Juan Fernandez-Martinez

List of Publications by Year
in descending order

127	2,392	218677	243625
papers	citations	26 h-index	44 g-index

131	131	131	1769
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	PSO: A powerful algorithm to solve geophysical inverse problems. Journal of Applied Geophysics, 2010, 71, 13-25.	2.1	163
2	Stochastic Stability Analysis of the Linear Continuous and Discrete PSO Models. IEEE Transactions on Evolutionary Computation, 2011, 15, 405-423.	10.0	133
3	On the topography of the cost functional in linear and nonlinear inverse problems. Geophysics, 2012, 77, W1-W15.	2.6	87
4	The PSO family: deduction, stochastic analysis and comparison. Swarm Intelligence, 2009, 3, 245.	2.2	86
5	Gravity inversion and uncertainty assessment of basement relief via Particle Swarm Optimization. Journal of Applied Geophysics, 2015, 116, 180-191.	2.1	85
6	From Bayes to Tarantola: New insights to understand uncertainty in inverse problems. Journal of Applied Geophysics, 2013, 98, 62-72.	2.1	76
7	Sequence stratigraphy of source rocks applied to the study of the Kim meridgian/Tithonian in the north-west European shelf (Dorset/UK, Yorkshire/UK and Boulonnais/France). Marine and Petroleum Geology, 1995, 12, 177-194.	3.3	68
8	Particle swarm optimization applied to solving and appraising the streaming-potential inverse problem. Geophysics, 2010, 75, WA3-WA15.	2.6	64
9	Adherence to a Mediterranean Diet Influences the Fecal Metabolic Profile of Microbial-Derived Phenolics in a Spanish Cohort of Middle-Age and Older People. Journal of Agricultural and Food Chemistry, 2017, 65, 586-595.	5.2	63
10	The Generalized PSO: A New Door to PSO Evolution. Journal of Artificial Evolution and Applications, 2008, 2008, 1-15.	1.8	63
11	Feasibility Analysis of the Use of Binary Genetic Algorithms as Importance Samplers Application toÂaÂ1-D DC Resistivity Inverse Problem. Mathematical Geosciences, 2008, 40, 375-408.	2.4	56
12	Using artificial intelligence methods to speed up drug discovery. Expert Opinion on Drug Discovery, 2019, 14, 769-777.	5.0	54
13	NK-cell Editing Mediates Epithelial-to-Mesenchymal Transition via Phenotypic and Proteomic Changes in Melanoma Cell Lines. Cancer Research, 2018, 78, 3913-3925.	0.9	53
14	Assessing concrete strength with rebound hammer: review of key issues and ideas for more reliable conclusions. Materials and Structures/Materiaux Et Constructions, 2014, 47, 1589-1604.	3.1	52
15	3D gravity inversion and uncertainty assessment of basement relief via Particle Swarm Optimization. Journal of Applied Geophysics, 2017, 139, 338-350.	2.1	52
16	Theoretical analysis of particle swarm trajectories through a mechanical analogy. International Journal of Computational Intelligence Research, 2008, 4, .	0.3	51
17	Innovations in Genomics and Big Data Analytics for Personalized Medicine and Health Care: A Review. International Journal of Molecular Sciences, 2022, 23, 4645.	4.1	45
18	Reservoir characterization and inversion uncertainty via a family of particle swarm optimizers. Geophysics, 2012, 77, M1-M16.	2.6	43

