

# Giorgio Cassiani

## List of Publications by Year in descending order

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112  
papers

4,255  
citations

101543

36  
h-index

123424

61  
g-index

114  
all docs

114  
docs citations

114  
times ranked

3102  
citing authors

#	ARTICLE	IF	CITATIONS
1	Vadose zone flow model parameterisation using cross-borehole radar and resistivity imaging. Journal of Hydrology, 2002, 267, 147-159.	5.4	332
2	Relationship between spectral induced polarization and hydraulic properties of saturated and unsaturated sandstone. Water Resources Research, 2005, 41, .	4.2	265
3	An overview of the spectral induced polarization method for near-surface applications. Near Surface Geophysics, 2012, 10, 453-468.	1.2	233
4	A saline trace test monitored via time-lapse surface electrical resistivity tomography. Journal of Applied Geophysics, 2006, 59, 244-259.	2.1	192
5	Managing the effects of multiple stressors on aquatic ecosystems under water scarcity. The GLOBAQUA project. Science of the Total Environment, 2015, 503-504, 3-9.	8.0	161
6	A 3D ERT study of solute transport in a large experimental tank. Journal of Applied Geophysics, 2002, 49, 211-229.	2.1	146
7	A saline tracer test monitored via both surface and cross-borehole electrical resistivity tomography: Comparison of time-lapse results. Journal of Applied Geophysics, 2012, 79, 6-16.	2.1	90
8	Partial root-zone drying irrigation in orange orchards: Effects on water use and crop production characteristics. European Journal of Agronomy, 2017, 82, 190-202.	4.1	82
9	An updated ground thermal properties database for GSHP applications. Geothermics, 2020, 85, 101758.	3.4	82
10	Effective permittivity of porous media: a critical analysis of the complex refractive index model. Geophysical Prospecting, 2008, 56, 715-727.	1.9	79
11	Monitoring and modelling of soil-plant interactions: the joint use of ERT, sap flow and eddy covariance data to characterize the volume of an orange tree root zone. Hydrology and Earth System Sciences, 2015, 19, 2213-2225.	4.9	76
12	Characterization of a dismissed landfill via electrical resistivity tomography and mise-à-la-masse method. Journal of Applied Geophysics, 2013, 98, 1-10.	2.1	74
13	An experiment of non-invasive characterization of the vadose zone via water injection and cross-hole time-lapse geophysical monitoring. Near Surface Geophysics, 2007, 5, 183-194.	1.2	71
14	Modeling unsaturated flow in a layered formation under quasi-steady state conditions using geophysical data constraints. Advances in Water Resources, 2005, 28, 467-477.	3.8	70
15	Calibration of a Vadose Zone Model Using Water Injection Monitored by GPR and Electrical Resistance Tomography. Vadose Zone Journal, 2008, 7, 215-226.	2.2	69
16	Mode misidentification in Rayleigh waves: Ellipticity as a cause and a cure. Geophysics, 2013, 78, EN17-EN28.	2.6	68
17	Spectral induced polarization for the characterization of free-phase hydrocarbon contamination of sediments with low clay content. Near Surface Geophysics, 2009, 7, 547-562.	1.2	66
18	Monitoring the hydrologic behaviour of a mountain slope via time-lapse electrical resistivity tomography. Near Surface Geophysics, 2009, 7, 475-486.	1.2	66

