Alfred Anwander

List of Publications by Year
in descending order

81 papers	7,857 citations	70961 41 h-index	69108 77 g-index
89 all docs	89 docs citations	89 times ranked	9014 citing authors

#	Article	IF	Citations
1	Deterministic and Probabilistic Tractography Based on Complex Fibre Orientation Distributions. IEEE Transactions on Medical Imaging, 2009, 28, 269-286.	5.4	593
2	The brain differentiates human and non-human grammars: Functional localization and structural connectivity. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 2458-2463.	3.3	572
3	Connectivity-Based Parcellation of Broca's Area. Cerebral Cortex, 2006, 17, 816-825.	1.6	476
4	Dynamic Properties of Human Brain Structure: Learning-Related Changes in Cortical Areas and Associated Fiber Connections. Journal of Neuroscience, 2010, 30, 11670-11677.	1.7	442
5	Influence of tissue conductivity anisotropy on EEG/MEG field and return current computation in a realistic head model: A simulation and visualization study using high-resolution finite element modeling. NeuroImage, 2006, 30, 813-826.	2.1	401
6	Neural language networks at birth. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16056-16061.	3.3	398
7	Cortico-striatal connections predict control over speed and accuracy in perceptual decision making. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15916-15920.	3.3	332
8	Segregating the core computational faculty of human language from working memory. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 8362-8367.	3.3	307
9	Neuroanatomical Prerequisites for Language Functions in the Maturing Brain. Cerebral Cortex, 2011, 21, 459-466.	1.6	233
10	A mind-brain-body dataset of MRI, EEG, cognition, emotion, and peripheral physiology in young and old adults. Scientific Data, 2019, 6, 180308.	2.4	188
11	Parametric spherical deconvolution: Inferring anatomical connectivity using diffusion MR imaging. NeuroImage, 2007, 37, 474-488.	2.1	175
12	Dorsal and Ventral Pathways for Prosody. Current Biology, 2015, 25, 3079-3085.	1.8	175
13	Dorsal and ventral pathways in language development. Brain and Language, 2013, 127, 289-295.	0.8	165
14	Cortico-subthalamic white matter tract strength predicts interindividual efficacy in stopping a motor response. NeuroImage, 2012, 60, 370-375.	2.1	160
15	Diffusion imaging in humans at 7T using readoutâ€segmented EPI and GRAPPA. Magnetic Resonance in Medicine, 2010, 64, 9-14.	1.9	151
16	EEG source analysis of epileptiform activity using a 1Âmm anisotropic hexahedra finite element head model. NeuroImage, 2009, 44, 399-410.	2.1	145
17	Direct Structural Connections between Voice- and Face-Recognition Areas. Journal of Neuroscience, 2011, 31, 12906-12915.	1.7	145
18	k-space and q-space: Combining ultra-high spatial and angular resolution in diffusion imaging using ZOOPPA at 7T. NeuroImage, 2012, 60, 967-978.	2.1	122

#	Article	IF	Citations
19	The CONNECT project: Combining macro- and micro-structure. NeuroImage, 2013, 80, 273-282.	2.1	121
20	Sex-Dependent Influences of Obesity on Cerebral White Matter Investigated by Diffusion-Tensor Imaging. PLoS ONE, 2011, 6, e18544.	1.1	121
21	Layer-Specific Intracortical Connectivity Revealed with Diffusion MRI. Cerebral Cortex, 2014, 24, 328-339.	1.6	116
22	Validation of tractography: Comparison with manganese tracing. Human Brain Mapping, 2015, 36, 4116-4134.	1.9	110
23	Emotion Regulation and Trait Anxiety Are Predicted by the Microstructure of Fibers between Amygdala and Prefrontal Cortex. Journal of Neuroscience, 2015, 35, 6020-6027.	1.7	106
24	The Neurobiological Grounding of Persistent Stuttering: from Structure to Function. Current Neurology and Neuroscience Reports, 2015, 15, 63.	2.0	104
25	Diffusion tensor imaging segments the human amygdala in vivo. NeuroImage, 2010, 49, 2958-2965.	2.1	98
26	Track density imaging (TDI): Validation of super resolution property. NeuroImage, 2011, 56, 1259-1266.	2.1	92
27	Geometry-Adapted Hexahedral Meshes Improve Accuracy of Finite-Element-Method-Based EEG Source Analysis. IEEE Transactions on Biomedical Engineering, 2007, 54, 1446-1453.	2.5	84
28	Connectivity Architecture and Subdivision of the Human Inferior Parietal Cortex Revealed by Diffusion MRI. Cerebral Cortex, 2014, 24, 2436-2448.	1.6	80
29	Structural connectivity of right frontal hyperactive areas scales with stuttering severity. Brain, 2018, 141, 191-204.	3.7	76
30	Linking ordering in Broca's area to storage in left temporo-parietal regions: The case of sentence processing. NeuroImage, 2012, 62, 1987-1998.	2.1	75
31	Anatomical and functional parcellation of the human lateral premotor cortex. NeuroImage, 2010, 50, 396-408.	2.1	72
32	A hierarchical method for wholeâ€brain connectivityâ€based parcellation. Human Brain Mapping, 2014, 35, 5000-5025.	1.9	70
33	Mathematical methods for diffusion MRI processing. NeuroImage, 2009, 45, S111-S122.	2.1	68
34	Pathological glutamatergic neurotransmission in Gilles de la Tourette syndrome. Brain, 2017, 140, 218-234.	3.7	68
35	A parallel algebraic multigrid solver for finite element method based source localization in the human brain. Computing and Visualization in Science, 2002, 5, 165-177.	1.2	63
36	Highâ€resolution MRI and diffusionâ€weighted imaging of the human habenula at 7 tesla. Journal of Magnetic Resonance Imaging, 2014, 39, 1018-1026.	1.9	62