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19	The effect of noise and Tikhonov's regularization in inverse problems. Part I: The linear case. Journal of Applied Geophysics, 2014, 108, 176-185.	2.1	42
20	The effect of noise and Tikhonovâ€™s regularization in inverse problems. Part II: The nonlinear case. Journal of Applied Geophysics, 2014, 108, 186-193.	2.1	40
21	Tree height prediction approaches for uneven-aged beech forests in northwestern Spain. Forest Ecology and Management, 2013, 307, 63-73.	3.2	38
22	Supervised Classification by Filter Methods and Recursive Feature Elimination Predicts Risk of Radiotherapy-Related Fatigue in Patients with Prostate Cancer. Cancer Informatics, 2014, 13, CIN.S19745.	1.9	38
23	Scalable uncertainty estimation for nonlinear inverse problems using parameter reduction, constraint mapping, and geometric sampling: Marine controlled-source electromagnetic examples. Geophysics, 2011, 76, F263-F281.	2.6	36
24	Convergence and stochastic stability analysis of particle swarm optimization variants with generic parameter distributions. Applied Mathematics and Computation, 2014, 249, 286-302.	2.2	33
25	On the prediction of Hodgkin lymphoma treatment response. Clinical and Translational Oncology, 2015, 17, 612-619.	2.4	28
26	Uncertainty assessment for inverse problems in high dimensional spaces using particle swarm optimization and model reduction techniques. Mathematical and Computer Modelling, 2011, 54, 2889-2899.	2.0	27
27	STOCHASTIC STABILITY AND NUMERICAL ANALYSIS OF TWO NOVEL ALGORITHMS OF THE PSO FAMILY: PP-GPSO AND RR-GPSO. International Journal on Artificial Intelligence Tools, 2012, 21, 1240011.	1.0	26
28	mGluR5 mediates post-radiotherapy fatigue development in cancer patients. Translational Psychiatry, 2018, 8, 110.	4.8	26
29	MMP11 expression in intratumoral inflammatory cells in breast cancer. Histopathology, 2019, 75, 916-930.	2.9	26
30	Model reduction and uncertainty analysis in inverse problems. The Leading Edge, 2015, 34, 1006-1016.	0.7	25
31	Design of Biomedical Robots for Phenotype Prediction Problems. Journal of Computational Biology, 2016, 23, 678-692.	1.6	25
32	Detection of Breast Cancer Using Infrared Thermography and Deep Neural Networks. Lecture Notes in Computer Science, 2019, , 514-523.	1.3	25
33	Genomic risk prediction of aromatase inhibitorâ€related arthralgia in patients with breast cancer using a novel machineâ€learning algorithm. Cancer Medicine, 2018, 7, 240-253.	2.8	23
34	The curse of dimensionality in inverse problems. Journal of Computational and Applied Mathematics, 2020, 369, 112571.	2.0	22
35	Sensitivity analysis of gene ranking methods in phenotype prediction. Journal of Biomedical Informatics, 2016, 64, 255-264.	4.3	20
36	Genomic data integration in chronic lymphocytic leukemia. Journal of Gene Medicine, 2017, 19, e2936.	2.8	20

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37	FOLD PROFILER: A MATLABÂ®â€"based program for fold shape classification. Computers and Geosciences, 2006, 32, 102-108.	4.2	19
38	Particle Swarm Optimization (PSO): a simple and powerful algorithm family for geophysical inversion. , 2008, , .		19
39	Fast learning optimized prediction methodology (FLOPRED) for protein secondary structure prediction. Journal of Molecular Modeling, 2012, 18, 4275-4289.	1.8	18
40	GravPSO2D: A Matlab package for 2D gravity inversion in sedimentary basins using the Particle Swarm Optimization algorithm. Computers and Geosciences, 2021, 146, 104653.	4.2	17
41	A Novel Peptide for Simultaneously Enhanced Treatment of Head and Neck Cancer and Mitigation of Oral Mucositis. PLoS ONE, 2016, 11, e0152995.	2.5	17
42	High-Dimensional Analysis of Single-Cell Flow Cytometry Data Predicts Relapse in Childhood Acute Lymphoblastic Leukaemia. Cancers, 2021, 13, 17.	3.7	17
43	A methodology for converting traditional vertical electrical soundings into 2D resistivity models: Application to the SaÃ¯ss basin, Morocco. Geophysics, 2011, 76, B225-B236.	2.6	16
44	How to design a powerful family of particle swarm optimizers for inverse modelling. Transactions of the Institute of Measurement and Control, 2012, 34, 705-719.	1.7	15
45	Relationship of Mitochondrial Enzymes to Fatigue Intensity in Men With Prostate Cancer Receiving External Beam Radiation Therapy. Biological Research for Nursing, 2016, 18, 274-280.	1.9	14
46	Particle Swarm Optimization and Uncertainty Assessment in Inverse Problems. Entropy, 2018, 20, 96.	2.2	14
47	Estimation of water table from selfâ€potential data using particle swarm optimization (PSO). , 2008, , .		13
48	Electrical resistivity characterization and defect detection on a geosynthetic clay liner (GCL) on an experimental site. Journal of Applied Geophysics, 2013, 90, 19-26.	2.1	13
49	Analysis of clinical prognostic variables for Chronic Lymphocytic Leukemia decision-making problems. Journal of Biomedical Informatics, 2016, 60, 342-351.	4.3	13
50	Uncertainty analysis and probabilistic segmentation of electrical resistivity images: the 2D inverse problem. Geophysical Prospecting, 2017, 65, 112-130.	1.9	13
51	Data kit inversion and uncertainty analysis. Journal of Applied Geophysics, 2019, 161, 228-238.	2.1	13
52	Mathematical modelling of the process of continuous casting of aluminium and its alloys. Finite Elements in Analysis and Design, 1999, 33, 43-59.	3.2	12
53	Marine electromagnetic inverse solution appraisal and uncertainty using modelâ€derived basis functions and sparse geometric sampling. Geophysical Prospecting, 2011, 59, 947-965.	1.9	12
54	A NEW FRACTAL INTERPOLATION ALGORITHM AND ITS APPLICATIONS TO SELF-AFFINE SIGNAL RECONSTRUCTION. Fractals, 2011, 19, 355-365.	3.7	12

