

Moo K Chung

List of Publications by Year in descending order

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140
papers

6,133
citations

125106

35
h-index

90395

73
g-index

155
all docs

155
docs citations

155
times ranked

7751
citing authors

#	ARTICLE	IF	CITATIONS
1	Spectral Permutation Test on Persistence Diagrams. , 2022, , .		2
2	OUP accepted manuscript. Biometrika, 2021, 108, 775-778.	1.3	1
3	Lattice Paths for Persistent Diagrams. Lecture Notes in Computer Science, 2021, 12929, 77-86.	1.0	3
4	Topological Learning and Its Application to Multimodal Brain Network Integration. Lecture Notes in Computer Science, 2021, 12902, 166-176.	1.0	9
5	Revisiting convolutional neural network on graphs with polynomial approximations of Laplace's Beltrami spectral filtering. Neural Computing and Applications, 2021, 33, 13693-13704.	3.2	7
6	Fast mesh data augmentation via Chebyshev polynomial of spectral filtering. Neural Networks, 2021, 143, 198-208.	3.3	8
7	Statistical model for dynamically-changing correlation matrices with application to brain connectivity. Journal of Neuroscience Methods, 2020, 331, 108480.	1.3	9
8	Fast Polynomial Approximation of Heat Kernel Convolution on Manifolds and Its Application to Brain Sulcal and Gyral Graph Pattern Analysis. IEEE Transactions on Medical Imaging, 2020, 39, 2201-2212.	5.4	19
9	Heat Kernel Smoothing on Manifolds and Its Application to Hyoid Bone Growth Modeling. Emerging Topics in Statistics and Biostatistics, 2020, , 235-261.	0.1	2
10	Exact topological inference of the resting-state brain networks in twins. Network Neuroscience, 2019, 3, 674-694.	1.4	45
11	Dynamic Functional Connectivity Using Heat Kernel. , 2019, , .		3
12	Statistical Inference on the Number of Cycles in Brain Networks. , 2019, 2019, 113-116.		11
13	Statistical Preliminary. , 2019, , 1-26.		0
14	Brain Network Nodes and Edges. , 2019, , 27-60.		2
15	Correlation Networks. , 2019, , 76-107.		0
16	Big Brain Network Data. , 2019, , 108-128.		0
17	Network Simulations. , 2019, , 129-155.		0
18	Persistent Homology. , 2019, , 156-179.		0

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19	Diffusions on Graphs. , 2019, , 180-206.		0
20	Sparse Networks. , 2019, , 207-225.		0
21	Brain Network Distances. , 2019, , 226-245.		0
22	Combinatorial Inferences for Networks. , 2019, , 246-268.		0
23	Series Expansion of Connectivity Matrices. , 2019, , 269-291.		0
24	Dynamic Network Models. , 2019, , 292-301.		0
25	Altered dynamic electroencephalography connectome phase-space features of emotion regulation in social anxiety. <i>NeuroImage</i> , 2019, 186, 338-349.	2.1	11
26	Rapid Acceleration of the Permutation Test via Transpositions. <i>Lecture Notes in Computer Science</i> , 2019, 11848, 42-53.	1.0	14
27	Harmonic Holes as the Submodules of Brain Network and Network Dissimilarity. <i>Lecture Notes in Computer Science</i> , 2019, , 110-122.	1.0	3
28	Fast Polynomial Approximation to Heat Diffusion in Manifolds. <i>Lecture Notes in Computer Science</i> , 2019, , 48-56.	1.0	0
29	Heat Kernel Smoothing in Irregular Domains. <i>Lecture Notes Series, Institute for Mathematical Sciences</i> , 2019, , 181-209.	0.2	0
30	Statistical challenges of big brain network data. <i>Statistics and Probability Letters</i> , 2018, 136, 78-82.	0.4	23
31	Topological properties of the structural brain network constructed using the ϵ -neighbor method. <i>IEEE Transactions on Biomedical Engineering</i> , 2018, 65, 1-1.	2.5	21
32	Heritability of nested hierarchical structural brain network. , 2018, 2018, 554-557.		21
33	Discrete Heat Kernel Smoothing in Irregular Image Domains. , 2018, 2018, 5101-5104.		18
34	GRAND: Unbiased Connectome Atlas of Brain Network by Groupwise Graph Shrinkage and Network Diffusion. <i>Lecture Notes in Computer Science</i> , 2018, , 127-135.	1.0	1
35	Topological data analysis of single-trial electroencephalographic signals. <i>Annals of Applied Statistics</i> , 2018, 12, 1506-1534.	0.5	65
36	A Novel Registration-Based Semiautomatic Mandible Segmentation Pipeline Using Computed Tomography Images to Study Mandibular Development. <i>Journal of Computer Assisted Tomography</i> , 2018, 42, 306-316.	0.5	17

