

Gabriel Peyr

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

108
papers

3,979
citations

36
h-index

61
g-index

118
ext. papers

5,006
ext. citations

2.8
avg, IF

6.4
L-index

#	Paper	IF	Citations
108	Ground Metric Learning on Graphs. <i>Journal of Mathematical Imaging and Vision</i> , 2021 , 63, 89-107	1.6	2
107	Preface to the Special Issue on Optimization for Data Sciences. <i>Applied Mathematics and Optimization</i> , 2020 , 82, 889-890	1.5	1
106	The sliding Frank-Wolfe algorithm and its application to super-resolution microscopy. <i>Inverse Problems</i> , 2020 , 36, 014001	2.3	27
105	Guest Editorial JMIV Special Issue Mathematics and Image Analysis (MIA). <i>Journal of Mathematical Imaging and Vision</i> , 2019 , 61, 643-644	1.6	
104	Computational Optimal Transport: With Applications to Data Science. <i>Foundations and Trends in Machine Learning</i> , 2019 , 11, 355-607	32.9	363
103	A Low-Rank Approach to Off-the-Grid Sparse Superresolution. <i>SIAM Journal on Imaging Sciences</i> , 2019 , 12, 1464-1500	1.9	1
102	Editorial IMA IAI - Information and Inference special issue on optimal transport in data sciences. <i>Information and Inference</i> , 2019 , 8, 655-656	2.4	
101	MultiDimensional Sparse Super-Resolution. <i>SIAM Journal on Mathematical Analysis</i> , 2019 , 51, 1-44	1.7	19
100	Quantum entropic regularization of matrix-valued optimal transport. <i>European Journal of Applied Mathematics</i> , 2019 , 30, 1079-1102	1	7
99	Wasserstein Dictionary Learning: Optimal Transport-Based Unsupervised Nonlinear Dictionary Learning. <i>SIAM Journal on Imaging Sciences</i> , 2018 , 11, 643-678	1.9	37
98	Local linear convergence analysis of Primal-Dual splitting methods. <i>Optimization</i> , 2018 , 67, 821-853	1.2	6
97	Unbalanced optimal transport: Dynamic and Kantorovich formulations. <i>Journal of Functional Analysis</i> , 2018 , 274, 3090-3123	1.4	37
96	An Interpolating Distance Between Optimal Transport and Fisher-Rao Metrics. <i>Foundations of Computational Mathematics</i> , 2018 , 18, 1-44	2.7	64
95	Scaling algorithms for unbalanced optimal transport problems. <i>Mathematics of Computation</i> , 2018 , 87, 2563-2609	1.6	72
94	Semidual Regularized Optimal Transport. <i>SIAM Review</i> , 2018 , 60, 941-965	7.4	11
93	Bayesian Modeling of Motion Perception Using Dynamical Stochastic Textures. <i>Neural Computation</i> , 2018 , 30, 3355-3392	2.9	2
92	Sensitivity Analysis for Mirror-Stratifiable Convex Functions. <i>SIAM Journal on Optimization</i> , 2018 , 28, 2975-3000	2	7

