Don Vasco

List of Publications by Year
in descending order

143 papers	4,527 citations	94433 37 h-index	114465 63 g-index
148 all docs	148 docs citations	148 times ranked	2391 citing authors

#	Article	IF	Citations
1	Coupled reservoir-geomechanical analysis of CO2 injection and ground deformations at In Salah, Algeria. International Journal of Greenhouse Gas Control, 2010, 4, 225-230.	4.6	301
2	Satellite‑based measurements of surface deformation reveal fluid flow associated with the geological storage of carbon dioxide. Geophysical Research Letters, 2010, 37, .	4.0	249
3	Estimation of reservoir properties using transient pressure data: An asymptotic approach. Water Resources Research, 2000, 36, 3447-3465.	4.2	178
4	Direct reservoir parameter estimation using joint inversion of marine seismic AVA and CSEM data. Geophysics, 2006, 71, C1-C13.	2.6	143
5	Whole Earth structure estimated from seismic arrival times. Journal of Geophysical Research, 1998, 103, 2633-2671.	3.3	131
6	Reservoir monitoring and characterization using satellite geodetic data: Interferometric synthetic aperture radar observations from the Krechba field, Algeria. Geophysics, 2008, 73, WA113-WA122.	2.6	127
7	Integrating Dynamic Data Into High-Resolution Reservoir Models Using Streamline-Based Analytic Sensitivity Coefficients. SPE Journal, 1999, 4, 389-399.	3.1	126
8	A full field simulation of the in Salah gas production and CO2 storage project using a coupled geo-mechanical and thermal fluid flow simulator. Energy Procedia, 2011, 4, 3290-3297.	1.8	123
9	Tomographic inversions for mantle P wave velocity structure based on the minimization of l^2 and l^1 norms of International Seismological Centre Travel Time Residuals. Journal of Geophysical Research, 1993, 98, 699-734.	3.3	110
10	Beyond ray tomography: Wavepaths and Fresnel volumes. Geophysics, 1995, 60, 1790-1804.	2.6	109
11	A Bayesian model for gas saturation estimation using marine seismic AVA and CSEM data. Geophysics, 2007, 72, WA85-WA95.	2.6	99
12	Asymptotic solutions for solute transport: A formalism for tracer tomography. Water Resources Research, 1999, 35, 1-16.	4.2	95
13	A multidisciplinary fractured rock characterization study at Raymond field site, Raymond, CA. Journal of Hydrology, 2000, 236, 17-34.	5.4	79
14	Coupled reservoir-geomechanical analysis of CO2 injection at In Salah, Algeria. Energy Procedia, 2009, 1, 1847-1854.	1.8	76
15	Robust inversion of IASP91 travel time residuals for mantle P and S velocity structure, earthquake mislocations, and station corrections. Journal of Geophysical Research, 1994, 99, 13727-13755.	3.3	73
16	Resolution and uncertainty in hydrologic characterization. Water Resources Research, 1997, 33, 379-397.	4.2	73
17	Estimating permeability from quasi-static deformation: Temporal variations and arrival-time inversion. Geophysics, 2008, 73, O37-O52.	2.6	70
18	The Northwest Geysers EGS Demonstration Project, California: Pre-stimulation Modeling and Interpretation of the Stimulation. Mathematical Geosciences, 2015, 47, 3-29.	2.4	67