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37	Connectivity in fMRI: Blind Spots and Breakthroughs. IEEE Transactions on Medical Imaging, 2018, 37, 1537-1550.	5.4	29
38	Abnormal hole detection in brain connectivity by kernel density of persistence diagram and Hodge Laplacian. , 2018, 2018, 20-23.		25
39	Exact Combinatorial Inference for Brain Images. Lecture Notes in Computer Science, 2018, , 629-637.	1.0	10
40	Phase Angle Spatial Embedding (PhASE). Lecture Notes in Computer Science, 2018, , 367-374.	1.0	1
41	Characterizing mandibular growth using three-dimensional imaging techniques and anatomic landmarks. Archives of Oral Biology, 2017, 77, 27-38.	0.8	33
42	Integrative Structural Brain Network Analysis in Diffusion Tensor Imaging. Brain Connectivity, 2017, 7, 331-346.	0.8	34
43	The significance of negative correlations in brain connectivity. Journal of Comparative Neurology, 2017, 525, 3251-3265.	0.9	53
44	Integrated multimodal network approach to PET and MRI based on multidimensional persistent homology. Human Brain Mapping, 2017, 38, 1387-1402.	1.9	44
45	Degree-based statistic and center persistency for brain connectivity analysis. Human Brain Mapping, 2017, 38, 165-181.	1.9	36
46	Exact Topological Inference for Paired Brain Networks via Persistent Homology. Lecture Notes in Computer Science, 2017, 2017, 299-310.	1.0	26
47	Online Statistical Inference for Large-Scale Binary Images. Lecture Notes in Computer Science, 2017, 10434, 729-736.	1.0	2
48	Topological Network Analysis of Electroencephalographic Power Maps. Lecture Notes in Computer Science, 2017, 10511, 134-142.	1.0	6
49	Topological Distances Between Brain Networks. Lecture Notes in Computer Science, 2017, 10511, 161-170.	1.0	34
50	Composite growth model applied to human oral and pharyngeal structures and identifying the contribution of growth types. Statistical Methods in Medical Research, 2016, 25, 1975-1990.	0.7	12
51	Multi-resolution statistical analysis on graph structured data in neuroimaging. , 2015, 2015, 1548-1551.		0
52	Multi-resolution statistical analysis of brain connectivity graphs in preclinical Alzheimer's disease. NeuroImage, 2015, 118, 103-117.	2.1	53
53	LARS network filtration in the study of EEG brain connectivity. , 2015, 2015, 30-33.		1
54	Statistical inference models for image datasets with systematic variations. , 2015, 2015, 4795-4803.		4

