

Simone Fiori

List of Publications by Year in descending order

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136
papers

1,482
citations

394421

19
h-index

454955

30
g-index

139
all docs

139
docs citations

139
times ranked

706
citing authors

#	ARTICLE	IF	CITATIONS
1	A Theory for Learning by Weight Flow on Stiefel-Grassman Manifold. <i>Neural Computation</i> , 2001, 13, 1625-1647.	2.2	82
2	Mechanical properties of polypropylene matrix composites reinforced with natural fibers: A statistical approach. <i>Polymer Composites</i> , 2004, 25, 26-36.	4.6	74
3	Image compression using principal component neural networks. <i>Image and Vision Computing</i> , 2001, 19, 649-668.	4.5	57
4	Overview of independent component analysis technique with an application to synthetic aperture radar (SAR) imagery processing. <i>Neural Networks</i> , 2003, 16, 453-467.	5.9	52
5	An Algorithm to Compute Averages on Matrix Lie Groups. <i>IEEE Transactions on Signal Processing</i> , 2009, 57, 4734-4743.	5.3	52
6	Empirical Arithmetic Averaging Over the Compact Stiefel Manifold. <i>IEEE Transactions on Signal Processing</i> , 2013, 61, 883-894.	5.3	52
7	A contribution to (neuromorphic) blind deconvolution by flexible approximated Bayesian estimation. <i>Signal Processing</i> , 2001, 81, 2131-2153.	3.7	41
8	A theory for learning based on rigid bodies dynamics. <i>IEEE Transactions on Neural Networks</i> , 2002, 13, 521-531.	4.2	39
9	Blind separation of circularly distributed sources by neural extended APEX algorithm. <i>Neurocomputing</i> , 2000, 34, 239-252.	5.9	34
10	Fast Fixed-Point Neural Blind-Deconvolution Algorithm. <i>IEEE Transactions on Neural Networks</i> , 2004, 15, 455-459.	4.2	32
11	Extended Hamiltonian Learning on Riemannian Manifolds: Theoretical Aspects. <i>IEEE Transactions on Neural Networks</i> , 2011, 22, 687-700.	4.2	27
12	An Introductory Tutorial on Brain-Computer Interfaces and Their Applications. <i>Electronics (Switzerland)</i> , 2021, 10, 560.	3.1	27
13	Hybrid independent component analysis by adaptive LUT activation function neurons. <i>Neural Networks</i> , 2002, 15, 85-94.	5.9	26
14	Nonlinear Complex-Valued Extensions of Hebbian Learning: An Essay. <i>Neural Computation</i> , 2005, 17, 779-838.	2.2	26
15	Neural learning by geometric integration of reduced "rigid-body" equations. <i>Journal of Computational and Applied Mathematics</i> , 2004, 172, 247-269.	2.0	25
16	Learning the Fréchet Mean over the Manifold of Symmetric Positive-Definite Matrices. <i>Cognitive Computation</i> , 2009, 1, 279-291.	5.2	25
17	Extended Hamiltonian Learning on Riemannian Manifolds: Numerical Aspects. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2012, 23, 7-21.	11.3	25
18	Solving Minimal-Distance Problems over the Manifold of Real-Symplectic Matrices. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2011, 32, 938-968.	1.4	23

