

Remco Duits

List of Publications by Year in descending order

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74
papers

1,844
citations

331259

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all docs

84
docs citations

84
times ranked

1071
citing authors

#	ARTICLE	IF	CITATIONS
1	Lesion Segmentation in Ultrasound Using Semi-Pixel-Wise Cycle Generative Adversarial Nets. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2021, 18, 2555-2565.	1.9	24
2	Roto-translation equivariant convolutional networks: Application to histopathology image analysis. Medical Image Analysis, 2021, 68, 101849.	7.0	51
3	Total Variation and Mean Curvature PDEs on the Homogeneous Space of Positions and Orientations. Journal of Mathematical Imaging and Vision, 2021, 63, 237-262.	0.8	6
4	Recent Geometric Flows in Multi-orientation Image Processing via a Cartan Connection. , 2021, , 1-60.		2
5	Equivariant Deep Learning via Morphological and Linear Scale Space PDEs on the Space of Positions and Orientations. Lecture Notes in Computer Science, 2021, , 27-39.	1.0	4
6	Total Variation and Mean Curvature PDEs on the Space of Positions and Orientations. Lecture Notes in Computer Science, 2019, , 211-223.	1.0	6
7	Fourier Transform on the Homogeneous Space of 3D Positions and Orientations for Exact Solutions to Linear PDEs. Entropy, 2019, 21, 38.	1.1	6
8	Brain Connectivity Measures via Direct Sub-Finslerian Front Propagation on the 5D Sphere Bundle of Positions and Directions. Mathematics and Visualization, 2019, , 309-321.	0.4	4
9	Optimal Paths for Variants of the 2D and 3D Reedsâ€™Shepp Car with Applications in Image Analysis. Journal of Mathematical Imaging and Vision, 2018, 60, 816-848.	0.8	42
10	Design and Processing of Invertible Orientation Scores of 3D Images. Journal of Mathematical Imaging and Vision, 2018, 60, 1427-1458.	0.8	17
11	Template Matching via Densities on the Roto-Translation Group. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 452-466.	9.7	17
12	Roto-Translation Covariant Convolutional Networks for Medical Image Analysis. Lecture Notes in Computer Science, 2018, , 440-448.	1.0	59
13	Differential Geometry and Orientation Analysis in Image Processing. Journal of Mathematical Imaging and Vision, 2018, 60, 763-765.	0.8	0
14	Tracking of Lines in Spherical Images via Sub-Riemannian Geodesics in $\text{SO}(3)$. Journal of Mathematical Imaging and Vision, 2017, 58, 239-264.	0.8	18
15	Retrieving challenging vessel connections in retinal images by line co-occurrence statistics. Biological Cybernetics, 2017, 111, 237-247.	0.6	5
16	New exact and numerical solutions of the (convectionâ€™)diffusion kernels on $\text{SE}(3)$. Differential Geometry and Its Applications, 2017, 53, 182-219.	0.2	5
17	Stability metrics for optic radiation tractography: Towards damage prediction after resective surgery. Journal of Neuroscience Methods, 2017, 288, 34-44.	1.3	13
18	Sub-Riemannian geodesics in $\text{SO}(3)$ with application to vessel tracking in spherical images of retina. Doklady Mathematics, 2017, 95, 168-171.	0.1	2