91	Model Consistency of Partly Smooth Regularizers. <i>IEEE Transactions on Information Theory</i> , 2018 , 64, 1725-1737	2.8	13
90	Local Convergence Properties of Douglas-Bachford and Alternating Direction Method of Multipliers. <i>Journal of Optimization Theory and Applications</i> , 2017 , 172, 874-913	1.6	11
89	Activity Identification and Local Linear Convergence of Forward-Backward-type Methods. <i>SIAM Journal on Optimization</i> , 2017 , 27, 408-437	2	32
88	Convergence of Entropic Schemes for Optimal Transport and Gradient Flows. <i>SIAM Journal on Mathematical Analysis</i> , 2017 , 49, 1385-1418	1.7	46
87	Sparse regularization on thin grids I: the Lasso. <i>Inverse Problems</i> , 2017 , 33, 055008	2.3	21
86	Geometric properties of solutions to the total variation denoising problem. <i>Inverse Problems</i> , 2017 , 33, 015002	2.3	28
85	Sparse spikes super-resolution on thin grids II: the continuous basis pursuit. <i>Inverse Problems</i> , 2017 , 33, 095008	2.3	15
84	The degrees of freedom of partly smooth regularizers. <i>Annals of the Institute of Statistical Mathematics</i> , 2017 , 69, 791-832	1	13
83	JMIV Special Issue Mathematics and Image Analysis. <i>Journal of Mathematical Imaging and Vision</i> , 2017 , 59, 371-372	1.6	
82	Support Recovery for Sparse Super-Resolution of Positive Measures. <i>Journal of Fourier Analysis and Applications</i> , 2017 , 23, 1153-1194	1.1	40
81	Wasserstein Loss for Image Synthesis and Restoration. <i>SIAM Journal on Imaging Sciences</i> , 2016 , 9, 1726-1755		12
80	A Convergence Result for the Upper Bound Limit Analysis of Plates. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2016 , 50, 215-235	1.8	3
79	Convergence rates with inexact non-expansive operators. <i>Mathematical Programming</i> , 2016 , 159, 403-434	2.1	33
78	Geodesics on Shape Spaces with Bounded Variation and Sobolev Metrics. <i>SIAM Journal on Imaging Sciences</i> , 2016 , 9, 238-274	1.9	6
77	Spatially Structured Sparse Morphological Component Separation for voltage-sensitive dye optical imaging. <i>Journal of Neuroscience Methods</i> , 2016 , 257, 76-96	3	4
76	An automated workflow for the anatomic-functional mapping of the barrel cortex. <i>Journal of Neuroscience Methods</i> , 2016 , 263, 145-54	3	6
75	Entropic metric alignment for correspondence problems. <i>ACM Transactions on Graphics</i> , 2016 , 35, 1-13	7.6	62
74	Wasserstein barycentric coordinates. <i>ACM Transactions on Graphics</i> , 2016 , 35, 1-10	7.6	44

73	A Smoothed Dual Approach for Variational Wasserstein Problems. <i>SIAM Journal on Imaging Sciences</i> , 2016 , 9, 320-343	1.9	51
72	Exact Support Recovery for Sparse Spikes Deconvolution. <i>Foundations of Computational Mathematics</i> , 2015 , 15, 1315-1355	2.7	140
71	Activity Identification and Local Linear Convergence of Douglas-Rachford/ADMM under Partial Smoothness. <i>Lecture Notes in Computer Science</i> , 2015 , 642-653	0.9	8
70	Iterative Bregman Projections for Regularized Transportation Problems. <i>SIAM Journal of Scientific Computing</i> , 2015 , 37, A1111-A1138	2.6	216
69	Variational Texture Synthesis with Sparsity and Spectrum Constraints. <i>Journal of Mathematical Imaging and Vision</i> , 2015 , 52, 124-144	1.6	23
68	Entropic Approximation of Wasserstein Gradient Flows. <i>SIAM Journal on Imaging Sciences</i> , 2015 , 8, 2323-2351	3.4	34
67	Convolutional wasserstein distances. <i>ACM Transactions on Graphics</i> , 2015 , 34, 1-11	7.6	181
66	Sliced and Radon Wasserstein Barycenters of Measures. <i>Journal of Mathematical Imaging and Vision</i> , 2015 , 51, 22-45	1.6	100
65	Low Complexity Regularization of Linear Inverse Problems. <i>Applied and Numerical Harmonic Analysis</i> , 2015 , 103-153	0.6	4
64	The non degenerate source condition: Support robustness for discrete and continuous sparse deconvolution 2015 ,		2
63	Model selection with low complexity priors. <i>Information and Inference</i> , 2015 ,	2.4	8
62	Optimal Transport with Proximal Splitting. <i>SIAM Journal on Imaging Sciences</i> , 2014 , 7, 212-238	1.9	82
61	Stein Unbiased Gradient estimator of the Risk (SUGAR) for Multiple Parameter Selection. <i>SIAM Journal on Imaging Sciences</i> , 2014 , 7, 2448-2487	1.9	53
60	Low noise regimes for ℓ_1 regularization : continuous and discrete settings. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014 , 14, 943-944	0.2	
59	Regularized Discrete Optimal Transport. <i>SIAM Journal on Imaging Sciences</i> , 2014 , 7, 1853-1882	1.9	55
58	Synthesizing and Mixing Stationary Gaussian Texture Models. <i>SIAM Journal on Imaging Sciences</i> , 2014 , 7, 476-508	1.9	27
57	Local behavior of sparse analysis regularization: Applications to risk estimation. <i>Applied and Computational Harmonic Analysis</i> , 2013 , 35, 433-451	3.1	22
56	On growth and formlets: Sparse multi-scale coding of planar shape. <i>Image and Vision Computing</i> , 2013 , 31, 1-13	3.7	10