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19	A geostatistical framework for incorporating seismic tomography auxiliary data into hydraulic conductivity estimation. <i>Journal of Hydrology</i> , 1998, 206, 58-74.	5.4	62
20	Multilayer ground-penetrating radar guided waves in shallow soil layers for estimating soil water content. <i>Geophysics</i> , 2007, 72, J17-J29.	2.6	62
21	Combined geophysical surveys for the characterization of a reconstructed river embankment. <i>Engineering Geology</i> , 2016, 211, 74-84.	6.3	60
22	Shear wave profiles from surface wave inversion: the impact of uncertainty on seismic site response analysis. <i>Journal of Geophysics and Engineering</i> , 2011, 8, 162-174.	1.4	58
23	Noninvasive characterization of the Trecate (Italy) crude-oil contaminated site: links between contamination and geophysical signals. <i>Environmental Science and Pollution Research</i> , 2014, 21, 8914-8931.	5.3	55
24	Coupled and uncoupled hydrogeophysical inversions using ensemble Kalman filter assimilation of ERT-monitored tracer test data. <i>Water Resources Research</i> , 2015, 51, 3277-3291.	4.2	55
25	Hydraulics of a partially penetrating well: solution to a mixed-type boundary value problem via dual integral equations. <i>Journal of Hydrology</i> , 1998, 211, 100-111.	5.4	54
26	Incorporating Auxiliary Geophysical Data into Ground-Water Flow Parameter Estimation. <i>Ground Water</i> , 1997, 35, 79-91.	1.3	50
27	Assessment of local hydraulic properties from electrical resistivity tomography monitoring of a three-dimensional synthetic tracer test experiment. <i>Water Resources Research</i> , 2011, 47, .	4.2	46
28	Use of small scale electrical resistivity tomography to identify soil-root interactions during deficit irrigation. <i>Journal of Hydrology</i> , 2018, 556, 310-324.	5.4	46
29	Flowing partially penetrating well: solution to a mixed-type boundary value problem. <i>Advances in Water Resources</i> , 1999, 23, 59-68.	3.8	43
30	River embankment characterization: The joint use of geophysical and geotechnical techniques. <i>Journal of Applied Geophysics</i> , 2014, 110, 5-22.	2.1	43
31	Conceptualization of Water Flow Pathways in Agricultural Terraced Landscapes. <i>Land Degradation and Development</i> , 2018, 29, 651-662.	3.9	43
32	A tracer test in a shallow heterogeneous aquifer monitored via time-lapse surface electrical resistivity tomography. <i>Geophysics</i> , 2010, 75, WA61-WA73.	2.6	42
33	Noninvasive Monitoring of Soil Static Characteristics and Dynamic States: A Case Study Highlighting Vegetation Effects on Agricultural Land. <i>Vadose Zone Journal</i> , 2012, 11, vzt2011.0195.	2.2	42
34	Identification of lateral discontinuities via multi-offset phase analysis of surface wave data. <i>Geophysical Prospecting</i> , 2010, 58, 389-413.	1.9	40
35	Soil-plant interaction monitoring: Small scale example of an apple orchard in Trentino, North-Eastern Italy. <i>Science of the Total Environment</i> , 2016, 543, 851-861.	8.0	39
36	Combined estimation of effective electrical conductivity and permittivity for soil monitoring. <i>Water Resources Research</i> , 2011, 47, .	4.2	37