#	ARTICLE	IF	CITATIONS
19	The Hessian of Axially Symmetric Functions on $SE(3)$ and Application in 3D Image Analysis. Lecture Notes in Computer Science, 2017, , 643-655.	1.0	3
20	Robust Retinal Vessel Segmentation via Locally Adaptive Derivative Frames in Orientation Scores. IEEE Transactions on Medical Imaging, 2016, 35, 2631-2644.	5.4	300
21	On Sub-Riemannian Geodesics in $SE(3)$ Whose Spatial Projections do not Have Cusps. Journal of Dynamical and Control Systems, 2016, 22, 771-805.	0.4	14
22	Numerical Approaches for Linear Left-invariant Diffusions on $SE(2)$, their Comparison to Exact Solutions, and their Applications in Retinal Imaging. Numerical Mathematics, 2016, 9, 1-50.	0.6	18
23	Locally Adaptive Frames in the Roto-Translation Group and Their Applications in Medical Imaging. Journal of Mathematical Imaging and Vision, 2016, 56, 367-402.	0.8	17
24	Brain-inspired algorithms for retinal image analysis. Machine Vision and Applications, 2016, 27, 1117-1135.	1.7	22
25	Holistic Image Reconstruction for Diffusion MRI. Mathematics and Visualization, 2016, , 27-39.	0.4	1
26	Improving Fiber Alignment in HARDI by Combining Contextual PDE Flow with Constrained Spherical Deconvolution. PLoS ONE, 2015, 10, e0138122.	1.1	28
27	Training of Templates for Object Recognition in Invertible Orientation Scores: Application to Optic Nerve Head Detection in Retinal Images. Lecture Notes in Computer Science, 2015, , 464-477.	1.0	4
28	Left-invariant evolutions of wavelet transforms on the similitude group. Applied and Computational Harmonic Analysis, 2015, 39, 110-137.	1.1	16
29	A PDE Approach to Data-Driven Sub-Riemannian Geodesics in $SE(2)$. SIAM Journal on Imaging Sciences, 2015, 8, 2740-2770.	1.3	44
30	Invertible Orientation Scores of 3D Images. Lecture Notes in Computer Science, 2015, , 563-575.	1.0	3
31	Sub-Riemannian Fast Marching in $SE(2)$. Lecture Notes in Computer Science, 2015, , 366-374.	1.0	15
32	Curve cusplless reconstruction via sub-Riemannian geometry. ESAIM - Control, Optimisation and Calculus of Variations, 2014, 20, 748-770.	0.7	23
33	Association Fields via Cusplless Sub-Riemannian Geodesics in $SE(2)$. Journal of Mathematical Imaging and Vision, 2014, 49, 384-417.	0.8	39
34	A Multi-Orientation Analysis Approach to Retinal Vessel Tracking. Journal of Mathematical Imaging and Vision, 2014, 49, 583-610.	0.8	95
35	Crossing-Preserving Multi-scale Vesselness. Lecture Notes in Computer Science, 2014, 17, 603-610.	1.0	27
36	Optic Nerve Head Detection via Group Correlations in Multi-orientation Transforms. Lecture Notes in Computer Science, 2014, , 293-302.	1.0	4

#	ARTICLE	IF	CITATIONS
37	Cuspless Sub-Riemannian Geodesics within the Euclidean Motion Group $SE(d)$. Lecture Notes in Morphogenesis, 2014, , 173-215.	0.2	4
38	Sharpening Fibers in Diffusion Weighted MRI via Erosion. Mathematics and Visualization, 2014, , 97-126.	0.4	6
39	Evaluating Contextual Processing in Diffusion MRI: Application to Optic Radiation Reconstruction for Epilepsy Surgery. PLoS ONE, 2014, 9, e101524.	1.1	21
40	A variational approach to cardiac motion estimation based on covariant derivatives and multi-scale Helmholtz decomposition. Quarterly of Applied Mathematics, 2013, 71, 1-36.	0.5	3
41	Evolution equations on Gabor transforms and their applications. Applied and Computational Harmonic Analysis, 2013, 35, 483-526.	1.1	19
42	Morphological and Linear Scale Spaces for Fiber Enhancement in DW-MRI. Journal of Mathematical Imaging and Vision, 2013, 46, 326-368.	0.8	33
43	Fiber Enhancement in Diffusion-Weighted MRI. Lecture Notes in Computer Science, 2012, , 1-13.	1.0	2
44	Numerical Schemes for Linear and Non-linear Enhancement of DW-MRI. Lecture Notes in Computer Science, 2012, , 14-25.	1.0	11
45	Optimal control for reconstruction of curves without cusps. , 2012, , .		1
46	Left Invariant Evolution Equations on Gabor Transforms. Computational Imaging and Vision, 2012, , 137-158.	0.6	2
47	Left-Invariant Diffusions on the Space of Positions and Orientations and their Application to Crossing-Preserving Smoothing of HARDI images. International Journal of Computer Vision, 2011, 92, 231-264.	10.9	76
48	Left-invariant parabolic evolutions on $SE(2)$ and contour enhancement via invertible orientation scores Part II: Nonlinear left-invariant diffusions on invertible orientation scores. Quarterly of Applied Mathematics, 2010, 68, 293-331.	0.5	59
49	A Sobolev Norm Based Distance Measure for HARDI Clustering. Lecture Notes in Computer Science, 2010, 13, 175-182.	1.0	2
50	Left-invariant parabolic evolutions on $SE(2)$ and contour enhancement via invertible orientation scores Part I: Linear left-invariant diffusion equations on $SE(2)$. Quarterly of Applied Mathematics, 2010, 68, 255-292.	0.5	82
51	Linear Image Reconstruction by Sobolev Norms on the Bounded Domain. International Journal of Computer Vision, 2009, 84, 205-219.	10.9	2
52	Crossing-Preserving Coherence-Enhancing Diffusion on Invertible Orientation Scores. International Journal of Computer Vision, 2009, 85, 253-278.	10.9	76
53	Coarse-to-Fine Image Reconstruction Based on Weighted Differential Features and Background Gauge Fields. Lecture Notes in Computer Science, 2009, , 377-388.	1.0	5
54	Scale Spaces on the 3D Euclidean Motion Group for Enhancement of HARDI Data. Lecture Notes in Computer Science, 2009, , 820-831.	1.0	3

