

# Gabriel PeyrÃ©

## List of Publications by Year in descending order

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115  
papers

6,049  
citations

71097

41  
h-index

76898

74  
g-index

118  
all docs

118  
docs citations

118  
times ranked

3665  
citing authors

#	ARTICLE	IF	CITATIONS
1	Computational Optimal Transport: With Applications to Data Science. Foundations and Trends in Machine Learning, 2019, 11, 355-607.	69.0	909
2	Iterative Bregman Projections for Regularized Transportation Problems. SIAM Journal of Scientific Computing, 2015, 37, A1111-A1138.	2.8	324
3	Convolutional Wasserstein distances. ACM Transactions on Graphics, 2015, 34, 1-11.	7.2	254
4	A Generalized Forward-Backward Splitting. SIAM Journal on Imaging Sciences, 2013, 6, 1199-1226.	2.2	204
5	Exact Support Recovery for Sparse Spikes Deconvolution. Foundations of Computational Mathematics, 2015, 15, 1315-1355.	2.5	201
6	Sliced and Radon Wasserstein Barycenters of Measures. Journal of Mathematical Imaging and Vision, 2015, 51, 22-45.	1.3	181
7	Manifold models for signals and images. Computer Vision and Image Understanding, 2009, 113, 249-260.	4.7	147
8	Geodesic Remeshing Using Front Propagation. International Journal of Computer Vision, 2006, 69, 145-156.	15.6	146
9	Wasserstein Barycenter and Its Application to Texture Mixing. Lecture Notes in Computer Science, 2012, , 435-446.	1.3	142
10	Scaling algorithms for unbalanced optimal transport problems. Mathematics of Computation, 2018, 87, 2563-2609.	2.1	135
11	Surface compression with geometric bandelets. ACM Transactions on Graphics, 2005, 24, 601-608.	7.2	133
12	Sparse Modeling of Textures. Journal of Mathematical Imaging and Vision, 2009, 34, 17-31.	1.3	118
13	A review of Bandlet methods for geometrical image representation. Numerical Algorithms, 2007, 44, 205-234.	1.9	115
14	Non-local Regularization of Inverse Problems. Lecture Notes in Computer Science, 2008, , 57-68.	1.3	111
15	Best Basis Compressed Sensing. IEEE Transactions on Signal Processing, 2010, 58, 2613-2622.	5.3	107
16	Optimal Transport with Proximal Splitting. SIAM Journal on Imaging Sciences, 2014, 7, 212-238.	2.2	106
17	An Interpolating Distance Between Optimal Transport and Fisher-Rao Metrics. Foundations of Computational Mathematics, 2018, 18, 1-44.	2.5	93
18	Non-local regularization of inverse problems. Inverse Problems and Imaging, 2011, 5, 511-530.	1.1	92

#	ARTICLE	IF	CITATIONS
19	Regularized Discrete Optimal Transport. SIAM Journal on Imaging Sciences, 2014, 7, 1853-1882.	2.2	92
20	Entropic metric alignment for correspondence problems. ACM Transactions on Graphics, 2016, 35, 1-13.	7.2	89
21	Learning the Morphological Diversity. SIAM Journal on Imaging Sciences, 2010, 3, 646-669.	2.2	87
22	Unbalanced optimal transport: Dynamic and Kantorovich formulations. Journal of Functional Analysis, 2018, 274, 3090-3123.	1.4	83
23	Total Variation Projection With First Order Schemes. IEEE Transactions on Image Processing, 2011, 20, 657-669.	9.8	78
24	Geodesic Methods in Computer Vision and Graphics. Foundations and Trends in Computer Graphics and Vision, 2009, 5, 197-397.	4.5	77
25	The Numerical Tours of Signal Processing. Computing in Science and Engineering, 2011, 13, 94-97.	1.2	76
26	Image Processing with Nonlocal Spectral Bases. Multiscale Modeling and Simulation, 2008, 7, 703-730.	1.6	75
27	A panorama on multiscale geometric representations, intertwining spatial, directional and frequency selectivity. Signal Processing, 2011, 91, 2699-2730.	3.7	75
28	Robust Sparse Analysis Regularization. IEEE Transactions on Information Theory, 2013, 59, 2001-2016.	2.4	75
29	Stein Unbiased Gradient estimator of the Risk (SUGAR) for Multiple Parameter Selection. SIAM Journal on Imaging Sciences, 2014, 7, 2448-2487.	2.2	72
30	Wasserstein barycentric coordinates. ACM Transactions on Graphics, 2016, 35, 1-10.	7.2	67
31	Convergence of Entropic Schemes for Optimal Transport and Gradient Flows. SIAM Journal on Mathematical Analysis, 2017, 49, 1385-1418.	1.9	67
32	Orthogonal bandelet bases for geometric images approximation. Communications on Pure and Applied Mathematics, 2008, 61, 1173-1212.	3.1	65
33	A Smoothed Dual Approach for Variational Wasserstein Problems. SIAM Journal on Imaging Sciences, 2016, 9, 320-343.	2.2	65
34	Wasserstein Dictionary Learning: Optimal Transport-Based Unsupervised Nonlinear Dictionary Learning. SIAM Journal on Imaging Sciences, 2018, 11, 643-678.	2.2	64
35	Support Recovery for Sparse Super-Resolution of Positive Measures. Journal of Fourier Analysis and Applications, 2017, 23, 1153-1194.	1.0	57
36	Entropic Approximation of Wasserstein Gradient Flows. SIAM Journal on Imaging Sciences, 2015, 8, 2323-2351.	2.2	51