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19	Lie-group-type neural system learning by manifold retractions. <i>Neural Networks</i> , 2008, 21, 1524-1529.	5.9	21
20	Probability Density Estimation Using Adaptive Activation Function Neurons. <i>Neural Processing Letters</i> , 2001, 13, 31-42.	3.2	19
21	PROBABILITY DENSITY FUNCTION LEARNING BY UNSUPERVISED NEURONS. <i>International Journal of Neural Systems</i> , 2001, 11, 399-417.	5.2	19
22	Robust Averaging of Covariances for EEG Recordings Classification in Motor Imagery Brain-Computer Interfaces. <i>Neural Computation</i> , 2017, 29, 1631-1666.	2.2	19
23	UNSUPERVISED NEURAL LEARNING ON LIE GROUP. <i>International Journal of Neural Systems</i> , 2002, 12, 219-246.	5.2	18
24	On vector averaging over the unit hypersphere. , 2009, 19, 715-725.		18
25	Singular Value Decomposition Learning on Double Stiefel Manifold. <i>International Journal of Neural Systems</i> , 2003, 13, 155-170.	5.2	17
26	LEARNING BY CRITERION OPTIMIZATION ON A UNITARY UNIMODULAR MATRIX GROUP. <i>International Journal of Neural Systems</i> , 2008, 18, 87-103.	5.2	17
27	Fully-multiplicative orthogonal-group ICA neural algorithm. <i>Electronics Letters</i> , 2003, 39, 1737.	1.0	16
28	A MINOR SUBSPACE ALGORITHM BASED ON NEURAL STIEFEL DYNAMICS. <i>International Journal of Neural Systems</i> , 2002, 12, 339-350.	5.2	15
29	An improved sequential method for principal component analysis. <i>Pattern Recognition Letters</i> , 2003, 24, 1409-1415.	4.2	15
30	Formulation and Integration of Learning Differential Equations on the Stiefel Manifold. <i>IEEE Transactions on Neural Networks</i> , 2005, 16, 1697-1701.	4.2	15
31	Geodesic-based and projection-based neural blind deconvolution algorithms. <i>Signal Processing</i> , 2008, 88, 521-538.	3.7	15
32	Leap-frog-type learning algorithms over the Lie group of unitary matrices. <i>Neurocomputing</i> , 2008, 71, 2224-2244.	5.9	15
33	Learning by Natural Gradient on Noncompact Matrix-Type Pseudo-Riemannian Manifolds. <i>IEEE Transactions on Neural Networks</i> , 2010, 21, 841-852.	4.2	15
34	Nonlinear damped oscillators on Riemannian manifolds: Fundamentals. <i>Journal of Systems Science and Complexity</i> , 2016, 29, 22-40.	2.8	15
35	Numerical modeling for the localization and the assessment of electromagnetic field sources. <i>IEEE Transactions on Magnetics</i> , 2003, 39, 1638-1641.	2.1	14
36	A Study on Neural Learning on Manifold Foliations: The Case of the Lie Group $SU(3)$. <i>Neural Computation</i> , 2008, 20, 1091-1117.	2.2	14

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37	Manifold Calculus in System Theory and Control—Fundamentals and First-Order Systems. Symmetry, 2021, 13, 2092.	2.2	14
38	On blind separation of complex-valued sources by extended Hebbian learning. IEEE Signal Processing Letters, 2001, 8, 217-220.	3.6	13
39	Descent methods for optimization on homogeneous manifolds. Mathematics and Computers in Simulation, 2008, 79, 1298-1323.	4.4	13
40	Nonlinear damped oscillators on Riemannian manifolds: Numerical simulation. Communications in Nonlinear Science and Numerical Simulation, 2017, 47, 207-222.	3.3	13
41	Model Formulation Over Lie Groups and Numerical Methods to Simulate the Motion of Gyrostats and Quadrotors. Mathematics, 2019, 7, 935.	2.2	13
42	Extension of a PID control theory to Lie groups applied to synchronising satellites and drones. IET Control Theory and Applications, 2020, 14, 2628-2642.	2.1	13
43	Visualization of Riemannian-manifold-valued elements by multidimensional scaling. Neurocomputing, 2011, 74, 983-992.	5.9	12
44	Robust Averaging of Covariance Matrices by Riemannian Geometry for Motor-Imagery Brain—Computer Interfacing. Advances in Cognitive Neurodynamics, 2016, , 347-353.	0.1	12
45	An Experimental Comparison of Three PCA Neural Networks. Neural Processing Letters, 2000, 11, 209-218.	3.2	11
46	Blind adaptation of stable discrete-time IIR filters in state-space form. IEEE Transactions on Signal Processing, 2006, 54, 2596-2605.	5.3	11
47	Fixed-point neural independent component analysis algorithms on the orthogonal group. Future Generation Computer Systems, 2006, 22, 430-440.	7.5	11
48	An Improved Chaotic Optimization Algorithm Applied to a DC Electrical Motor Modeling. Entropy, 2017, 19, 665.	2.2	11
49	Entropy optimization by the PFANN network: application to blind source separation. Network: Computation in Neural Systems, 1999, 10, 171-186.	3.6	11
50	Neural independent component analysis by “maximum-mismatch” learning principle. Neural Networks, 2003, 16, 1201-1221.	5.9	10
51	Averaging over the Lie group of optical systems transference matrices. Frontiers of Electrical and Electronic Engineering in China: Selected Publications From Chinese Universities, 2011, 6, 137-145.	0.6	10
52	Tangent-Bundle Maps on the Grassmann Manifold: Application to Empirical Arithmetic Averaging. IEEE Transactions on Signal Processing, 2015, 63, 155-168.	5.3	10
53	A Riemannian steepest descent approach over the inhomogeneous symplectic group: Application to the averaging of linear optical systems. Applied Mathematics and Computation, 2016, 283, 251-264.	2.2	10
54	Nonsymmetric PDF estimation by artificial neurons: Application to statistical characterization of reinforced composites. IEEE Transactions on Neural Networks, 2003, 14, 959-962.	4.2	9