55	Robust Sparse Analysis Regularization. <i>IEEE Transactions on Information Theory</i> , 2013 , 59, 2001-2016	2.8	62
54	A Generalized Forward-Backward Splitting. <i>SIAM Journal on Imaging Sciences</i> , 2013 , 6, 1199-1226	1.9	144
53	Static and Dynamic Texture Mixing Using Optimal Transport. <i>Lecture Notes in Computer Science</i> , 2013 , 137-148	0.9	10
52	Constrained Sparse Texture Synthesis. <i>Lecture Notes in Computer Science</i> , 2013 , 186-197	0.9	5
51	Regularized Discrete Optimal Transport. <i>Lecture Notes in Computer Science</i> , 2013 , 428-439	0.9	15
50	Nonlocal Active Contours. <i>SIAM Journal on Imaging Sciences</i> , 2012 , 5, 1022-1054	1.9	39
49	Wasserstein Barycenter and Its Application to Texture Mixing. <i>Lecture Notes in Computer Science</i> , 2012 , 435-446	0.9	79
48	Wasserstein active contours 2012 ,		13
47	Sharp support recovery from noisy random measurements by . <i>Applied and Computational Harmonic Analysis</i> , 2012 , 33, 24-43	3.1	12
46	Compact representations of stationary dynamic textures 2012 ,		4
45	Unbiased risk estimation for sparse analysis regularization 2012 ,		5
44	Non-local Active Contours. <i>Lecture Notes in Computer Science</i> , 2012 , 255-266	0.9	8
43	Locally Parallel Texture Modeling. <i>SIAM Journal on Imaging Sciences</i> , 2011 , 4, 413-447	1.9	34
42	Non-local regularization of inverse problems. <i>Inverse Problems and Imaging</i> , 2011 , 5, 511-530	2.1	70
41	A panorama on multiscale geometric representations, intertwining spatial, directional and frequency selectivity. <i>Signal Processing</i> , 2011 , 91, 2699-2730	4.4	60
40	A Review of Adaptive Image Representations. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2011 , 5, 896-911	7.5	33
39	The Numerical Tours of Signal Processing. <i>Computing in Science and Engineering</i> , 2011 , 13, 94-97	1.5	61
38	The Numerical Tours of Signal Processing Part 2: Multiscale Processings. <i>Computing in Science and Engineering</i> , 2011 , 13, 68-71	1.5	5