#	ARTICLE	IF	CITATIONS
55	Curvature Estimation for Enhancement of Crossing Curves. , 2007, , .		5
56	The explicit solutions of linear left-invariant second order stochastic evolution equations on the 2D Euclidean motion group. Quarterly of Applied Mathematics, 2007, 66, 27-67.	0.5	40
57	Invertible orientation scores as an application of generalized wavelet theory. Pattern Recognition and Image Analysis, 2007, 17, 42-75.	0.6	19
58	ScaleSpaceViz: $\hat{\pm}$ -Scale spaces in practice. Pattern Recognition and Image Analysis, 2007, 17, 106-116.	0.6	7
59	Image Analysis and Reconstruction using a Wavelet Transform Constructed from a Reducible Representation of the Euclidean Motion Group. International Journal of Computer Vision, 2007, 72, 79-102.	10.9	87
60	Scale Spaces on Lie Groups. , 2007, , 300-312.		23
61	Linear Image Reconstruction by Sobolev Norms on the Bounded Domain. Lecture Notes in Computer Science, 2007, , 55-67.	1.0	3
62	A Linear Image Reconstruction Framework Based on Sobolev Type Inner Products. International Journal of Computer Vision, 2006, 70, 231-240.	10.9	11
63	Towards a New Paradigm for Motion Extraction. Lecture Notes in Computer Science, 2006, , 743-754.	1.0	4
64	The Monogenic Scale Space on a Rectangular Domain and its Features. International Journal of Computer Vision, 2005, 64, 187-201.	10.9	21
65	On $\hat{\pm}$ Kernels, L $\hat{\pm}$ vy Processes, and Natural Image Statistics. Lecture Notes in Computer Science, 2005, , 468-479.	1.0	4
66	A Linear Image Reconstruction Framework Based on Sobolev Type Inner Products. Lecture Notes in Computer Science, 2005, , 85-96.	1.0	5
67	From Stochastic Completion Fields to Tensor Voting. Lecture Notes in Computer Science, 2005, , 124-134.	1.0	11
68	A Comparison of the Deep Structure of $\hat{\pm}$ -Scale Spaces. Lecture Notes in Computer Science, 2005, , 234-248.	1.0	2
69	Linear Image Reconstruction from a Sparse Set of $\hat{\pm}$ -Scale Space Features by Means of Inner Products of Sobolev Type. Lecture Notes in Computer Science, 2005, , 96-111.	1.0	3
70	On the Axioms of Scale Space Theory. Journal of Mathematical Imaging and Vision, 2004, 20, 267-298.	0.8	97
71	The Monogenic Scale Space on a Bounded Domain and Its Applications. Lecture Notes in Computer Science, 2003, , 209-224.	1.0	13
72	$\hat{\pm}$ Scale Spaces on a Bounded Domain. Lecture Notes in Computer Science, 2003, , 494-510.	1.0	33

#	ARTICLE	IF	CITATIONS
73	Tikhonov regularization versus scale space: A new result. , 0, , .		4
74	Curvature Based Biomarkers for Diabetic Retinopathy via Exponential Curve Fits in SE(2). , 0, , .		18