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37	Orientation dependence of magnetization transfer parameters in human white matter. NeuroImage, 2015, 114, 136-146.	2.1	62
38	Left posterior-dorsal area 44 couples with parietal areas to promote speech fluency, while right area 44 activity promotes the stopping of motor responses. NeuroImage, 2016, 142, 628-644.	2.1	60
39	Beyond fractional anisotropy: Extraction of bundle-specific structural metrics from crossing fiber models. NeuroImage, 2014, 100, 176-191.	2.1	54
40	Primate auditory prototype in the evolution of the arcuate fasciculus. Nature Neuroscience, 2020, 23, 611-614.	7.1	53
41	Functional Network Mirrored in the Prefrontal Cortex, Caudate Nucleus, and Thalamus: High-Resolution Functional Imaging and Structural Connectivity. Journal of Neuroscience, 2014, 34, 9202-9212.	1.7	52
42	Altered Structural Connectivity of the Left Visual Thalamus in Developmental Dyslexia. Current Biology, 2017, 27, 3692-3698.e4.	1.8	51
43	Influence of anisotropic conductivity on EEG source reconstruction: investigations in a rabbit model. IEEE Transactions on Biomedical Engineering, 2006, 53, 1841-1850.	2.5	50
44	Human Cerebellar Sub-millimeter Diffusion Imaging Reveals the Motor and Non-motor Topography of the Dentate Nucleus. Cerebral Cortex, 2017, 27, 4537-4548.	1.6	48
45	Improved EEG source analysis using lowâ€resolution conductivity estimation in a fourâ€compartment finite element head model. Human Brain Mapping, 2009, 30, 2862-2878.	1.9	41
46	Position-orientation adaptive smoothing of diffusion weighted magnetic resonance data (POAS). Medical Image Analysis, 2012, 16, 1142-1155.	7.0	41
47	The Concurrence of Cortical Surface Area Expansion and White Matter Myelination in Human Brain Development. Cerebral Cortex, 2019, 29, 827-837.	1.6	41
48	Structural studies of the hypothalamus and its nuclei in mood disorders. Psychiatry Research - Neuroimaging, 2012, 201, 1-9.	0.9	38
49	Development and Evaluation of an Algorithm for the Computer-Assisted Segmentation of the Human Hypothalamus on 7-Tesla Magnetic Resonance Images. PLoS ONE, 2013, 8, e66394.	1.1	37
50	Numerical approaches for dipole modeling in finite element method based source analysis. International Congress Series, 2007, 1300, 189-192.	0.2	35
51	Beyond Cytoarchitectonics: The Internal and External Connectivity Structure of the Caudate Nucleus. PLoS ONE, 2013, 8, e70141.	1.1	33
52	Hypothalamus enlargement in mood disorders. Acta Psychiatrica Scandinavica, 2019, 139, 56-67.	2.2	30
53	Variational inference of the fiber orientation density using diffusion MR imaging. NeuroImage, 2008, 42, 1366-1380.	2.1	28
54	Plausibility Tracking: A method to evaluate anatomical connectivity and microstructural properties along fiber pathways. NeuroImage, 2014, 90, 163-178.	2.1	28

