Moo K Chung

List of Publications by Year
in descending order

140 papers	6,133 citations	109311 35 h-index	79691 73 g-index
155 all docs	155 docs citations	155 times ranked	6778 citing authors

#	Article	IF	Citations
1	Spectral Permutation Test on Persistence Diagrams. , 2022, , .		2
2	OUP accepted manuscript. Biometrika, 2021, 108, 775-778.	2.4	1
3	Lattice Paths for Persistent Diagrams. Lecture Notes in Computer Science, 2021, 12929, 77-86.	1.3	3
4	Topological Learning and Its Application to Multimodal Brain Network Integration. Lecture Notes in Computer Science, 2021, 12902, 166-176.	1.3	9
5	Revisiting convolutional neural network on graphs with polynomial approximations of Laplaceâ€“Beltrami spectral filtering. Neural Computing and Applications, 2021, 33, 13693-13704.	5.6	7
6	Fast mesh data augmentation via Chebyshev polynomial of spectral filtering. Neural Networks, 2021, 143, 198-208.	5.9	8
7	Statistical model for dynamically-changing correlation matrices with application to brain connectivity. Journal of Neuroscience Methods, 2020, 331, 108480.	2.5	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.	8.9	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.	2.6	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. NeuroImage, 2019, 186, 338-349.	4.2	11
26	Rapid Acceleration of the Permutation Test via Transpositions. Lecture Notes in Computer Science, 2019, 11848, 42-53.	1.3	14
27	Harmonic Holes as the Submodules of Brain Network and Network Dissimilarity. Lecture Notes in Computer Science, 2019, , 110-122.	1.3	3
28	Fast Polynomial Approximation to Heat Diffusion in Manifolds. Lecture Notes in Computer Science, 2019, , 48-56.	1.3	0
29	Heat Kernel Smoothing in Irregular Domains. Lecture Notes Series, Institute for Mathematical Sciences, 2019, , 181-209.	0.2	0
30	Statistical challenges of big brain network data. Statistics and Probability Letters, 2018, 136, 78-82.	0.7	23
31	Topological properties of the structural brain network constructed using the $epsilon$-neighbor method. IEEE Transactions on Biomedical Engineering, 2018, 65, 1-1.	4.2	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. Lecture Notes in Computer Science, 2018, , 127-135.	1.3	1
35	Topological data analysis of single-trial electroencephalographic signals. Annals of Applied Statistics, 2018, 12, 1506-1534.	1.1	65
36	A Novel Registration-Based Semiautomatic Mandible Segmentation Pipeline Using Computed Tomography Images to Study Mandibular Development. Journal of Computer Assisted Tomography, 2018, 42, 306-316.	0.9	17