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37	The sliding Frank-Wolfe algorithm and its application to super-resolution microscopy. Inverse Problems, 2020, 36, 014001.	2.0	51
38	Texture Synthesis with Grouplets. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, 32, 733-746.	13.9	50
39	Convergence rates with inexact non-expansive operators. Mathematical Programming, 2016, 159, 403-434.	2.4	50
40	Activity Identification and Local Linear Convergence of Forward-Backward-type Methods. SIAM Journal on Optimization, 2017, 27, 408-437.	2.0	49
41	Extraction of tubular structures over an orientation domain. , 2009, , .		45
42	Nonlocal Active Contours. SIAM Journal on Imaging Sciences, 2012, 5, 1022-1054.	2.2	45
43	Locally Parallel Texture Modeling. SIAM Journal on Imaging Sciences, 2011, 4, 413-447.	2.2	41
44	A Review of Adaptive Image Representations. IEEE Journal on Selected Topics in Signal Processing, 2011, 5, 896-911.	10.8	37
45	Geometric properties of solutions to the total variation denoising problem. Inverse Problems, 2017, 33, 015002.	2.0	35
46	A numerical exploration of compressed sampling recovery. Linear Algebra and Its Applications, 2010, 432, 1663-1679.	0.9	34
47	Synthesizing and Mixing Stationary Gaussian Texture Models. SIAM Journal on Imaging Sciences, 2014, 7, 476-508.	2.2	34
48	Sparse regularization on thin grids I: the Lasso. Inverse Problems, 2017, 33, 055008.	2.0	30
49	Matching 2D and 3D articulated shapes using the eccentricity transform. Computer Vision and Image Understanding, 2011, 115, 817-834.	4.7	28
50	Variational Texture Synthesis with Sparsity and Spectrum Constraints. Journal of Mathematical Imaging and Vision, 2015, 52, 124-144.	1.3	28
51	Local behavior of sparse analysis regularization: Applications to risk estimation. Applied and Computational Harmonic Analysis, 2013, 35, 433-451.	2.2	27
52	Approximation of maximal Cheeger sets by projection. ESAIM: Mathematical Modelling and Numerical Analysis, 2009, 43, 139-150.	1.9	26
53	Surface compression with geometric bandelets. , 2005, , .		25
54	MultiDimensional Sparse Super-Resolution. SIAM Journal on Mathematical Analysis, 2019, 51, 1-44.	1.9	25



