments up to 400°C and 24â€¦MPa. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 238-243.	2.4	18
32	Illuminating seafloor faults and ocean dynamics with dark fiber distributed acoustic sensing. <i>Science</i> , 2019, 366, 1103-1107.	12.6	324
33	Field Observations, Experimental Studies, and Thermodynamic Modeling of CO <sub>2</sub> Effects on Microbial Populations. , 2019, , 263-290.		0
34	Biogenic sulfide control by nitrate and (per)chlorate â€“ A monitoring and modeling investigation. <i>Chemical Geology</i> , 2018, 476, 180-190.	3.3	23
35	Next generation modeling of microbial souring â€“ Parameterization through genomic information. <i>International Biodeterioration and Biodegradation</i> , 2018, 126, 189-203.	3.9	21
36	Automated Parallel Data Processing Engine with Application to Large-Scale Feature Extraction. , 2018, , .		3

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37	Microbial Sulfate Reduction and Perchlorate Inhibition in a Novel Mesoscale Tank Experiment. Energy & Fuels, 2018, 32, 12049-12065.	5.1	5
38	Attenuating Sulfidogenesis in a Soured Continuous Flow Column System With Perchlorate Treatment. Frontiers in Microbiology, 2018, 9, 1575.	3.5	32
39	Permafrost Degradation and Subsidence Observations during a Controlled Warming Experiment. Scientific Reports, 2018, 8, 10908.	3.3	21
40	Evaluation of accessible mineral surface areas for improved prediction of mineral reaction rates in porous media. Geochimica Et Cosmochimica Acta, 2017, 205, 31-49.	3.9	79
41	Pore-scale capillary pressure analysis using multi-scale X-ray micromotography. Advances in Water Resources, 2017, 104, 223-241.	3.8	63
42	Strain-dependent partial slip on rock fractures under seismic-frequency torsion. Geophysical Research Letters, 2017, 44, 4756-4764.	4.0	10
43	An effective-medium model for P-wave velocities of saturated, unconsolidated saline permafrost. Geophysics, 2017, 82, EN33-EN50.	2.6	27
44	Experimental development of low-frequency shear modulus and attenuation measurements in mated rock fractures: Shear mechanics due to asperity contact area changes with normal stress. Geophysics, 2017, 82, M19-M36.	2.6	18
45	Pore-scale Evolution of Trapped CO <sub>2</sub> at Early Stages Following Imbibition Using Micro-CT Imaging. Energy Procedia, 2017, 114, 4872-4878.	1.8	14
46	Spatiotemporal changes of seismic attenuation caused by injected CO <sub>2</sub> at the Frio pilot site, Dayton, TX, USA. Journal of Geophysical Research: Solid Earth, 2017, 122, 7156-7171.	3.4	33
47	Clay, Water, and Salt: Controls on the Permeability of Fine-Grained Sedimentary Rocks. Accounts of Chemical Research, 2017, 50, 2067-2074.	15.6	61
48	Distributed Acoustic Sensing for Seismic Monitoring of The Near Surface: A Traffic-Noise Interferometry Case Study. Scientific Reports, 2017, 7, 11620.	3.3	254
49	Alteration and Erosion of Rock Matrix Bordering a Carbonate-Rich Shale Fracture. Environmental Science & Technology, 2017, 51, 8861-8868.	10.0	50
50	Quantitative characterization of soil micro-aggregates: New opportunities from sub-micron resolution synchrotron X-ray microtomography. Geoderma, 2017, 305, 382-393.	5.1	60
51	Fiber-Optic Network Observations of Earthquake Wavefields. Geophysical Research Letters, 2017, 44, 11,792.	4.0	248
52	Fracture detection and imaging through relative seismic velocity changes using distributed acoustic sensing and ambient seismic noise. The Leading Edge, 2017, 36, 1009-1017.	0.7	10
53	Visualization and prediction of supercritical CO <sub>2</sub> distribution in sandstones during drainage: An in situ synchrotron X-ray micro-computed tomography study. International Journal of Greenhouse Gas Control, 2017, 66, 230-245.	4.6	21
54	Introduction to this special section: Geophysical applications of fiber-optic distributed sensing. The Leading Edge, 2017, 36, 973-974.	0.7	4