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37	Statistical multioffset phase analysis for surface-wave processing in laterally varying media. <i>Geophysics</i> , 2011, 76, U1-U11.	2.6	37
38	Saturated area dynamics and streamflow generation from coupled surface–subsurface simulations and field observations. <i>Advances in Water Resources</i> , 2013, 59, 196-208.	3.8	36
39	Small-scale characterization of vine plant root water uptake via 3-D electrical resistivity tomography and mise-À-la-masse method. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 5427-5444.	4.9	35
40	Vertical Radar Profiles for the Characterization of Deep Vadose Zones. <i>Vadose Zone Journal</i> , 2004, 3, 1093-1105.	2.2	34
41	A combination of the Hashin-Shtrikman bounds aimed at modelling electrical conductivity and permittivity of variably saturated porous media. <i>Geophysical Journal International</i> , 2010, 180, 225-237.	2.4	33
42	Refraction microtremors: Data analysis and diagnostics of key hypotheses. <i>Geophysics</i> , 2011, 76, MA11-MA20.	2.6	33
43	Hydrogeophysical characterization and monitoring of the hyporheic and riparian zones: The Vermigliana Creek case study. <i>Science of the Total Environment</i> , 2019, 648, 1105-1120.	8.0	32
44	An iterative particle filter approach for coupled hydro-geophysical inversion of a controlled infiltration experiment. <i>Journal of Computational Physics</i> , 2015, 283, 37-51.	3.8	30
45	Electrical properties of partially saturated sandstones: Novel computational approach with hydrogeophysical applications. <i>Water Resources Research</i> , 2005, 41, .	4.2	29
46	Assessing the extent of citrus trees root apparatus under deficit irrigation via multi-method geo-electrical imaging. <i>Scientific Reports</i> , 2019, 9, 9913.	3.3	29
47	Plant–soil interactions in salt marsh environments: Experimental evidence from electrical resistivity tomography in the Venice Lagoon. <i>Geophysical Research Letters</i> , 2014, 41, 6160-6166.	4.0	28
48	Aging of Oil/Gas-Bearing Sediments, Their Compressibility, and Subsidence. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2001, 127, 926-938.	3.0	27
49	Time-lapse monitoring of root water uptake using electrical resistivity tomography and mise-À-la-masse: a vineyard infiltration experiment. <i>Soil</i> , 2020, 6, 95-114.	4.9	27
50	Focused inversion of vertical radar profile (VRP) travelttime data. <i>Geophysics</i> , 2012, 77, H9-H18.	2.6	26
51	Coupled inverse modeling of a controlled irrigation experiment using multiple hydro-geophysical data. <i>Advances in Water Resources</i> , 2015, 82, 150-165.	3.8	26
52	A strain-rate-dependent modified Cam-Clay model for the simulation of soil/rock compaction. <i>Geomechanics for Energy and the Environment</i> , 2017, 11, 42-51.	2.5	26
53	Local- and Plot-Scale Measurements of Soil Moisture: Time and Spatially Resolved Field Techniques in Plain, Hill and Mountain Sites. <i>Water (Switzerland)</i> , 2017, 9, 706.	2.7	23
54	Geophysical investigations unravel the vestiges of ancient meandering channels and their dynamics in tidal landscapes. <i>Scientific Reports</i> , 2018, 8, 1708.	3.3	23

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55	A field-scale remediation of residual light non-aqueous phase liquid (LNAPL): chemical enhancers for pump and treat. <i>Environmental Science and Pollution Research</i> , 2021, 28, 35286-35296.	5.3	23
56	Vertical radar profiling for the assessment of landfill capping effectiveness. <i>Near Surface Geophysics</i> , 2008, 6, 133-142.	1.2	22
57	On the use of spatially distributed, time-lapse microgravity surveys to inform hydrological modeling. <i>Water Resources Research</i> , 2015, 51, 7270-7288.	4.2	22
58	Time-lapse Mise-À-la-Masse measurements and modeling for tracer test monitoring in a shallow aquifer. <i>Journal of Hydrology</i> , 2018, 561, 461-477.	5.4	22
59	Geophysical characterization of a small pre-Alpine catchment. <i>Journal of Applied Geophysics</i> , 2012, 80, 32-42.	2.1	21
60	Characterization of the Vajont landslide (North-Eastern Italy) by means of reflection and surface wave seismics. <i>Journal of Applied Geophysics</i> , 2016, 128, 58-67.	2.1	21
61	Single-well reactive tracer test and stable isotope analysis for determination of microbial activity in a fast hydrocarbon-contaminated aquifer. <i>Environmental Pollution</i> , 2004, 129, 321-330.	7.5	20
62	Frequency-dependent multi-offset phase analysis of surface waves: an example of high-resolution characterization of a riparian aquifer. <i>Geophysical Prospecting</i> , 2016, 64, 102-111.	1.9	20
63	Monitoring Soil-plant Interactions in an Apple Orchard Using 3D Electrical Resistivity Tomography. <i>Procedia Environmental Sciences</i> , 2013, 19, 394-402.	1.4	19
64	An Integrated Approach Supporting Remediation of an Aquifer Contaminated with Chlorinated Solvents by a Combination of Adsorption and Biodegradation. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 4318.	2.5	18
65	From surface wave inversion to seismic site response prediction: Beyond the 1D approach. <i>Soil Dynamics and Earthquake Engineering</i> , 2012, 36, 38-51.	3.8	17
66	Well Hydraulics with the Weber-Goldstein Transforms. <i>Transport in Porous Media</i> , 1997, 29, 225-246.	2.6	16
67	Soil damping influence on seismic ground response: A parametric analysis for weak to moderate ground motion. <i>Soil Dynamics and Earthquake Engineering</i> , 2015, 79, 71-79.	3.8	16
68	Measuring and modeling water-related soil-vegetation feedbacks in a fallow plot. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 1105-1118.	4.9	15
69	Delineation of hydrocarbon contaminants with multi-frequency complex conductivity imaging. <i>Science of the Total Environment</i> , 2021, 768, 144997.	8.0	15
70	Constrained optimization of spatial sampling in salt contaminated coastal farmland using EMI and continuous simulated annealing. <i>Procedia Environmental Sciences</i> , 2011, 7, 234-239.	1.4	14
71	Comparing ERT- and scaling-based approaches to parameterize soil hydraulic properties for spatially distributed model applications. <i>Advances in Water Resources</i> , 2019, 126, 155-167.	3.8	14
72	Contamination presence and dynamics at a polluted site: Spatial analysis of integrated data and joint conceptual modeling approach. <i>Journal of Contaminant Hydrology</i> , 2022, 248, 104026.	3.3	14

