Brian Butterworth

List of Publications by Year
in descending order

69 papers	6,716 citations	126907 33 h-index	106344 65 g-index
72 all docs	72 docs citations	72 times ranked	3561 citing authors

#	Article	IF	Citations
1	Developmental dyscalculia and basic numerical capacities: a study of 8â€“9-year-old students. Cognition, 2004, 93, 99-125.	2.2	750
2	Dyscalculia: From Brain to Education. Science, 2011, 332, 1049-1053.	12.6	549
3	The development of arithmetical abilities. Journal of Child Psychology and Psychiatry and Allied Disciplines, 2005, 46, 3-18.	5.2	515
4	Two routes or one in reading aloud? A connectionist dual-process model.. Journal of Experimental Psychology: Human Perception and Performance, 1998, 24, 1131-1161.	0.9	353
5	Number and language: how are they related?. Trends in Cognitive Sciences, 2005, 9, 6-10.	7.8	330
6	Foundational numerical capacities and the origins of dyscalculia. Trends in Cognitive Sciences, 2010, 14, 534-541.	7.8	294
7	Are Subitizing and Counting Implemented as Separate or Functionally Overlapping Processes?. NeuroImage, 2002, 15, 435-446.	4.2	293
8	Discrete and analogue quantity processing in the parietal lobe: A functional MRI study. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 4693-4698.	7.1	268
9	Exact and approximate judgements of visual and auditory numerosity: An fMRI study. Brain Research, 2006, 1106, 177-188.	2.2	248
10	A SPECIFIC DEFICIT FOR NUMBERS IN A CASE OF DENSE ACALCULIA. Brain, 1991, 114, 2619-2637.	7.6	242
11	Dexterity with numbers: rTMS over left angular gyrus disrupts finger gnosis and number processing. Neuropsychologia, 2005, 43, 1609-1624.	1.6	221
12	Core information processing deficits in developmental dyscalculia and low numeracy. Developmental Science, 2008, 11, 669-680.	2.4	203
13	Toward a multiroute model of number processing: Impaired number transcoding with preserved calculation skills.. Journal of Experimental Psychology: General, 1995, 124, 375-390.	2.1	193
14	Spared numerical abilities in a case of semantic dementia. Neuropsychologia, 2001, 39, 1224-1239.	1.6	166
15	Evidence for Two Numerical Systems That Are Similar in Humans and Guppies. PLoS ONE, 2012, 7, e31923.	2.5	157
16	Understanding Neurocognitive Developmental Disorders Can Improve Education for All. Science, 2013, 340, 300-305.	12.6	136
17	Basic numerical capacities and prevalence of developmental dyscalculia: The Havana Survey.. Developmental Psychology, 2012, 48, 123-135.	1.6	131
18	Numerical thought with and without words: Evidence from indigenous Australian children. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 13179-13184.	7.1	113

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19	The principles and practices of educational neuroscience: Comment on Bowers (2016).. Psychological Review, 2016, 123, 620-627.	3.8	110
20	Stability and change in markers of core numerical competencies.. Journal of Experimental Psychology: General, 2012, 141, 649-666.	2.1	94
21	Modulating Attentional Load Affects Numerosity Estimation: Evidence against a Pre-Attentive Subitizing Mechanism. PLoS ONE, 2008, 3, e3269.	2.5	93
22	Storage and retrieval of addition facts: The role of number comparison. Quarterly Journal of Experimental Psychology Section A: Human Experimental Psychology, 2001, 54, 1005-1029.	2.3	80
23	Low numeracy and dyscalculia: identification and intervention. ZDM - International Journal on Mathematics Education, 2010, 42, 527-539.	2.2	80
24	Category specificity in reading and writing: the case of number words. Nature Neuroscience, 2001, 4, 784-786.	14.8	62
25	A Candidate for the Attentional Bottleneck: Set-size Specific Modulation of the Right TPJ during Attentive Enumeration. Journal of Cognitive Neuroscience, 2011, 23, 728-736.	2.3	61
26	Neural basis of mathematical cognition. Current Biology, 2011, 21, R618-R621.	3.9	54
27	Dissociations in numerical abilities revealed by progressive cognitive decline in a patient with semantic dementia. Cognitive Neuropsychology, 2005, 22, 771-793.	1.1	51
28	Specialization in the Human Brain: The Case of Numbers. Frontiers in Human Neuroscience, 2011, 5, 62.	2.0	51
29	Contribution of frontal cortex to the spatial representation of number. Cortex, 2011, 47, 2-13.	2.4	48
30	Short term Memory Impairment and Arithmetical Ability. Quarterly Journal of Experimental Psychology Section A: Human Experimental Psychology, 1996, 49, 251-262.	2.3	44
31	Numeracy skills in patients with degenerative disorders and focal brain lesions: A neuropsychological investigation.. Neuropsychology, 2012, 26, 1-19.	1.3	43
32	Numerical Activities and Information Learned at Home Link to the Exact Numeracy Skills in 5â€“6 Years-Old Children. Frontiers in Psychology, 2016, 7, 94.	2.1	43
33	Sensitivity to numerosity is not a unique visuospatial psychophysical predictor of mathematical ability. Vision Research, 2013, 89, 1-9.	1.4	41
34	Developmental trajectories of grey and white matter in dyscalculia. Trends in Neuroscience and Education, 2013, 2, 56-64.	3.1	39
35	Using Mental Representations of Space When Words Are Unavailable: Studies of Enumeration and Arithmetic in Indigenous Australia. Journal of Cross-Cultural Psychology, 2011, 42, 630-638.	1.6	36
36	Updating Working Memory and arithmetical attainment in school. Learning and Individual Differences, 2011, 21, 655-661.	2.7	34