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55	Experimental evidence for dynamic friction on rock fractures from frequency-dependent nonlinear hysteresis and harmonic generation. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 4982-4999.	3.4	9
56	Pore-scale multiphase flow modeling and imaging of CO <sub>2</sub> exsolution in Sandstone. <i>Journal of Petroleum Science and Engineering</i> , 2017, 155, 63-77.	4.2	28
57	In situ measurement of velocity-stress sensitivity using crosswell continuous active-source seismic monitoring. <i>Geophysics</i> , 2017, 82, D319-D326.	2.6	16
58	Surface-wave imaging of inversely dispersive media: A permafrost example. , 2017, , .		0
59	Time-lapse surface wave monitoring of permafrost thaw using distributed acoustic sensing and a permanent automated seismic source. , 2017, , .		37
60	Surface orbital vibrator for permanent seismic monitoring: A signal contents and repeatability appraisal. , 2017, , .		5
61	The emerging role of 4D synchrotron X-ray micro-tomography for climate and fossil energy studies: five experiments showing the present capabilities at Åbeamline 8.3.2 at the Advanced Light Source. <i>Journal of Synchrotron Radiation</i> , 2017, 24, 1237-1249.	2.4	10
62	Measuring the effects of pore-pressure changes on seismic amplitude using crosswell continuous active-source seismic monitoring (CASSM). , 2017, , .		0
63	Surface orbital vibrator (SOV) and fiber-optic DAS: Field demonstration of economical, continuous-land seismic time-lapse monitoring from the Australian CO <sub>2</sub> CRC Otway site. , 2016, , .		30
64	Interferometry of a roadside DAS array in Fairbanks, AK. , 2016, , .		28
65	Analysis of laboratory data on ultrasonic monitoring of permeability reduction due to biopolymer formation in unconsolidated granular media. <i>Geophysical Prospecting</i> , 2016, 64, 445-455.	1.9	1
66	A 2.5D Reactive Transport Model for Fracture Alteration Simulation. <i>Environmental Science &amp; Technology</i> , 2016, 50, 7564-7571.	10.0	79
67	<i>P</i> and <i>S</i> wave responses of bacterial biopolymer formation in unconsolidated porous media. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2016, 121, 1158-1177.	3.0	26
68	Reactive Transport Model of Sulfur Cycling as Impacted by Perchlorate and Nitrate Treatments. <i>Environmental Science &amp; Technology</i> , 2016, 50, 7010-7018.	10.0	45
69	Evaluation of mineral reactive surface area estimates for prediction of reactivity of a multi-mineral sediment. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 188, 310-329.	3.9	108
70	A rock-physics investigation of unconsolidated saline permafrost: P-wave properties from laboratory ultrasonic measurements. <i>Geophysics</i> , 2016, 81, WA233-WA245.	2.6	27
71	IMAGING FRACTURE NETWORKS USING JOINT SEISMIC AND ELECTRICAL CHANGE DETECTION TECHNIQUES. , 2016, , .		4
72	The CO <sub>2</sub> CRC Otway Project deployment of a Distributed Acoustic Sensing Network Coupled with Permanent Rotary Sources. , 2016, , .		33

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73	A Field Test of Distributed Acoustic Sensing for Ambient Noise Recording. , 2015, , .		14
74	Interferometry of ambient noise from a trenched distributed acoustic sensing array. , 2015, , .		6
75	Microbial Growth under Supercritical CO <sub>2</sub> . Applied and Environmental Microbiology, 2015, 81, 2881-2892.	3.1	44
76	Isotopic insights into microbial sulfur cycling in oil reservoirs. Frontiers in Microbiology, 2014, 5, 480.	3.5	29
77	Full-wavefield inversion of surface waves for mapping embedded low-velocity zones in permafrost. Geophysics, 2014, 79, EN107-EN124.	2.6	73
78	Pore-Scale Controls on Calcite Dissolution Rates from Flow-through Laboratory and Numerical Experiments. Environmental Science & Technology, 2014, 48, 7453-7460.	10.0	154
79	Field testing of fiber-optic distributed acoustic sensing (DAS) for subsurface seismic monitoring. The Leading Edge, 2013, 32, 699-706.	0.7	333
80	Bioclogging and Permeability Alteration by <i>L. mesenteroides</i> in a Sandstone Reservoir: A Reactive Transport Modeling Study. Energy & Fuels, 2013, 27, 6538-6551.	5.1	33
81	Supercritical CO <sub>2</sub> flow through a layered silica sand/calcite sand system: Experiment and modified maximal inscribed spheres analysis. International Journal of Greenhouse Gas Control, 2013, 14, 141-150.	4.6	12
82	High-resolution characterization of a CO <sub>2</sub> plume using crosswell seismic tomography: Cranfield, MS, USA. International Journal of Greenhouse Gas Control, 2013, 18, 497-509.	4.6	84
83	Constraining CO <sub>2</sub> simulations by coupled modeling and inversion of electrical resistance and gas composition data. International Journal of Greenhouse Gas Control, 2013, 18, 510-522.	4.6	32
84	High-frequency seismic response during permeability reduction due to biopolymer clogging in unconsolidated porous media. Geophysics, 2013, 78, EN117-EN127.	2.6	27
85	X-ray micro-tomography at the Advanced Light Source. Proceedings of SPIE, 2012, , .	0.8	54
86	Measurement of accessible reactive surface area in a sandstone, with application to CO <sub>2</sub> mineralization. Chemical Geology, 2012, 318-319, 113-125.	3.3	95
87	Upscaling calcium carbonate precipitation rates from pore to continuum scale. Chemical Geology, 2012, 318-319, 60-74.	3.3	99
88	Potentials of Applying Surface-Wave Methods for Imaging Subsurface Properties in Permafrost Soils. , 2012, , .		0
89	Investigating biomineralization using synchrotron based X-ray computed microtomography. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	32
90	Constraining the reservoir model of an injected CO <sub>2</sub> plume with crosswell CASSM at the Frio-II brine pilot. International Journal of Greenhouse Gas Control, 2011, 5, 1022-1030.	4.6	55