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55	Topological seizure origin detection in electroencephalographic signals. , 2015, 2015, 351-354.		6
56	Comparisons of topological properties in autism for the brain network construction methods. Proceedings of SPIE, 2015, , .	0.8	1
57	A 4D hyperspherical interpretation of q-space. Medical Image Analysis, 2015, 21, 15-28.	7.0	1
58	Manifold learning on brain functional networks in aging. Medical Image Analysis, 2015, 20, 52-60.	7.0	57
59	Unified heat kernel regression for diffusion, kernel smoothing and wavelets on manifolds and its application to mandible growth modeling in CT images. Medical Image Analysis, 2015, 22, 63-76.	7.0	47
60	4D hyperspherical harmonic (HyperSPHARM) representation of surface anatomy: A holistic treatment of multiple disconnected anatomical structures. Medical Image Analysis, 2015, 22, 89-101.	7.0	10
61	Persistent Homology in Sparse Regression and Its Application to Brain Morphometry. IEEE Transactions on Medical Imaging, 2015, 34, 1928-1939.	5.4	69
62	Diffeomorphic metric mapping and probabilistic atlas generation of hybrid diffusion imaging based on BFOR signal basis. Medical Image Analysis, 2014, 18, 1002-1014.	7.0	5
63	Improved statistical power with a sparse shape model in detecting an aging effect in the hippocampus and amygdala. Proceedings of SPIE, 2014, 9034, 90340Y.	0.8	0
64	Grading and Interpretation of White Matter Hyperintensities Using Statistical Maps. Stroke, 2014, 45, 3567-3575.	1.0	54
65	Multivariate General Linear Models (MGLM) on Riemannian Manifolds with Applications to Statistical Analysis of Diffusion Weighted Images. , 2014, 2014, 2705-2712.		38
66	Tracing the evolution of multi-scale functional networks in a mouse model of depression using persistent brain network homology. NeuroImage, 2014, 101, 351-363.	2.1	58
67	Multi-resolutional shape features via non-Euclidean wavelets: Applications to statistical analysis of cortical thickness. NeuroImage, 2014, 93, 107-123.	2.1	25
68	Hole Detection in Metabolic Connectivity of Alzheimer's Disease Using κ -Laplacian. Lecture Notes in Computer Science, 2014, , 297-304.	1.0	29
69	A Unified Kernel Regression for Diffusion Wavelets on Manifolds Detects Aging-Related Changes in the Amygdala and Hippocampus. Lecture Notes in Computer Science, 2014, 17, 789-796.	1.0	2
70	The 4D Hyperspherical Diffusion Wavelet: A New Method for the Detection of Localized Anatomical Variation. Lecture Notes in Computer Science, 2014, 17, 65-72.	1.0	3
71	Hole detection in metabolic connectivity of Alzheimer's disease using κ -Laplacian. , 2014, 17, 297-304.		7
72	Early Neglect Is Associated With Alterations in White Matter Integrity and Cognitive Functioning. Child Development, 2013, 84, 1566-1578.	1.7	210

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73	The effect of computed tomographic scanner parameters and 3-dimensional volume rendering techniques on the accuracy of linear, angular, and volumetric measurements of the mandible. Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology, 2013, 115, 682-691.	0.2	78
74	Bessel Fourier Orientation Reconstruction (BFOR): An analytical diffusion propagator reconstruction for hybrid diffusion imaging and computation of q-space indices. NeuroImage, 2013, 64, 650-670.	2.1	63
75	Multi-resolution Shape Analysis via Non-Euclidean Wavelets: Applications to Mesh Segmentation and Surface Alignment Problems. , 2013, , .		17
76	Diffeomorphic Metric Mapping of Hybrid Diffusion Imaging Based on BFOR Signal Basis. Lecture Notes in Computer Science, 2013, 23, 147-158.	1.0	1
77	Multi-resolutional Brain Network Filtering and Analysis via Wavelets on Non-Euclidean Space. Lecture Notes in Computer Science, 2013, 16, 643-651.	1.0	10
78	Persistent Homological Sparse Network Approach to Detecting White Matter Abnormality in Maltreated Children: MRI and DTI Multimodal Study. Lecture Notes in Computer Science, 2013, 16, 300-307.	1.0	11
79	4D Hyperspherical Harmonic (HyperSPHARM) Representation of Multiple Disconnected Brain Subcortical Structures. Lecture Notes in Computer Science, 2013, 16, 598-605.	1.0	5
80	A 4D Hyperspherical Interpretation of q-space. Lecture Notes in Computer Science, 2013, 16, 501-509.	1.0	2
81	Agreement between the white matter connectivity based on the tensor-based morphometry and the volumetric white matter parcellations based on diffusion tensor imaging. , 2012, , .		20
82	Sparse shape representation using the Laplace-Beltrami eigenfunctions and its application to modeling subcortical structures. , 2012, , 25-32.		7
83	Persistent Brain Network Homology From the Perspective of Dendrogram. IEEE Transactions on Medical Imaging, 2012, 31, 2267-2277.	5.4	176
84	Structural Variations in Prefrontal Cortex Mediate the Relationship between Early Childhood Stress and Spatial Working Memory. Journal of Neuroscience, 2012, 32, 7917-7925.	1.7	192
85	Extracting Quantitative Measures from EAP: A Small Clinical Study Using BFOR. Lecture Notes in Computer Science, 2012, 15, 280-287.	1.0	5
86	Wavelet based multi-scale shape features on surfaces for cortical thickness discrimination. Advances in Neural Information Processing Systems, 2012, 2012, 1241-1249.	2.8	24
87	Laplace-Beltrami eigenfunction expansion of cortical manifolds. , 2011, , .		12
88	Discriminative persistent homology of brain networks. , 2011, , .		68
89	Sparse topological data recovery in medical images. , 2011, , .		1
90	Sparse Brain Network Recovery Under Compressed Sensing. IEEE Transactions on Medical Imaging, 2011, 30, 1154-1165.	5.4	172