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55	Word learning reveals white matter plasticity in preschool children. Brain Structure and Function, 2020, 225, 607-619.	1.2	25
56	Increased sensitivity and signal-to-noise ratio in diffusion-weighted MRI using multi-echo acquisitions. NeuroImage, 2020, 221, 117172.	2.1	24
57	A Deformable Vessel Model with Single Point Initialization for Segmentation, Quantification, and Visualization of Blood Vessels in 3D MRA. Lecture Notes in Computer Science, 2000, , 735-745.	1.0	20
58	Diffusion imaging-based subdivision of the human hypothalamus: a magnetic resonance study with clinical implications. European Archives of Psychiatry and Clinical Neuroscience, 2013, 263, 497-508.	1.8	20
59	Quantification of multicontrast vascular MR images with NLSnake, an active contour model: In vitro validation and in vivo evaluation. Magnetic Resonance in Medicine, 2004, 51, 370-379.	1.9	19
60	Quantifying Brain Connectivity: A Comparative Tractography Study. Lecture Notes in Computer Science, 2009, 12, 886-893.	1.0	19
61	Mapping the human connectome using diffusion MRI at 300 mT/m gradient strength: Methodological advances and scientific impact. NeuroImage, 2022, 254, 118958.	2.1	18
62	Prior knowledge on cortex organization in the reconstruction of source current densities from EEG. NeuroImage, 2013, 67, 7-24.	2.1	17
63	Language Without Speech: Segregating Distinct Circuits in the Human Brain. Cerebral Cortex, 2020, 30, 812-823.	1.6	17
64	Same Brain, Different Look?â€”The Impact of Scanner, Sequence and Preprocessing on Diffusion Imaging Outcome Parameters. Journal of Clinical Medicine, 2021, 10, 4987.	1.0	14
65	Intensity standardisation of 7T MR images for intensity-based segmentation of the human hypothalamus. PLoS ONE, 2017, 12, e0173344.	1.1	11
66	Low resolution conductivity estimation to improve source localization. International Congress Series, 2007, 1300, 149-152.	0.2	10
67	White matter pathways for prosodic structure building: A case study. Brain and Language, 2018, 183, 1-10.	0.8	10
68	Mapping the human lateral geniculate nucleus and its cytoarchitectonic subdivisions using quantitative MRI. NeuroImage, 2021, 244, 118559.	2.1	10
69	Virtual Klingler Dissection: Putting Fibers into Context. Computer Graphics Forum, 2008, 27, 1063-1070.	1.8	9
70	Obesity Associated Cerebral Gray and White Matter Alterations Are Interrelated in the Female Brain. PLoS ONE, 2014, 9, e114206.	1.1	9
71	Temporo-cerebellar connectivity underlies timing constraints in audition. ELife, 2021, 10, .	2.8	8
72	Tensor Lines in Tensor Fields of Arbitrary Order. Lecture Notes in Computer Science, 2007, , 341-350.	1.0	8

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73	The influence of volume conduction effects on the EEG/MEG reconstruction of the sources of the Early Left Anterior Negativity. , 2004, 2004, 3569-72.		6
74	The Gini coefficient: a methodological pilot study to assess fetal brain development employing postmortem diffusion MRI. Pediatric Radiology, 2014, 44, 1290-1301.	1.1	5
75	An Image Retrieval System Based on Local and Global Color Descriptors. Lecture Notes in Computer Science, 2001, , 55-62.	1.0	4
76	High Resolution Diffusion-Weighted Imaging in Human at 7T. NeuroImage, 2009, 47, S73.	2.1	3
77	The dorsal pathways: A comment on Kronfeld-Duenias etÂal.. Cortex, 2017, 90, 166-168.	1.1	3
78	Dynamic Active Contour Model for Size Independent Blood Vessel Lumen Segmentation and Quantification in High-Resolution Magnetic Resonance Images. Lecture Notes in Computer Science, 2001, , 264-273.	1.0	3
79	Multiscale colour gradient for image segmentation. , 0, , .		2
80	Interactive Volume Rendering of Diffusion Tensor Data. Mathematics and Visualization, 2009, , 161-176.	0.4	1
81	Size Independent Active Contour Model for Blood Vessel Lumen Quantification in High-Resolution Magnetic Resonance Images. Lecture Notes in Computer Science, 2001, , 854-861.	1.0	0