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19	Geodetic imaging: reservoir monitoring using satellite interferometry. Geophysical Journal International, 2002, 149, 555-571.	2.4	66
20	Monitoring the geologic storage of carbon dioxide using multicomponent SAR interferometry. Geophysical Journal International, 2013, 193, 197-208.	2.4	62
21	Using surface displacement and strain observations to determine deformation at depth, with an application to Long Valley Caldera, California. Journal of Geophysical Research, 1988, 93, 3232-3242.	3.3	59
22	A Streamline Approach for Integrating Transient Pressure Data Into High-Resolution Reservoir Models. SPE Journal, 2001, 6, 273-282.	3.1	57
23	Ground‐penetrating radar velocity tomography in heterogeneous and anisotropic media. Geophysics, 1997, 62, 1758-1773.	2.6	55
24	Using surface deformation to image reservoir dynamics. Geophysics, 2000, 65, 132-147.	2.6	54
25	The Northwest Geysers EGS Demonstration Project, California â€" Part 2: Modeling and interpretation. Geothermics, 2016, 63, 120-138.	3.4	51
26	Integrating Multiphase Production History in Stochastic Reservoir Characterization. SPE Formation Evaluation, 1997, 12, 149-156.	0.5	50
27	Coupled non-isothermal, multiphase fluid flow, and geomechanical modeling of ground surface deformations and potential for induced micro-seismicity at the In Salah CO_2 storage operation. Energy Procedia, 2011, 4, 3542-3549.	1.8	50
28	Monitoring deformation at the Geysers Geothermal Field, California using C‐band and X‐band interferometric synthetic aperture radar. Geophysical Research Letters, 2013, 40, 2567-2572.	4.0	50
29	Lateral variations in mantle velocity structure and discontinuities determined from $P, PP, S, SS,$ and $SS-Sd$ travel time residuals. Journal of Geophysical Research, 1995, 100, 24037-24059.	3.3	49
30	Role of agricultural activity on land subsidence in the San Joaquin Valley, California. Journal of Hydrology, 2019, 569, 462-469.	5.4	48
31	A Multiscale Approach to Production-Data Integration Using Streamline Models. SPE Journal, 2001, 6, 182-192.	3.1	47
32	Seismic imaging of reservoir flow properties: Time‐lapse amplitude changes. Geophysics, 2004, 69, 1425-1442.	2.6	46
33	Resolution and variance operators of gravity and gravity gradiometry. Geophysics, 1989, 54, 889-899.	2.6	44
34	A 3D hydrogeological and geomechanical model of an Enhanced Geothermal System at The Geysers, California. Geothermics, 2014, 51, 240-252.	3.4	43
35	A coupled inversion of pressure and surface displacement. Water Resources Research, 2001, 37, 3071-3089.	4.2	42
36	Wavepath traveltime tomography. Geophysical Journal International, 1993, 115, 1055-1069.	2.4	41

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37	Inversion of airborne gravity gradient data, southwestern Oklahoma. Geophysics, 1991, 56, 90-101.	2.6	39
38	Resolution, uncertainty, and whole Earth tomography. Journal of Geophysical Research, 2003, 108, ESE 9-1-ESE 9-26.	3.3	38
39	Inverse modeling of partitioning interwell tracer tests: A streamline approach. Water Resources Research, 2002, 38, 15-1-15-17.	4.2	37
40	Reservoir-parameter identification using minimum relative entropy-based Bayesian inversion of seismic AVA and marine CSEM data. Geophysics, 2006, 71, O77-O88.	2.6	37
41	Detailed Characterization of a Fractured Limestone Formation by Use of Stochastic Inverse Approaches. SPE Formation Evaluation, 1995, 10, 133-140.	0.5	36
42	Monitoring of Fluid Injection and Soil Consolidation Using Surface Tilt Measurements. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 1998, 124, 29-37.	3.0	36
43	On the use of quasi-static deformation to understand reservoir fluid flow. Geophysics, 2005, 70, O13-O27.	2.6	35
44	Nonuniqueness in traveltime tomography: Ensemble inference and cluster analysis. Geophysics, 1996, 61, 1209-1227.	2.6	34
45	Resolving seismic anisotropy: Sparse matrix methods for geophysical inverse problems. Geophysics, 1998, 63, 970-983.	2.6	34
46	Rapid inverse modeling of pressure interference tests using trajectory-based traveltime and amplitude sensitivities. Water Resources Research, 2006, 42, .	4.2	34
47	Viscoacoustic crosswell imaging using asymptotic waveforms. Geophysics, 2001, 66, 861-870.	2.6	32
48	Utilizing the onset of time-lapse changes: a robust basis for reservoir monitoring and characterization. Geophysical Journal International, 2014, 197, 542-556.	2.4	32
49	Satellite-based monitoring of groundwater depletion in California's Central Valley. Scientific Reports, 2019, 9, 16053.	3.3	32
50	Numerical trajectory calculations for the efficient inversion of transient flow and tracer observations. Water Resources Research, 2004, 40, .	4.2	31
51	Crustal deformation and source models of the Yellowstone volcanic field from geodetic data. Journal of Geophysical Research, 2007, 112, .	3.3	31
52	On the Sensitivity and Spatial Resolution of Transient Pressure and Tracer Data For Heterogeneity Characterization. SPE Formation Evaluation, 1997, 12, 137-144.	0.5	30
53	Global Earth structure: inference and assessment. Geophysical Journal International, 2002, 137, 381-407.	2.4	30
54	A simultaneous inversion of seismic traveltimes and amplitudes for velocity and attenuation. Geophysics, 1996, 61, 1738-1757.	2.6	29