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55	Non-delayed synchronization of non-autonomous dynamical systems on Riemannian manifolds and its applications. <i>Nonlinear Dynamics</i> , 2018, 94, 3077-3100.	5.2	9
56	Blind deconvolution by simple adaptive activation function neuron. <i>Neurocomputing</i> , 2002, 48, 763-778.	5.9	8
57	Neural Systems with Numerically-Matched Input-Output Statistic: Variate Generation. <i>Neural Processing Letters</i> , 2006, 23, 143-170.	3.2	8
58	Fast statistical regression in presence of a dominant independent variable. <i>Neural Computing and Applications</i> , 2013, 22, 1367-1378.	5.6	8
59	Blind deconvolution by a Newton method on the non-unitary hypersphere. <i>International Journal of Adaptive Control and Signal Processing</i> , 2013, 27, 488-518.	4.1	8
60	Auto-regressive moving-average discrete-time dynamical systems and autocorrelation functions on real-valued Riemannian matrix manifolds. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2014, 19, 2785-2808.	0.9	8
61	“Mechanical” neural learning for blind source separation. <i>Electronics Letters</i> , 1999, 35, 1963.	1.0	7
62	Novel Neural Network Feature Selection Procedure by Generalization Maximization with Application to Automatic Robot Guidance. <i>International Journal of Smart Engineering System Design</i> , 2002, 4, 91-106.	0.2	6
63	A feasibility study for electromagnetic pollution monitoring by electromagnetic-source localization via neural independent component analysis. <i>Neurocomputing</i> , 2003, 55, 451-468.	5.9	6
64	Bivariate Nonisotonic Statistical Regression by a Lookup Table Neural System. <i>Cognitive Computation</i> , 2015, 7, 715-730.	5.2	6
65	A Mobile Acquisition System and a Method for Hips Sway Fluency Assessment. <i>Information (Switzerland)</i> , 2018, 9, 321.	2.9	6
66	A Control-Theoretic Approach to the Synchronization of Second-Order Continuous-Time Dynamical Systems on Real Connected Riemannian Manifolds. <i>SIAM Journal on Control and Optimization</i> , 2020, 58, 787-813.	2.1	6
67	Extension of PID Regulators to Dynamical Systems on Smooth Manifolds (M-PID). <i>SIAM Journal on Control and Optimization</i> , 2021, 59, 78-102.	2.1	6
68	Application of the MEC network to principal component analysis and source separation. <i>Lecture Notes in Computer Science</i> , 1997, , 571-576.	1.3	5
69	Blind source separation by new M-WARP algorithm. <i>Electronics Letters</i> , 1999, 35, 269.	1.0	5
70	Complex-Weighted One-Unit “Rigid-Bodies” Learning Rule for Independent Component Analysis. <i>Neural Processing Letters</i> , 2002, 15, 275-282.	3.2	5
71	STIEFEL-MANIFOLD LEARNING BY IMPROVED RIGID-BODY THEORY APPLIED TO ICA. <i>International Journal of Neural Systems</i> , 2003, 13, 273-290.	5.2	5
72	One-unit “rigid-bodies” learning rule for principal/independent component analysis with application to ECT-NDE signal processing. <i>Neurocomputing</i> , 2004, 56, 233-255.	5.9	5