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73	The Influence of Subsoil Structure and Acquisition Parameters in MASW Mode Mis-identification. Journal of Environmental and Engineering Geophysics, 2014, 19, 87-99.	0.5	13
74	Double-array refraction microtremors. Journal of Applied Geophysics, 2015, 121, 31-41.	2.1	13
75	Flow dynamics in hyper-saline aquifers: hydro-geophysical monitoring and modeling. Hydrology and Earth System Sciences, 2017, 21, 1439-1454.	4.9	13
76	UNSATURATED ZONE PROCESSES. , 2006, , 75-116.		13
77	CHARACTERIZATION OF HETEROGENEITY IN UNSATURATED SANDSTONE USING BOREHOLE LOGS AND CROSS-BOREHOLE TOMOGRAPHY. , 2004, , 129-138.		12
78	Vertical Radar Profiles for the Characterization of Deep Vadose Zones. Vadose Zone Journal, 2004, 3, 1093-1105.	2.2	12
79	Subsidence risk in Venice and nearby areas, Italy, owing to offshore gas fields; a stochastic analysis. Environmental and Engineering Geoscience, 2000, 6, 115-128.	0.9	11
80	A note on in situ estimates of sorption using push-pull tests. Water Resources Research, 2005, 41, .	4.2	11
81	OBS Data Analysis to Quantify Gas Hydrate and Free Gas in the South Shetland Margin (Antarctica). Energies, 2018, 11, 3290.	3.1	11
82	Analysis of time-lapse data error in complex conductivity imaging to alleviate anthropogenic noise for site characterization. Geophysics, 2019, 84, B181-B193.	2.6	11
83	Geophysical and Sedimentological Investigations Integrate Remote-Sensing Data to Depict Geometry of Fluvial Sedimentary Bodies: An Example from Holocene Point-Bar Deposits of the Venetian Plain (Italy). Remote Sensing, 2020, 12, 2568.	4.0	11
84	Small Local Earthquake Detection Using Low-Cost MEMS Accelerometers: Examples in Northern and Central Italy. The Seismic Record, 2021, 1, 20-26.	3.1	11
85	Frequency domain electromagnetic induction imaging: An effective method to see inside a capped landfill. Waste Management, 2022, 144, 29-40.	7.4	11
86	ModelPROBE: model driven soil probing, site assessment and evaluation. Reviews in Environmental Science and Biotechnology, 2009, 8, 131-136.	8.1	10
87	A new method for the interpretation of the constant-head well permeameter. Journal of Hydrology, 1998, 210, 11-20.	5.4	9
88	Statistical estimation of the relative efficiency of natural attenuation mechanisms in contaminated aquifers. Stochastic Environmental Research and Risk Assessment, 2004, 18, 339-350.	4.0	9
89	Impact of genesis and abandonment processes of a fluvial meander on geometry and grain-size distribution of the associated point bar (Venetian Plain, Italy). Marine and Petroleum Geology, 2021, 127, 104951.	3.3	9
90	Title is missing!. Mathematical Geosciences, 1998, 30, 57-76.	0.9	8