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55	Deriving source-time functions using principal component analysis. Bulletin of the Seismological Society of America, 1989, 79, 711-730.	2.3	29
56	Ensemble inference in geophysical inverse problems. Geophysical Journal International, 1993, 115, 711-728.	2.4	28
57	Interpretation and inversion of low-frequency head observations. Water Resources Research, 2006, 42, .	4.2	28
58	Seismic imaging of reservoir flow properties: Time‐lapse pressure changes. Geophysics, 2004, 69, 511-521.	2.6	27
59	Inversion for sources of crustal deformation and gravity change at the Yellowstone Caldera. Journal of Geophysical Research, 1990, 95, 19839-19856.	3.3	26
60	Singularity and Branching: A Path-Following Formalism For Geophysical Inverse Problems. Geophysical Journal International, 1994, 119, 809-830.	2.4	24
61	Bounding seismic velocities using a tomographic method. Geophysics, 1991, 56, 472-482.	2.6	24
62	Inversion of pressure observations: an integral formulation. Journal of Hydrology, 2001, 253, 27-40.	5.4	23
63	Formal inversion of ISC arrival times for mantle P-velocity structure. Geophysical Journal International, 1993, 113, 586-606.	2.4	22
64	Fluid pressure arrival-time tomography: Estimation and assessment in the presence of inequality constraints with an application to production at the Krechba field, Algeria. Geophysics, 2010, 75, O39-O55.	2.6	22
65	Monitoring production using surface deformation: the Hijiori test site and the Okuaizu geothermal field, Japan. Geothermics, 2002, 31, 303-342.	3.4	21
66	Characterization of the geothermal system beneath the Northwest Geysers steam field, California, from seismicity and velocity patterns. Geothermics, 1995, 24, 471-487.	3.4	18
67	Inversion of Waveforms For Extreme Source Models With an application to the Isotropic Moment Tensor Component. Geophysical Journal International, 1989, 97, 1-18.	2.4	16
68	Asymptotics, Saturation Fronts, and High Resolution Reservoir Characterization. Transport in Porous Media, 2001, 42, 315-350.	2.6	16
69	Estimation of flow properties using surface deformation and head data: A trajectory-based approach. Water Resources Research, 2004, 40, .	4.2	16
70	Streamline-Based Time-Lapse-Seismic-Data Integration Incorporating Pressure and Saturation Effects. SPE Journal, 2017, 22, 1261-1279.	3.1	16
71	Changes in geophysical properties caused by fluid injection into porous rocks: analytical models. Geophysical Prospecting, 2017, 65, 766-790.	1.9	16
72	Regularization and trade-off associated with nonlinear geophysical inverse problems: penalty homotopies. Inverse Problems, 1998, 14, 1033-1052.	2.0	15

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73	Computation of uniform wave forms using complex rays. Physical Review E, 2006, 73, 036704.	2.1	15
74	Groups, algebras, and the non-linearity of geophysical inverse problems. Geophysical Journal International, 1997, 131, 9-23.	2.4	14
75	Characterization of a fracture zone using seismic attributes at the In Salah CO_2 storage project. Interpretation, 2015, 3, SM37-SM46.	1.1	14
76	Using Sentinel-1 and GRACE satellite data to monitor the hydrological variations within the Tulare Basin, California. Scientific Reports, 2022, 12, 3867.	3.3	14
77	Extremal inversion of static earth displacements due to volume sources. Geophysical Journal International, 1985, 80, 223-239.	2.4	13
78	On the propagation of a coupled saturation and pressure front. Water Resources Research, 2011, 47, .	4.2	13
79	Calculating Trajectories Associated With Solute Transport in a Heterogeneous Medium. Water Resources Research, 2018, 54, 6890-6908.	4.2	13
80	Advanced monitoring and simulation for underground gas storage risk management. Journal of Petroleum Science and Engineering, 2022, 208, 109763.	4.2	13
81	Joint inversion of seismic AVO and EM data for gas saturation estimation using a sampling€based stochastic model. , 2004, , .		12
82	The Seismic Response to Injected Carbon Dioxide: Comparing Observations to Estimates Based Upon Fluid Flow Modeling. Journal of Geophysical Research: Solid Earth, 2019, 124, 6880-6907.	3.4	12
83	Reservoir characterization based upon the onset of time-lapse amplitude changes. Geophysics, 2015, 80, M1-M14.	2.6	11
84	Invariance, groups, and non-uniqueness: the discrete case. Geophysical Journal International, 2007, 168, 473-490.	2.4	10
85	Modelling broad-band poroelastic propagation using an asymptotic approach. Geophysical Journal International, 2009, 179, 299-318.	2.4	10
86	History Matching of Frequent Seismic Surveys Using Seismic Onset Times at the Peace River Field, Canada. , 2017, , .		10
87	An Extended Trajectory Mechanics Approach for Calculating the Path of a Pressure Transient: Derivation and Illustration. Water Resources Research, 2018, 54, 2642-2660.	4.2	10
88	Imaging of a fluid injection process using geophysical data â€" A didactic example. Geophysics, 2020, 85, W1-W16.	2.6	10
89	Acoustic crosswell imaging using asymptotic waveforms. Geophysics, 2000, 65, 1569-1582.	2.6	10
90	An algebraic formulation of geophysical inverse problems. Geophysical Journal International, 2000, 142, 970-990.	2.4	9