#	ARTICLE	IF	CITATIONS
73	Geodesic Methods for Shape and Surface Processing. , 2009, , 29-56.		12
74	Static and Dynamic Texture Mixing Using Optimal Transport. Lecture Notes in Computer Science, 2013, , 137-148.	1.3	12
75	Local linear convergence analysis of Primal-Dual splitting methods. Optimization, 2018, 67, 821-853.	1.7	11
76	Activity Identification and Local Linear Convergence of Douglas-Rachford/ADMM under Partial Smoothness. Lecture Notes in Computer Science, 2015, , 642-653.	1.3	10
77	Geodesics on Shape Spaces with Bounded Variation and Sobolev Metrics. SIAM Journal on Imaging Sciences, 2016, 9, 238-274.	2.2	10
78	An automated workflow for the anatomo-functional mapping of the barrel cortex. Journal of Neuroscience Methods, 2016, 263, 145-154.	2.5	10
79	Sensitivity Analysis for Mirror-Stratifiable Convex Functions. SIAM Journal on Optimization, 2018, 28, 2975-3000.	2.0	10
80	Non-local Active Contours. Lecture Notes in Computer Science, 2012, , 255-266.	1.3	10
81	Model selection with low complexity priors. Information and Inference, 2015, , .	1.6	9
82	Non-negative Sparse Modeling of Textures. , 2007, , 628-639.		9
83	Texture Segmentation via Non-local Non-parametric Active Contours. Lecture Notes in Computer Science, 2011, , 74-88.	1.3	9
84	Low Complexity Regularization of Linear Inverse Problems. Applied and Numerical Harmonic Analysis, 2015, , 103-153.	0.3	8
85	A Low-Rank Approach to Off-the-Grid Sparse Superresolution. SIAM Journal on Imaging Sciences, 2019, 12, 1464-1500.	2.2	7
86	Ground Metric Learning on Graphs. Journal of Mathematical Imaging and Vision, 2021, 63, 89-107.	1.3	7
87	Best basis denoising with non-stationary wavelet packets. , 2009, , .		6
88	Compact representations of stationary dynamic textures. , 2012, , .		6
89	Constrained Sparse Texture Synthesis. Lecture Notes in Computer Science, 2013, , 186-197.	1.3	6
90	The Numerical Tours of Signal Processing Part 2: Multiscale Processings. Computing in Science and Engineering, 2011, 13, 68-71.	1.2	5

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91	Compressive Wave Computation. Foundations of Computational Mathematics, 2011, 11, 257-303.	2.5	5
92	A PROJECTION APPROACH TO THE NUMERICAL ANALYSIS OF LIMIT LOAD PROBLEMS. Mathematical Models and Methods in Applied Sciences, 2011, 21, 1291-1316.	3.3	5
93	Unbiased risk estimation for sparse analysis regularization. , 2012, , .		5
94	Spatially Structured Sparse Morphological Component Separation for voltage-sensitive dye optical imaging. Journal of Neuroscience Methods, 2016, 257, 76-96.	2.5	5
95	Bayesian Modeling of Motion Perception Using Dynamical Stochastic Textures. Neural Computation, 2018, 30, 3355-3392.	2.2	5
96	Total variation projection with first order schemes. , 2009, , .		4
97	Non-local segmentation and inpainting. , 2011, , .		3
98	A $\Gamma$ -Convergence Result for the Upper Bound Limit Analysis of Plates. ESAIM: Mathematical Modelling and Numerical Analysis, 2016, 50, 215-235.	1.9	3
99	The Geometry of Off-the-Grid Compressed Sensing. Foundations of Computational Mathematics, 2023, 23, 241-327.	2.5	3
100	The non degenerate source condition: Support robustness for discrete and continuous sparse deconvolution. , 2015, , .		2
101	Texture Synthesis and Modification with a Patch-Valued Wavelet Transform. , 2007, , 640-651.		2
102	Separation of traveling waves in cortical networks using optical imaging. , 2010, , .		1
103	JMIV Special Issue. Journal of Mathematical Imaging and Vision, 2011, 41, 1-2.	1.3	1
104	Guest Editorial: Mathematics and Image Analysis. Journal of Mathematical Imaging and Vision, 2015, 52, 315-316.	1.3	1
105	Editorial IMA IAI - Information and Inference special issue on optimal transport in data sciences. Information and Inference, 2019, 8, 655-656.	1.6	1
106	Preface to the Special Issue on Optimization for Data Sciences. Applied Mathematics and Optimization, 2020, 82, 889-890.	1.6	1
107	Degrees of freedom for off-the-grid sparse estimation. Bernoulli, 2022, 28, .	1.3	1
108	Challenging restricted isometry constants with greedy pursuit. , 2009, , .		0

#	ARTICLE	IF	CITATIONS
109	Low noise regimes for $\hat{\alpha}$ regularization : continuous and discrete settings. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 943-944.	0.2	0
110	On the convergence rates of proximal splitting algorithms. , 2014, , .		0
111	JMIV Special Issue Mathematics and Image Analysis. Journal of Mathematical Imaging and Vision, 2017, 59, 371-372.	1.3	0
112	Guest Editorial JMIV Special Issue Mathematics and Image Analysis (MIA). Journal of Mathematical Imaging and Vision, 2019, 61, 643-644.	1.3	0
113	Locally Parallel Textures Modeling with Adapted Hilbert Spaces. Lecture Notes in Computer Science, 2009, , 429-442.	1.3	0
114	Piecewise rigid curve deformation via a Finsler steepest descent. Interfaces and Free Boundaries, 2016, 18, 1-44.	0.8	0
115	Optimal transport-based dictionary learning and its application to Euclid-like Point Spread Function representation. , 2017, , .		0