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55	An effective inversion strategy for fractalâ€“multifractal encoding of a storm in Boston. Journal of Hydrology, 2013, 496, 205-216.	5.4	12
56	Comparison of sparseâ€grid geometric and random sampling methods in nonlinear inverse solution uncertainty estimation. Geophysical Prospecting, 2013, 61, 28-41.	1.9	12
57	Linear geophysical inversion via the discrete cosine pseudoâ€inverse: application to potential fields. Geophysical Prospecting, 2017, 65, 94-111.	1.9	11
58	Analysis of defective pathways and drug repositioning in Multiple Sclerosis via machine learning approaches. Computers in Biology and Medicine, 2019, 115, 103492.	7.0	11
59	Sampling Defective Pathways in Phenotype Prediction Problems via the Holdout Sampler. Lecture Notes in Computer Science, 2018, , 24-32.	1.3	11
60	On the Role of Artificial Intelligence in Genomics to Enhance Precision Medicine . Pharmacogenomics and Personalized Medicine, 2020, Volume 13, 105-119.	0.7	10
61	Anisotropic Mean Traveltime Curves: AÂMethodÂtoÂEstimate Anisotropic Parameters from 2D Transmission Tomographic Data. Mathematical Geosciences, 2009, 41, 163-192.	2.4	9
62	Particle swarm optimisation: time for uniformisation. International Journal of Computing Science and Mathematics, 2013, 4, 16.	0.3	9
63	Impact of Microarray Preprocessing Techniques in Unraveling Biological Pathways. Journal of Computational Biology, 2016, 23, 957-968.	1.6	9
64	Prognostic networks for unraveling the biological mechanisms of Sarcopenia. Mechanisms of Ageing and Development, 2019, 182, 111129.	4.6	9
65	Robust Sampling of Defective Pathways in Alzheimerâ€™s Disease. Implications in Drug Repositioning. International Journal of Molecular Sciences, 2020, 21, 3594.	4.1	9
66	Anomaly shape inversion via model reduction and PSO. Computers and Geosciences, 2020, 140, 104492.	4.2	9
67	Sampling Defective Pathways in Phenotype Prediction Problems via the Fisherâ€™s Ratio Sampler. Lecture Notes in Computer Science, 2018, , 15-23.	1.3	9
68	A predictive algorithm to identify genes that discriminate individuals with fibromyalgia syndrome diagnosis from healthy controls. Journal of Pain Research, 2018, Volume 11, 2981-2990.	2.0	8
69	Comparative analysis of the solution of linear continuous inverse problems using different basis expansions. Journal of Applied Geophysics, 2015, 113, 92-102.	2.1	7
70	Exploring the Uncertainty Space of Ensemble Classifiers in Face Recognition. International Journal of Pattern Recognition and Artificial Intelligence, 2015, 29, 1556002.	1.2	7
71	Exploring Genetic Attributions Underlying Radiotherapy-Induced Fatigue in Prostate Cancer Patients. Journal of Pain and Symptom Management, 2017, 54, 326-339.	1.2	7
72	The uncertainty analysis in linear and nonlinear regression revisited: application to concrete strength estimation. Inverse Problems in Science and Engineering, 2019, 27, 1740-1764.	1.2	7