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91	Zeroth-order inversion of transient pressure observations. Inverse Problems, 2008, 24, 025013.	2.0	9
92	Modelling flow in a pressure-sensitive, heterogeneous medium. Geophysical Journal International, 2009, 179, 972-989.	2.4	8
93	Utilizing crosswell, single well and pressure transient tests for characterizing fractured gas reservoirs. The Leading Edge, 1996, 15, 951-956.	0.7	8
94	A transformational approach to geophysical inverse problems. Geophysical Journal International, 1995, 123, 183-212.	2.4	7
95	Extremal inversion of travel-time residuals. Bulletin of the Seismological Society of America, 1986, 76, 1323-1345.	2.3	7
96	An asymptotic solution for two-phase flow in the presence of capillary forces. Water Resources Research, 2004, 40, .	4.2	6
97	Modelling quasi-static poroelastic propagation using an asymptotic approach. Geophysical Journal International, 2008, 173, 1119-1135.	2.4	6
98	Asymptotics, streamlines, and reservoir modeling: A pathway to production tomography. The Leading Edge, 2001, 20, 1164-1171.	0.7	5
99	The search for magma reservoirs in Long Valley Caldera: single versus distributed sources. Geological Society Special Publication, 2006, 269, 173-180.	1.3	5
100	Seismic imaging of reservoir flow properties: Resolving water influx and reservoir permeability. Geophysics, 2008, 73, O1-O13.	2.6	5
101	Study of seismic diffractions caused by a fracture zone at In Salah carbon dioxide storage project. International Journal of Greenhouse Gas Control, 2015, 42, 75-86.	4.6	5
102	Validating compositional fluid flow simulations using 4D seismic interpretation and vice versa in the SECARB Early Testâ€"A critical review. International Journal of Greenhouse Gas Control, 2019, 82, 162-174.	4.6	5
103	On the use of adjoints in the inversion of observed quasi-static deformation. Geophysical Journal International, 2020, 224, 896-908.	2.4	5
104	Monitoring the fate of injected CO_2 using geodetic techniques. The Leading Edge, 2020, 39, 29-37.	0.7	5
105	Seismic source representation in orthogonal functions. Geophysical Journal International, 1990, 102, 531-535.	2.4	4
106	Degeneracy, singularity and multiple solutions in geophysical inversion. Geophysical Journal International, 1993, 113, 434-448.	2.4	4
107	An integrated approach for characterizing fractured reservoirs. Geological Society Special Publication, 1998, 147, 193-208.	1.3	4
108	Intersections, ideals, and inversion. Inverse Problems, 1999, 15, 1573-1602.	2.0	4