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91	A Multimodal 3D Imaging Study of Natural Gas Flow in Tight Sands. , 2011, , .		4
92	Hydrogeophysical Methods for Analyzing Aquifer Storage and Recovery Systems. Ground Water, 2011, 49, 250-269.	1.3	37
93	Geophysical monitoring and reactive transport modeling of ureolytically-driven calcium carbonate precipitation. Geochemical Transactions, 2011, 12, 7.	0.7	54
94	Monitoring a large volume CO2 injection: Year two results from SECARB project at Denburyâ€™s Cranfield, Mississippi, USA. Energy Procedia, 2011, 4, 3478-3485.	1.8	84
95	Statistical segmentation and porosity quantification of 3D x-ray microtomography. , 2011, , .		10
96	Seismic monitoring of permeability reduction due to biopolymer formation in unconsolidated materials. , 2011, , .		3
97	Multi-level continuous active source seismic monitoring (MLâ€™CASSM): Mapping shallow hydrofracture evolution at a TCE contaminated site. , 2011, , .		16
98	On the complex conductivity signatures of calcite precipitation. Journal of Geophysical Research, 2010, 115, .	3.3	42
99	Optimal experiment design for time-lapse traveltime tomography. Geophysics, 2009, 74, Q27-Q40.	2.6	29
100	Redatuming through a salt canopy and target-oriented salt-flank imaging. Geophysics, 2008, 73, S63-S71.	2.6	28
101	Integration of crosswell CASSM (Continuous active source seismic monitoring) and flow modeling for imaging of a CO 2 plume in a brine aquifer. , 2008, , .		3
102	Continuous active-source seismic monitoring of C O2 injection in a brine aquifer. Geophysics, 2007, 72, A57-A61.	2.6	95
103	Applying compactness constraints to differential traveltime tomography. Geophysics, 2007, 72, R67-R75.	2.6	82
104	Ultrasonic properties of granular media saturated with DNAPL/water mixtures. Geophysical Research Letters, 2007, 34, .	4.0	3
105	Continuous crosswell monitoring of CO2 injection in a brine aquifer. , 2007, , .		1
106	Redatuming through a salt canopy â€™ Another saltâ€™flank imaging strategy. , 2007, , .		6
107	Relative particle motions of fluid and solid phases in porous media: A numerical study of seismic scattering in digitized granular models. , 2007, , .		0
108	A survey of the geophysical properties of chlorinated DNAPLs. Journal of Applied Geophysics, 2006, 59, 177-189.	2.1	32

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109	Imaging dipping sediments at a salt dome flank â€•VSP seismic interferometry and reverseâ€•time migration. , 2006, , .		7
110	Temporal integration of seismic travelttime tomography. , 2005, , .		10
111	The dielectric properties of granular media saturated with DNAPL/water mixtures. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	24
112	Preliminary Characterization of a NAPLâ€•Contaminated Site Using Borehole Geophysical Techniques. , 2003, , .		1
113	Effect of Immiscible Liquid Contaminants on Pâ€•Wave Transmission through Natural Aquifer Samples. , 2003, , .		0