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37	Connectivity in fMRI: Blind Spots and Breakthroughs. IEEE Transactions on Medical Imaging, 2018, 37, 1537-1550.	8.9	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.	1.3	10
40	Phase Angle Spatial Embedding (PhASE). Lecture Notes in Computer Science, 2018, , 367-374.	1.3	1
41	Characterizing mandibular growth using three-dimensional imaging techniques and anatomic landmarks. Archives of Oral Biology, 2017, 77, 27-38.	1.8	33
42	Integrative Structural Brain Network Analysis in Diffusion Tensor Imaging. Brain Connectivity, 2017, 7, 331-346.	1.7	34
43	The significance of negative correlations in brain connectivity. Journal of Comparative Neurology, 2017, 525, 3251-3265.	1.6	53
44	Integrated multimodal network approach to PET and MRI based on multidimensional persistent homology. Human Brain Mapping, 2017, 38, 1387-1402.	3.6	44
45	Degreeâ€based statistic and center persistency for brain connectivity analysis. Human Brain Mapping, 2017, 38, 165-181.	3.6	36
46	Exact Topological Inference for Paired Brain Networks via Persistent Homology. Lecture Notes in Computer Science, 2017, 2017, 299-310.	1.3	26
47	Online Statistical Inference for Large-Scale Binary Images. Lecture Notes in Computer Science, 2017, 10434, 729-736.	1.3	2
48	Topological Network Analysis of Electroencephalographic Power Maps. Lecture Notes in Computer Science, 2017, 10511, 134-142.	1.3	6
49	Topological Distances Between Brain Networks. Lecture Notes in Computer Science, 2017, 10511, 161-170.	1.3	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.	1.5	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.	4.2	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.	11.6	1
58	Manifold learning on brain functional networks in aging. Medical Image Analysis, 2015, 20, 52-60.	11.6	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.	11.6	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.	11.6	10
61	Persistent Homology in Sparse Regression and Its Application to Brain Morphometry. IEEE Transactions on Medical Imaging, 2015, 34, 1928-1939.	8.9	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.	11.6	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.	2.0	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.	4.2	58
67	Multi-resolutional shape features via non-Euclidean wavelets: Applications to statistical analysis of cortical thickness. NeuroImage, 2014, 93, 107-123.	4.2	25
68	Hole Detection in Metabolic Connectivity of Alzheimerâ€™s Disease Using kâ€‰â^'Laplacian. Lecture Notes in Computer Science, 2014, , 297-304.	1.3	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.	1.3	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.	1.3	3
71	Hole detection in metabolic connectivity of Alzheimer's disease using kappa-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.	3.0	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.	0.4	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.	4.2	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.	1.3	1
77	Multi-resolutional Brain Network Filtering and Analysis via Wavelets on Non-Euclidean Space. Lecture Notes in Computer Science, 2013, 16, 643-651.	1.3	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.	1.3	11
79	4D Hyperspherical Harmonic (HyperSPHARM) Representation of Multiple Disconnected Brain Subcortical Structures. Lecture Notes in Computer Science, 2013, 16, 598-605.	1.3	5
80	A 4D Hyperspherical Interpretation of q-space. Lecture Notes in Computer Science, 2013, 16, 501-509.	1.3	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.	8.9	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.	3.6	192
85	Extracting Quantitative Measures from EAP: A Small Clinical Study Using BFOR. Lecture Notes in Computer Science, 2012, 15, 280-287.	1.3	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.	8.9	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.	8.9	69
92	A longitudinal study of motor performance and striatal [18F]fluorodopa uptake in Parkinsonâ€™s disease. Brain Imaging and Behavior, 2011, 5, 203-211.	2.1	12
93	Rate of 6â€[18F]fluorodopa uptake decline in striatal subregions in Parkinson's disease. Movement Disorders, 2011, 26, 614-620.	3.9	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.	1.6	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.	1.3	7
100	Computing the Shape of Brain Networks Using Graph Filtration and Gromov-Hausdorff Metric. Lecture Notes in Computer Science, 2011, 14, 302-309.	1.3	62
101	Hot Spots Conjecture and Its Application to Modeling Tubular Structures. Lecture Notes in Computer Science, 2011, 7009, 225-232.	1.3	10
102	Applications of Epsilon Radial Networks in Neuroimage Analyses. Lecture Notes in Computer Science, 2011, 7087, 236-247.	1.3	3
103	Heat Kernel Smoothing via Laplace-Beltrami Eigenfunctions and Its Application to Subcortical Structure Modeling. Lecture Notes in Computer Science, 2011, , 36-47.	1.3	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.	3.6	367
105	General multivariate linear modeling of surface shapes using SurfStat. NeuroImage, 2010, 53, 491-505.	4.2	144
106	Heat Kernel Smoothing Using Laplace-Beltrami Eigenfunctions. Lecture Notes in Computer Science, 2010, 13, 505-512.	1.3	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.	0.3	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. Clinical Anatomy, 2009, 22, 800-808.	2.7	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. NeuroImage, 2009, 44, 870-883.	4.2	93
113	Spatially augmented LPboosting for AD classification with evaluations on the ADNI dataset. NeuroImage, 2009, 48, 138-149.	4.2	186
114	Anatomic development of the oral and pharyngeal portions of the vocal tract: An imaging study. Journal of the Acoustical Society of America, 2009, 125, 1666-1678.	1.1	154
115	Persistence Diagrams of Cortical Surface Data. Lecture Notes in Computer Science, 2009, 21, 386-397.	1.3	62
116	Topological Characterization of Signal in Brain Images Using Min-Max Diagrams. Lecture Notes in Computer Science, 2009, 12, 158-166.	1.3	7
117	Robust Atlas-Based Brain Segmentation Using Multi-structure Confidence-Weighted Registration. Lecture Notes in Computer Science, 2009, 12, 549-557.	1.3	12
118	Tensor-Based Cortical Surface Morphometry via Weighted Spherical Harmonic Representation. IEEE Transactions on Medical Imaging, 2008, 27, 1143-1151.	8.9	124
119	Measurement Consistency from Magnetic Resonance Images. Academic Radiology, 2008, 15, 1322-1330.	2.5	9
120	Quantifying cortical surface asymmetry via logistic discriminant analysis. , 2008, , .		0
121	Automatic Physiological Waveform Processing for fMRI Noise Correction and Analysis. PLoS ONE, 2008, 3, e1751.	2.5	16
122	Amygdala Surface Modeling with Weighted Spherical Harmonics. Lecture Notes in Computer Science, 2008, , 177-184.	1.3	7
123	Cortical Surface Thickness as a Classifier: Boosting for Autism Classification. Lecture Notes in Computer Science, 2008, 11, 999-1007.	1.3	23
124	Weighted Fourier Series Representation and Its Application to Quantifying the Amount of Gray Matter. IEEE Transactions on Medical Imaging, 2007, 26, 566-581.	8.9	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. Neuroscience Letters, 2007, 424, 127-132.	2.1	252
128	Integrating VBM into the General Linear Model with voxelwise anatomical covariates. NeuroImage, 2007, 34, 500-508.	4.2	238
129	Estimating Head Circumference from Pediatric Imaging Studies. Academic Radiology, 2007, 14, 1102-1107.	2.5	18
130	Large-Scale Modeling of Parametric Surfaces Using Spherical Harmonics. , 2006, , .		54
131	Unified Statistical Approach to Cortical Thickness Analysis. Lecture Notes in Computer Science, 2005, 19, 627-638.	1.3	22
132	Cortical thickness analysis in autism with heat kernel smoothing. NeuroImage, 2005, 25, 1256-1265.	4.2	313
133	Functional but not structural subgenual prefrontal cortex abnormalities in melancholia. Molecular Psychiatry, 2004, 9, 393-405.	7.9	330
134	Quantitative analysis of diffusion tensor orientation: Theoretical framework. Magnetic Resonance in Medicine, 2004, 52, 1146-1155.	3.0	37
135	Less white matter concentration in autism: 2D voxel-based morphometry. NeuroImage, 2004, 23, 242-251.	4.2	145
136	Deformation-based surface morphometry applied to gray matter deformation. NeuroImage, 2003, 18, 198-213.	4.2	245
137	A Unified Statistical Approach to Deformation-Based Morphometry. NeuroImage, 2001, 14, 595-606.	4.2	372
138	Visualizing the Median as the Minimum-Deviation Location. American Statistician, 2001, 55, 150-152.	1.6	16
139	Diffusion smoothing on brain surface via finite element method. , 0, , .		16
140	Heat Kernel Smoothing on Unit Sphere. , 0, , .		7