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109	On fluid flow in a heterogeneous medium under nonisothermal conditions. Water Resources Research, 2010, 46, .	4.2	4
110	Dispersive transport and symmetry of the dispersion tensor in porous media. Physical Review E, 2017, 95, 043103.	2.1	4
111	Broad band trajectory mechanics. Geophysical Journal International, 0, , .	2.4	4
112	An extended trajectory-mechanics approach for calculating the path of a pressure transient: travel-time tomography. Hydrology and Earth System Sciences, 2019, 23, 4541-4560.	4.9	4
113	Zeroth–order asymptotics: Waveform inversion of the lowest degree. Geophysics, 2003, 68, 614-628.	2.6	4
114	Joint use of crosswell EM and seismics for monitoring CO_2 storage at the Containment and Monitoring Institute Field Site (CaMI): Baseline surveys and preliminary results. , 2020, , .		4
115	Trajectory-based modelling of broad-band electromagnetic wavefields. Geophysical Journal International, 2007, 168, 949-963.	2.4	3
116	On the propagation of a disturbance in a heterogeneous, deformable, porous medium saturated with two fluid phases. Geophysics, 2012, 77, L25-L44.	2.6	3
117	On the propagation of a disturbance in a smoothly varying heterogeneous porous medium saturated with three fluid phases. Geophysics, 2013, 78, L1-L26.	2.6	3
118	Rapid estimation of earthquake locations using waveform traveltimes. Geophysical Journal International, 2019, 217, 1727-1741.	2.4	3
119	The correspondence between gravitational attraction and surface displacement due to volume expansion. Geophysical Journal International, 1987, 89, 749-754.	2.4	2
120	Hydrologic Imaging of Fractured Rock. Materials Research Society Symposia Proceedings, 1994, 353, 379.	0.1	2
121	Improving thin-bed resolution: Application of a sparse-layer inversion on 3D seismic observations from the In Salah carbon dioxide storage project. Interpretation, 2015, 3, SS65-SS71.	1.1	2
122	Estimating fluid-induced stress change from observed deformation. Geophysical Journal International, 0, , ggw472.	2.4	2
123	Trajectory–based modeling of fluid transport in a medium with smoothly varying heterogeneity. Water Resources Research, 2016, 52, 2618-2646.	4.2	2
124	Using onset times from frequent seismic surveys to understand fluid flow at the Peace River Field, Canada. Geophysical Journal International, 2020, 223, 1610-1629.	2.4	2
125	Adjoint–Based Inversion of Geodetic Data for Sources of Deformation and Strain. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB021735.	3.4	2
126	Wellbore integrity investigation using seismic tube-wave and time-domain reflectometry: Laboratory modeling. , 2018, , .		2

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127	Determination of porosity and saturation using seismic waveform inversion. Studia Geophysica Et Geodaetica, 2007, 51, 119-140.	0.5	1
128	On the propagation of a quasi€static disturbance in a heterogeneous, deformable, and porous medium with pressure€dependent properties. Water Resources Research, 2011, 47, .	4.2	1
129	A trajectory mechanics approach for the study of wave propagation in an anisotropic elastic medium. Geophysical Journal International, 2019, 219, 1885-1899.	2.4	1
130	Seismicity and Stress Associated With a Fluid€Driven Fracture: Estimating the Evolving Geometry. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020190.	3.4	1
131	Interferometric SAR modelling of near surface data to improve geological model in the Surat Basin, Australia. Journal of Applied Geophysics, 2021, 194, 104444.	2.1	1
132	Trajectory-Based Methods for Modeling and Characterization. Studies in Computational Intelligence, 2008, , 69-103.	0.9	1
133	Monitoring natural gas storage using Synthetic Aperture Radar: Are the residuals informative?. Geophysical Journal International, 0, , .	2.4	1
134	Fluid pressure arrival time tomography: Estimation and assessment in the presence of inequality constraints, with an application to production at the Krechba field, Algeria. , 2009, , .		1
135	Characterization of a fracture zone using seismic attributes at the In Salah CO_2 storage project. , 2015, , .		1
136	Seismic monitoring of well integrity. The Leading Edge, 2022, 41, 134-139.	0.7	1
137	From Surface Deformation to Permeabiltiy â€" A Case Study. , 2010, , .		0
138	Multi€geometry SAR Interferometry for CO2 sequestration monitoring. , 2011, , .		0
139	Monitoring the Deformation Associated with the Geological Storage of CO2. , 2019, , 93-114.		0
140	An extended trajectory-mechanics approach for calculating two-phase flow paths. AIP Advances, 2020, 10, 095205.	1.3	0
141	Using onset times from frequent geophysical surveys to understand reservoir fluid flow and to estimate flow properties. First Break, 2021, 39, 53-60.	0.4	0
142	Using geodetic data in geothermal areas. The Leading Edge, 2020, 39, 883-892.	0.7	0
143	Enhanced Multi-Dimensional Inversion Through Target-Specific Inversion Parameter Bounds With an Application to Crosswell Electromagnetic for Sequestration Monitoring. Frontiers in Earth Science, 2022, 10, .	1.8	0