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73	Robust Prediction of Single and Multiple Point Protein Mutations Stability Changes. Biomolecules, 2020, 10, 67.	4.0	7
74	Structural analysis of seismically mapped horizons using the developable surface model. AAPG Bulletin, 2005, 89, 839-848.	1.5	7
75	Mean Traveltime Curves Analysis: A Method to Improve Understanding of Data Behaviour in 2-D Transmission Tomography at the Pre-Inversion Stage. Mathematical Geosciences, 2006, 38, 343-374.	0.9	6
76	Inverse Problems and Model Reduction Techniques. Advances in Intelligent and Soft Computing, 2010, , 255-262.	0.2	6
77	Joint inversion of timeâ€lapse seismic and production data for Norne field. , 2011, , .		6
78	Predicting protein tertiary structure and its uncertainty analysis via particle swarm sampling. Journal of Molecular Modeling, 2019, 25, 79.	1.8	6
79	Robust pathway sampling in phenotype prediction. Application to triple negative breast cancer. BMC Bioinformatics, 2020, 21, 89.	2.6	6
80	Predictive Mathematical Models of the Short-Term and Long-Term Growth of the COVID-19 Pandemic. Computational and Mathematical Methods in Medicine, 2021, 2021, 1-14.	1.3	6
81	Comparison of Different Sampling Algorithms for Phenotype Prediction. Lecture Notes in Computer Science, 2018, , 33-45.	1.3	6
82	Particle Swarm Optimization in High Dimensional Spaces. Lecture Notes in Computer Science, 2010, , 496-503.	1.3	6
83	Robust Sampling of Defective Pathways in Multiple Myeloma. International Journal of Molecular Sciences, 2019, 20, 4681.	4.1	5
84	MTCLAB: A MATLABÂ®-based program for traveltime quality analysis and pre-inversion velocity tuning in 2D transmission tomography. Computers and Geosciences, 2008, 34, 213-225.	4.2	4
85	GenLab: A MATLABÂ®-based program for structural analysis of folds mapped by GPS or seismic methods. Computers and Geosciences, 2009, 35, 317-326.	4.2	4
86	Application of Global Optimization Algorithms to a Salt Water Intrusion Problem. , 2009, , .		4
87	Distributions of amino acids suggest that certain residue types more effectively determine protein secondary structure. Journal of Molecular Modeling, 2013, 19, 4337-4348.	1.8	4
88	NUMERICAL ANALYSIS AND COMPARISON OF SPECTRAL DECOMPOSITION METHODS IN BIOMETRIC APPLICATIONS. International Journal of Pattern Recognition and Artificial Intelligence, 2014, 28, 1456001.	1.2	4
89	UNSUPERVISED ENSEMBLE CLASSIFICATION FOR BIOMETRIC APPLICATIONS. International Journal of Pattern Recognition and Artificial Intelligence, 2014, 28, 1456007.	1.2	4
90	Principal component analysis in protein tertiary structure prediction. Journal of Bioinformatics and Computational Biology, 2018, 16, 1850005.	0.8	4

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91	Particle Swarm Optimization: A Powerful Family of Stochastic Optimizers. Analysis, Design and Application to Inverse Modelling. Lecture Notes in Computer Science, 2011, , 1-8.	1.3	4
92	Robust Sampling of Altered Pathways for Drug Repositioning Reveals Promising Novel Therapeutics for Inclusion Body Myositis. Journal of Rare Diseases Research & Treatment, 2019, 4, 7-15.	1.1	4
93	Geostatistical Analysis of Inverse Problem Variables: Application to Seismic Tomography. Mathematical Geosciences, 2003, 35, 953-969.	0.9	3
94	AMTCLAB: A MATLABÂ®-based program for traveltime analysis and velocity tuning in 2D elliptical anisotropic media. Computers and Geosciences, 2009, 35, 2057-2064.	4.2	3
95	Prediction of Protein Tertiary Structure via Regularized Template Classification Techniques. Molecules, 2020, 25, 2467.	3.8	3
96	Analysis of Clinical Prognostic Variables for Triple Negative Breast Cancer Histological Grading and Lymph Node Metastasis. Journal of Medical Informatics and Decision Making, 2017, 1, 14-36.	0.5	3
97	Domain decomposition methods for the numerical resolution of the aluminium casting process. Finite Elements in Analysis and Design, 2000, 36, 147-169.	3.2	2
98	Linear inversion via the discrete wavelet transform pseudoinverse. Geophysical Prospecting, 2017, 65, 131-149.	1.9	2
99	Protein Tertiary Structure Prediction via SVD and PSO Sampling. Lecture Notes in Computer Science, 2018, , 211-220.	1.3	2
100	Deep neural networks for phenotype prediction in rare diseases. , 2020, , 189-202.		2
101	Geometric Sampling: An Approach to Uncertainty in High Dimensional Spaces. Advances in Intelligent and Soft Computing, 2010, , 247-254.	0.2	2
102	Scalable Solutions for Nonlinear Inverse Uncertainty Using Model Reduction, Constraint Mapping, and Sparse Sampling. , 2010, , .		2
103	A Posteriori Inference of Model Parameters in a Geophysical Inverse Problem Using GA. , 2004, , 709-716.		1
104	Application of the Mean Traveltime Curves to GPR and VSP Data. , 2009, , .		1
105	Robust Mean Traveltime Curves in 2D Transmission Tomographic Surveys. Mathematical Geosciences, 2010, 42, 377-400.	2.4	1
106	PSO Advances and Application to Inverse Problems. Lecture Notes in Computer Science, 2010, , 147-154.	1.3	1
107	Improvements in Resampling Techniques for Phenotype Prediction: Applications to Neurodegenerative Diseases. SEMA SIMAI Springer Series, 2017, , 245-248.	0.7	1
108	Self-potential Inversion and Uncertainty Analysis via the Particle Swarm Optimization (PSO) Family. Springer Geophysics, 2021, , 105-131.	0.9	1