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73	Neural Systems with Numerically Matched Input-Output Statistic: Isotonic Bivariate Statistical Modeling. Computational Intelligence and Neuroscience, 2007, 2007, 1-23.	1.7	5
74	Learning independent components on the orthogonal group of matrices by retractions. Neural Processing Letters, 2007, 25, 187-198.	3.2	5
75	Riemannian-Gradient-Based Learning on the Complex Matrix-Hypersphere. IEEE Transactions on Neural Networks, 2011, 22, 2132-2138.	4.2	5
76	Auto-Regressive Moving Average Models on Complex-Valued Matrix Lie Groups. Circuits, Systems, and Signal Processing, 2014, 33, 2449-2473.	2.0	5
77	A Riemannianâ€steepestâ€descent approach for optimization on the real symplectic group. Mathematical Methods in the Applied Sciences, 2018, 41, 4273-4286.	2.3	5
78	Blind intrinsically-stable 2-pole IIR filtering. Electronics Letters, 2002, 38, 1482.	1.0	5
79	Entropy optimization by the PFANN network: application to blind source separation. Network: Computation in Neural Systems, 1999, 10, 171-186.	3.6	4
80	Notes on Bell-Sejnowski PDF-Matching Neuron. Neural Computation, 2002, 14, 2847-2855.	2.2	4
81	Closed-Form Expressions of Some Stochastic Adapting Equations for Nonlinear Adaptive Activation Function Neurons. Neural Computation, 2003, 15, 2909-2929.	2.2	4
82	Least Squares Approximate Joint Diagonalization on the Orthogonal Group. , 2007, , .		4
83	An isotonic trivariate statistical regression method. Advances in Data Analysis and Classification, 2013, 7, 209-235.	1.4	4
84	Kolmogoroffâ€™Nagumo mean over the affine symplectic group of matrices. Applied Mathematics and Computation, 2015, 266, 820-837.	2.2	4
85	Gyroscopic signal smoothness assessment by geometric jolt estimation. Mathematical Methods in the Applied Sciences, 2017, 40, 5893-5905.	2.3	4
86	Exact low-order polynomial expressions to compute the Kolmogoroffâ€™Nagumo mean in the affine symplectic group of optical transference matrices. Linear and Multilinear Algebra, 2017, 65, 840-856.	1.0	4
87	A Closed-Form Expression of the Instantaneous Rotational Lurch Index to Evaluate Its Numerical Approximation. Symmetry, 2019, 11, 1208.	2.2	4
88	Glomerular Filtration Rate Estimation by a Novel Numerical Binning-Less Isotonic Statistical Bivariate Numerical Modeling Method. Information (Switzerland), 2019, 10, 100.	2.9	4
89	Error-based control systems on Riemannian state manifolds: Properties of the principal pushforward map associated to parallel transport. Mathematical Control and Related Fields, 2021, 11, 143-167.	1.1	4
90	Lie-Group Modeling and Numerical Simulation of a Helicopter. Mathematics, 2021, 9, 2682.	2.2	4

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91	Lie-Group Type Quadcopter Control Design by Dynamics Replacement and the Virtual Attractive-Repulsive Potentials Theory. <i>Mathematics</i> , 2022, 10, 1104.	2.2	4
92	Manifold Calculus in System Theory and Control—Second Order Structures and Systems. <i>Symmetry</i> , 2022, 14, 1144.	2.2	4
93	Notes on cost functions and estimators for “Bussgang”™ adaptive blind equalization. <i>European Transactions on Telecommunications</i> , 2002, 13, 631-634.	1.2	3
94	Blind equalisation of communication channels for equal energy sources: energy matching approach. <i>Electronics Letters</i> , 2006, 42, 247.	1.0	3
95	A two-dimensional Poisson equation formulation of non-parametric statistical non-linear modeling. <i>Computers and Mathematics With Applications</i> , 2014, 67, 1171-1185.	2.7	3
96	Statistical Nonparametric Bivariate Isotonic Regression by Look-Up-Table-Based Neural Networks. <i>Lecture Notes in Computer Science</i> , 2011, , 365-372.	1.3	3
97	Neural Learning by Retractions on Manifolds. , 2007, , .		2
98	Learning on the compact Stiefel manifold by a cayley-transform-based pseudo-retraction map. , 2012, , .		2
99	Fast closed-form trivariate statistical isotonic modelling. <i>Electronics Letters</i> , 2014, 50, 708-710.	1.0	2
100	Empirical Means on Pseudo-Orthogonal Groups. <i>Mathematics</i> , 2019, 7, 940.	2.2	2
101	A Novel Non-Isotonic Statistical Bivariate Regression Method—Application to Stratigraphic Data Modeling and Interpolation. <i>Mathematical and Computational Applications</i> , 2020, 25, 15.	1.3	2
102	First Order and Second Order Learning Algorithms on the Special Orthogonal Group to Compute the SVD of Data Matrices. <i>Electronics (Switzerland)</i> , 2020, 9, 334.	3.1	2
103	Synthetic nonlinear second-order oscillators on Riemannian manifolds and their numerical simulation. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2022, 27, 1227.	0.9	2
104	Virtual Attractive-Repulsive Potentials Control Theory: A Review and an Extension to Riemannian Manifolds. <i>Symmetry</i> , 2022, 14, 257.	2.2	2
105	Synchronization of dynamical systems on Riemannian manifolds by an extended PID-type control theory: Numerical evaluation. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2022, , .	0.9	2
106	RELATIVE UNCERTAINTY LEARNING THEORY: AN ESSAY. <i>International Journal of Neural Systems</i> , 2004, 14, 293-311.	5.2	1
107	Extrinsic Geometrical Methods for Neural Blind Deconvolution. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	1
108	Generation of pseudorandom numbers with arbitrary distribution by learnable look-up-table-type neural networks. , 2008, , .		1