37	Total variation projection with first order schemes. <i>IEEE Transactions on Image Processing</i> , 2011 , 20, 657-69		64
36	JMIV Special Issue. <i>Journal of Mathematical Imaging and Vision</i> , 2011 , 41, 1-2	1.6	1
35	Compressive Wave Computation. <i>Foundations of Computational Mathematics</i> , 2011 , 11, 257-303	2.7	4
34	Wasserstein regularization of imaging problem 2011 ,		16
33	Matching 2D and 3D articulated shapes using the eccentricity transform. <i>Computer Vision and Image Understanding</i> , 2011 , 115, 817-834	4.3	24
32	Non-local segmentation and inpainting 2011 ,		2
31	A PROJECTION APPROACH TO THE NUMERICAL ANALYSIS OF LIMIT LOAD PROBLEMS. <i>Mathematical Models and Methods in Applied Sciences</i> , 2011 , 21, 1291-1316	3.5	5
30	Texture Segmentation via Non-local Non-parametric Active Contours. <i>Lecture Notes in Computer Science</i> , 2011 , 74-88	0.9	6
29	Best Basis Compressed Sensing. <i>IEEE Transactions on Signal Processing</i> , 2010 , 58, 2613-2622	4.8	74
28	Learning the Morphological Diversity. <i>SIAM Journal on Imaging Sciences</i> , 2010 , 3, 646-669	1.9	68
27	Texture synthesis with grouplets. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2010 , 32, 733-46	13.3	36
26	A numerical exploration of compressed sampling recovery. <i>Linear Algebra and Its Applications</i> , 2010 , 432, 1663-1679	0.9	29
25	Geodesic Shape Retrieval via Optimal Mass Transport. <i>Lecture Notes in Computer Science</i> , 2010 , 771-784	0.9	17
24	Approximation of maximal Cheeger sets by projection. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2009 , 43, 139-150	1.8	22
23	Total variation projection with first order schemes 2009 ,		2
22	Sparse Modeling of Textures. <i>Journal of Mathematical Imaging and Vision</i> , 2009 , 34, 17-31	1.6	98
21	Manifold models for signals and images. <i>Computer Vision and Image Understanding</i> , 2009 , 113, 249-260	4.3	114
20	Extraction of tubular structures over an orientation domain 2009 ,		33

19	Best basis denoising with non-stationary wavelet packets 2009 ,		6
18	Geodesic Methods in Computer Vision and Graphics. <i>Foundations and Trends in Computer Graphics and Vision</i> , 2009 , 5, 197-397	12	51
17	Numerical approximation of continuous traffic congestion equilibria. <i>Networks and Heterogeneous Media</i> , 2009 , 4, 605-623	1.6	13
16	Locally Parallel Textures Modeling with Adapted Hilbert Spaces. <i>Lecture Notes in Computer Science</i> , 2009 , 429-442	0.9	
15	Geodesic Methods for Shape and Surface Processing 2009 , 29-56		7
14	Image Processing with Nonlocal Spectral Bases. <i>Multiscale Modeling and Simulation</i> , 2008 , 7, 703-730	1.8	63
13	Non-local Regularization of Inverse Problems. <i>Lecture Notes in Computer Science</i> , 2008 , 57-68	0.9	82
12	3D shape matching by geodesic eccentricity 2008 ,		14
11	Orthogonal bandelet bases for geometric images approximation. <i>Communications on Pure and Applied Mathematics</i> , 2008 , 61, 1173-1212	2.5	48
10	Anisotropic Geodesics for Perceptual Grouping and Domain Meshing. <i>Lecture Notes in Computer Science</i> , 2008 , 129-142	0.9	11
9	A review of Bandlet methods for geometrical image representation. <i>Numerical Algorithms</i> , 2007 , 44, 205-234	2.1	84
8	Learning adapted dictionaries for geometry and texture separation 2007 ,		16
7	Non-negative Sparse Modeling of Textures 2007 , 628-639		6
6	Texture Synthesis and Modification with a Patch-Valued Wavelet Transform 2007 , 640-651		2
5	Geodesic Remeshing Using Front Propagation. <i>International Journal of Computer Vision</i> , 2006 , 69, 145-156	0.6	118
4	Surface compression with geometric bandelets 2005 ,		22
3	Surface compression with geometric bandelets. <i>ACM Transactions on Graphics</i> , 2005 , 24, 601-608	7.6	93
2	Heuristically Driven Front Propagation for Geodesic Paths Extraction. <i>Lecture Notes in Computer Science</i> , 2005 , 173-185	0.9	7

1 The Geometry of Off-the-Grid Compressed Sensing. *Foundations of Computational Mathematics*, 1 2.7 ○