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109	Sulfatase 2 Is Associated with Steroid Resistance in Childhood Nephrotic Syndrome. Journal of Clinical Medicine, 2021, 10, 523.	2.4	1
110	A Machine Learning Model for Evaluating Imported Disease Screening Strategies in Immigrant Populations. American Journal of Tropical Medicine and Hygiene, 2021, , .	1.4	1
111	Classification and prediction of bulk densities of states and chemical attributes with machine learning techniques. Applied Mathematics and Computation, 2022, 412, 126587.	2.2	1
112	Comparison of Sparse Polynomial and Random Sampling Methods in Electromagnetic Uncertainty Estimation. , 2011, , .		1
113	Aligned PSO for Optimization of Image Processing Methods Applied to the Face Recognition Problem. Lecture Notes in Computer Science, 2013, , 642-651.	1.3	1
114	The Utilization of Different Classifiers to Perform Drug Repositioning in Inclusion Body Myositis Supports the Concept of Biological Invariance. Lecture Notes in Computer Science, 2020, , 589-598.	1.3	1
115	Maneuver Optimization for Simultaneous Airspeed Calibration and Wind Estimation. Journal of Aerospace Engineering, 2022, 35, .	1.4	1
116	Reinterpretation of VES data (Saiss basin, Morocco) using geostatistics and 2D electrical inversion methods. , 2008, , .		0
117	Deciphering Crosstalk Circuits in Non-small Cell Lung Cancers with an Increasing Interval Length of Low Dose CT Screening. EBioMedicine, 2015, 2, 782-783.	6.1	0
118	[P3â€“091]: EFFECTIVE ANALYSIS OF GENE EXPRESSION FOR THE DISCOVERY OF BIOMARKERS AND THERAPEUTIC TARGETS FOR ALZHEIMER'S DISEASE. Alzheimer's and Dementia, 2017, 13, P968.	0.8	0
119	Efficient uncertainty analysis of the 3D electrical tomography inverse problem. Geophysics, 2019, 84, E209-E223.	2.6	0
120	The PSO Family: Application to the Portfolio Optimization Problem. Profiles in Operations Research, 2021, , 111-132.	0.4	0
121	Fast inversion of gravimetric profiles via a modified version of the Pereyraâ€“Rosen algorithm. Journal of Earth System Science, 2021, 130, 1.	1.3	0
122	A methodology for structural analysis of seismic folds. , 2008, , .		0
123	TWO ALGORITHMS OF THE EXTENDED PSO FAMILY. , 2010, , .		0
124	Particle Swarm Optimization and Inverse Problems. Advances in Intelligent and Soft Computing, 2010, , 289-296.	0.2	0
125	The Effect of the Noise and the Regularization in Inverse Problems: Geophysical Implications. Lecture Notes in Earth System Sciences, 2014, , 695-698.	0.6	0
126	The Effect of NOP16 Mutation in Chronic Lymphocytic Leukemia. Journal of Molecular and Genetic Medicine: an International Journal of Biomedical Research, 2017, 11, .	0.1	0

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127	On the Use of Principal Component Analysis and Particle Swarm Optimization in Protein Tertiary Structure Prediction. Lecture Notes in Computer Science, 2018, , 107-116.	1.3	0