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91	Topology-Based Kernels With Application to Inference Problems in Alzheimer's Disease. IEEE Transactions on Medical Imaging, 2011, 30, 1760-1770.	5.4	69
92	A longitudinal study of motor performance and striatal [18F]fluorodopa uptake in Parkinson's disease. Brain Imaging and Behavior, 2011, 5, 203-211.	1.1	12
93	Rate of [18F]fluorodopa uptake decline in striatal subregions in Parkinson's disease. Movement Disorders, 2011, 26, 614-620.	2.2	23
94	Sparse brain network using penalized linear regression. Proceedings of SPIE, 2011, , .	0.8	0
95	Mandible shape modeling using the second eigenfunction of the Laplace-Beltrami operator. , 2011, , .		6
96	Scalable brain network construction on white matter fibers. Proceedings of SPIE, 2011, 7962, .	0.8	13
97	Structural connectivity via the tensor-based morphometry. , 2011, , .		20
98	Developmental Sexual Dimorphism of the Oral and Pharyngeal Portions of the Vocal Tract: An Imaging Study. Journal of Speech, Language, and Hearing Research, 2011, 54, 995-1010.	0.7	69
99	Bessel Fourier Orientation Reconstruction: An Analytical EAP Reconstruction Using Multiple Shell Acquisitions in Diffusion MRI. Lecture Notes in Computer Science, 2011, 14, 217-225.	1.0	7
100	Computing the Shape of Brain Networks Using Graph Filtration and Gromov-Hausdorff Metric. Lecture Notes in Computer Science, 2011, 14, 302-309.	1.0	62
101	Hot Spots Conjecture and Its Application to Modeling Tubular Structures. Lecture Notes in Computer Science, 2011, 7009, 225-232.	1.0	10
102	Applications of Epsilon Radial Networks in Neuroimage Analyses. Lecture Notes in Computer Science, 2011, 7087, 236-247.	1.0	3
103	Heat Kernel Smoothing via Laplace-Beltrami Eigenfunctions and Its Application to Subcortical Structure Modeling. Lecture Notes in Computer Science, 2011, , 36-47.	1.0	6
104	Early Stress Is Associated with Alterations in the Orbitofrontal Cortex: A Tensor-Based Morphometry Investigation of Brain Structure and Behavioral Risk. Journal of Neuroscience, 2010, 30, 7466-7472.	1.7	367
105	General multivariate linear modeling of surface shapes using SurfStat. NeuroImage, 2010, 53, 491-505.	2.1	144
106	Heat Kernel Smoothing Using Laplace-Beltrami Eigenfunctions. Lecture Notes in Computer Science, 2010, 13, 505-512.	1.0	34
107	Cosine series representation of 3D curves and its application to white matter fiber bundles in diffusion tensor imaging. Statistics and Its Interface, 2010, 3, 69-80.	0.2	45
108	Classification in DTI using shapes of white matter tracts. , 2009, 2009, 2719-22.		15