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109	An averaging method for a committee of special-orthogonal-group machines. , 2008, , .		1
110	Asymmetric Variate Generation via a Parameterless Dual Neural Learning Algorithm. Computational Intelligence and Neuroscience, 2008, 2008, 1-8.	1.7	1
111	A comprehensive comparison of algorithms for the statistical modelling of non-monotone relationships via isotonic regression of transformed data. International Journal of Data Analysis Techniques and Strategies, 2019, 11, 29.	0.2	1
112	Anisotropic Gaussian kernel adaptive filtering by Lie-group dictionary learning. PLoS ONE, 2020, 15, e0237654.	2.5	1
113	Optimization of a control law to synchronize first-order dynamical systems on Riemannian manifolds by a transverse component. Discrete and Continuous Dynamical Systems - Series B, 2022, 27, 3947.	0.9	1
114	A Closed-Form Solution to the Problem of Averaging over the Lie Group of Special Orthogonal Matrices. Lecture Notes in Computer Science, 2010, , 185-192.	1.3	1
115	Neural Learning and Weight Flow on Stiefel Manifold. Perspectives in Neural Computing, 1999, , 325-333.	0.1	1
116	Topics in Blind Signal Processing by Neural Networks. Perspectives in Neural Computing, 2002, , 63-74.	0.1	0
117	On Self-Consistency of Cost Functions for Blind Signal Processing Based on Neural Bayesian Estimators. AIP Conference Proceedings, 2004, , .	0.4	0
118	Optical Flow Estimation via Neural Singular Value Decomposition Learning. Lecture Notes in Computer Science, 2004, , 961-970.	1.3	0
119	Learning stepsize selection for the geodesic-based neural blind deconvolution algorithm. , 2008, , .		0
120	Learning averages over the lie group of unitary matrices. , 2009, , .		0
121	Learning-machines-committee averages over the unitary group of matrices. , 2009, , .		0
122	Learning averages over the lie group of symmetric positive-definite matrices. , 2009, , .		0
123	A pseudo-Riemannian-gradient approach to the least-squares problem on the real symplectic group. , 2010, , .		0
124	Characterization studies of 1-(4-cyano-2-oxo-1,2-dihydro-1-pyridyl)-3-(4-cyano-1,2-dihydro-1-pyridyl)propane formed from the reaction of hydroxide Ion with 1,3-Bis-(4-cyano pyridinium)propane. Journal of the Brazilian Chemical Society, 2011, , .	0.6	0
125	Smooth statistical modeling of bivariate non-monotonic data by a three-stage LUT neural system. Neural Computing and Applications, 2018, 30, 1353-1368.	5.6	0
126	Statistical Modeling of Trivariate Static Systems: Isotonic Models. Data, 2019, 4, 17.	2.3	0

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127	Improvement and Assessment of a Blind Image Deblurring Algorithm Based on Independent Component Analysis. <i>Computation</i> , 2021, 9, 76.	2.0	0
128	Neural Learning Algorithms Based on Mappings: The Case of the Unitary Group of Matrices. <i>Lecture Notes in Computer Science</i> , 2007, , 858-863.	1.3	0
129	Random Clouds on Matrix Lie Groups. <i>Lecture Notes in Computer Science</i> , 2013, , 702-709.	1.3	0
130	An Experimental Comparison of Three PCA Neural Techniques. <i>Perspectives in Neural Computing</i> , 1999, , 249-255.	0.1	0
131	Polynomial Clusterons Exhibit Statistical Estimation Abilities. <i>Perspectives in Neural Computing</i> , 1999, , 113-119.	0.1	0
132	In-Lab Drone's Attitude Maneuvering Fluency Evaluation by a Gyroscopic Lurch Index. , 2021, 1, 71-80.		0
133	Anisotropic Gaussian kernel adaptive filtering by Lie-group dictionary learning. , 2020, 15, e0237654.		0
134	Anisotropic Gaussian kernel adaptive filtering by Lie-group dictionary learning. , 2020, 15, e0237654.		0
135	Anisotropic Gaussian kernel adaptive filtering by Lie-group dictionary learning. , 2020, 15, e0237654.		0
136	Anisotropic Gaussian kernel adaptive filtering by Lie-group dictionary learning. , 2020, 15, e0237654.		0