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91	Reply to comment on "Shear wave profile from surface wave inversion: the impact of uncertainty on seismic site response analysis". Journal of Geophysics and Engineering, 2012, 9, 244-246.	1.4	8
92	Borehole effect causing artefacts in cross-borehole electrical resistivity tomography: A hydraulic fracturing case study. Near Surface Geophysics, 2020, 18, 445-462.	1.2	8
93	Sensitivity of Intrinsic Permeability to Electrokinetic Coupling in Shaly and Clayey Porous Media. Transport in Porous Media, 2010, 83, 681-697.	2.6	7
94	2016 Central Italy Earthquakes Recorded by Low-Cost MEMS-Distributed Arrays. Seismological Research Letters, 2019, 90, 672-682.	1.9	7
95	APPLIED HYDROGEOPHYSICS. , 2006, , 1-8.		7
96	A Stochastic Analysis of Cross-Hole Ground-Penetrating Radar Zero-Offset Profiles for Subsurface Characterization. Vadose Zone Journal, 2012, 11, vj2011.0078.	2.2	6
97	Application of surface waves for detecting lateral variations: buried inclined plane. Near Surface Geophysics, 2019, 17, 501-531.	1.2	6
98	Surface wave tomography using 3D active-source seismic data. Geophysics, 2021, 86, EN13-EN26.	2.6	6
99	Geophysical Methods for Environmental Studies. International Journal of Geophysics, 2013, 2013, 1-2.	1.1	5
100	Multidisciplinary Analysis and Modelling of a River Embankment Affected by Piping. Lecture Notes in Civil Engineering, 2019, , 234-244.	0.4	5
101	Tackling Lateral Variability Using Surface Waves: A Tomography-Like Approach. Surveys in Geophysics, 2021, 42, 317-338.	4.6	5
102	Frequency-Domain Electromagnetic Mapping of an Abandoned Waste Disposal Site: A Case in Sardinia (Italy). Remote Sensing, 2022, 14, 878.	4.0	5
103	Detection of lateral discontinuities via surface waves analysis: A case study at a derelict industrial site. Journal of Applied Geophysics, 2019, 164, 65-74.	2.1	4
104	Combining Models of Root-Zone Hydrology and Geoelectrical Measurements: Recent Advances and Future Prospects. Frontiers in Water, 2021, 3, .	2.3	4
105	Ground-based remote sensing of the shallow subsurface: Geophysical methods for environmental applications. Developments in Earth Surface Processes, 2020, , 55-89.	2.8	3
106	2016 Central Italy Earthquakes: comparison between GPS signals and low-cost distributed MEMS arrays. Advances in Geosciences, 0, 51, 1-14.	12.0	3
107	From electromagnetic to sediment textural maps: an integrated approach to unravel the intra-point-bar variability of sediment properties. Journal of the Geological Society, 0, , jgs2021-156.	2.1	3
108	Multi-drive level Vibroseis test to evaluate the non-linear response of soft soils. Soil Dynamics and Earthquake Engineering, 2021, 149, 106861.	3.8	1

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109	Model Response Curves and Surveying Aspects of 2D Cross-Hole MMR. , 2009, , .		0
110	Integrated seismic characterization for deep engineering targets: active and passive surface waves, reflection and refraction near-surface modelling from a single 2D acquisition. , 2017, , .		0
111	Challenges of data integration in near-surface applications. , 2017, , .		0
112	Surface wave tomography using dense 3D data around the Scrovegni Chapel in Padua, Italy. Scientific Reports, 2022, 12, .	3.3	0