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109	Developmental craniofacial anthropometry: Assessment of race effects. <i>Clinical Anatomy</i> , 2009, 22, 800-808.	1.5	18
110	Efficient parametric encoding scheme for white matter fiber bundles. , 2009, 2009, 6644-7.		3
111	3D eigenfunction expansion of sparsely sampled 2D cortical data. , 2009, , .		1
112	A study of diffusion tensor imaging by tissue-specific, smoothing-compensated voxel-based analysis. <i>NeuroImage</i> , 2009, 44, 870-883.	2.1	93
113	Spatially augmented LPboosting for AD classification with evaluations on the ADNI dataset. <i>NeuroImage</i> , 2009, 48, 138-149.	2.1	186
114	Anatomic development of the oral and pharyngeal portions of the vocal tract: An imaging study. <i>Journal of the Acoustical Society of America</i> , 2009, 125, 1666-1678.	0.5	154
115	Persistence Diagrams of Cortical Surface Data. <i>Lecture Notes in Computer Science</i> , 2009, 21, 386-397.	1.0	62
116	Topological Characterization of Signal in Brain Images Using Min-Max Diagrams. <i>Lecture Notes in Computer Science</i> , 2009, 12, 158-166.	1.0	7
117	Robust Atlas-Based Brain Segmentation Using Multi-structure Confidence-Weighted Registration. <i>Lecture Notes in Computer Science</i> , 2009, 12, 549-557.	1.0	12
118	Tensor-Based Cortical Surface Morphometry via Weighted Spherical Harmonic Representation. <i>IEEE Transactions on Medical Imaging</i> , 2008, 27, 1143-1151.	5.4	124
119	Measurement Consistency from Magnetic Resonance Images. <i>Academic Radiology</i> , 2008, 15, 1322-1330.	1.3	9
120	Quantifying cortical surface asymmetry via logistic discriminant analysis. , 2008, , .		0
121	Automatic Physiological Waveform Processing for fMRI Noise Correction and Analysis. <i>PLoS ONE</i> , 2008, 3, e1751.	1.1	16
122	Amygdala Surface Modeling with Weighted Spherical Harmonics. <i>Lecture Notes in Computer Science</i> , 2008, , 177-184.	1.0	7
123	Cortical Surface Thickness as a Classifier: Boosting for Autism Classification. <i>Lecture Notes in Computer Science</i> , 2008, 11, 999-1007.	1.0	23
124	Weighted Fourier Series Representation and Its Application to Quantifying the Amount of Gray Matter. <i>IEEE Transactions on Medical Imaging</i> , 2007, 26, 566-581.	5.4	161
125	Morphometric Analysis of Hippocampal Shape in Mild Cognitive Impairment: An Imaging Genetics Study. , 2007, , .		9
126	Encoding Neuroanatomical Information using Weighted Spherical Harmonic Representation. , 2007, , .		4

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127	Diffusion tensor imaging of white matter in the superior temporal gyrus and temporal stem in autism. <i>Neuroscience Letters</i> , 2007, 424, 127-132.	1.0	252
128	Integrating VBM into the General Linear Model with voxelwise anatomical covariates. <i>NeuroImage</i> , 2007, 34, 500-508.	2.1	238
129	Estimating Head Circumference from Pediatric Imaging Studies. <i>Academic Radiology</i> , 2007, 14, 1102-1107.	1.3	18
130	Large-Scale Modeling of Parametric Surfaces Using Spherical Harmonics. , 2006, , .		54
131	Unified Statistical Approach to Cortical Thickness Analysis. <i>Lecture Notes in Computer Science</i> , 2005, 19, 627-638.	1.0	22
132	Cortical thickness analysis in autism with heat kernel smoothing. <i>NeuroImage</i> , 2005, 25, 1256-1265.	2.1	313
133	Functional but not structural subgenual prefrontal cortex abnormalities in melancholia. <i>Molecular Psychiatry</i> , 2004, 9, 393-405.	4.1	330
134	Quantitative analysis of diffusion tensor orientation: Theoretical framework. <i>Magnetic Resonance in Medicine</i> , 2004, 52, 1146-1155.	1.9	37
135	Less white matter concentration in autism: 2D voxel-based morphometry. <i>NeuroImage</i> , 2004, 23, 242-251.	2.1	145
136	Deformation-based surface morphometry applied to gray matter deformation. <i>NeuroImage</i> , 2003, 18, 198-213.	2.1	245
137	A Unified Statistical Approach to Deformation-Based Morphometry. <i>NeuroImage</i> , 2001, 14, 595-606.	2.1	372
138	Visualizing the Median as the Minimum-Deviation Location. <i>American Statistician</i> , 2001, 55, 150-152.	0.9	16
139	Diffusion smoothing on brain surface via finite element method. , 0, , .		16
140	Heat Kernel Smoothing on Unit Sphere. , 0, , .		7