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37	A new clinical tool for assessing numerical abilities in neurological diseases: numerical activities of daily living. Frontiers in Aging Neuroscience, 2014, 6, 112.	3.4	34
38	Why semantic dementia drives you to the dogs (but not to the horses): A theoretical account. Cognitive Neuropsychology, 2002, 19, 483-503.	1.1	28
39	The Understanding of Quantifiers in Semantic Dementia: A Single-Case Study. Neurocase, 2006, 12, 136-145.	0.6	28
40	Anatomical substrates and neurocognitive predictors of daily numerical abilities in mild cognitive impairment. Cortex, 2015, 71, 58-67.	2.4	28
41	Commonalities for Numerical and Continuous Quantity Skills at Temporo-parietal Junction. Journal of Cognitive Neuroscience, 2014, 26, 986-999.	2.3	26
42	Introduction: The origins of numerical abilities. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20160507.	4.0	25
43	Storage and retrieval of addition facts: The role of number comparison. Quarterly Journal of Experimental Psychology Section A: Human Experimental Psychology, 2001, 54, 1005-1029.	2.3	25
44	Verbal Counting and Spatial Strategies in Numerical Tasks: Evidence from Indigenous Australia. Philosophical Psychology, 2008, 21, 443-457.	0.9	23
45	Collective enhancement of numerical acuity by meritocratic leadership in fish. Scientific Reports, 2014, 4, 4560.	3.3	21
46	Mathematical Expertise. , 2006, , 553-568.		20
47	Foundational Numerical Capacities and the Origins of Dyscalculia. , 2011, , 249-265.		20
48	The role of numerosity in processing nonsymbolic proportions. Quarterly Journal of Experimental Psychology, 2012, 65, 2435-2446.	1.1	19
49	Short term Memory Impairment and Arithmetical Ability. Quarterly Journal of Experimental Psychology Section A: Human Experimental Psychology, 1996, 49, 251-262.	2.3	19
50	What makes a prodigy?. Nature Neuroscience, 2001, 4, 11-12.	14.8	18
51	Zero in the brain: A voxel-based lesionâ€“symptom mapping study in right hemisphere damaged patients. Cortex, 2016, 77, 38-53.	2.4	18
52	Longitudinal changes in young childrenÃ¢â‚¬â„¢s 0Ã¢â‚¬â€œ100 to 0Ã¢â‚¬â€œ1000 number-line error signatures. Frontiers in Psychology, 2015, 6, 647.	2.1	16
53	The implications for education of an innate numerosity-processing mechanism. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20170118.	4.0	14
54	Numerosity Perception: How Many Speckles on the Hen?. Current Biology, 2008, 18, R388-R389.	3.9	13

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55	Collective enumeration.. Journal of Experimental Psychology: Human Perception and Performance, 2013, 39, 338-347.	0.9	13
56	Ratio dependence in small number discrimination is affected by the experimental procedure. Frontiers in Psychology, 2015, 6, 1649.	2.1	12
57	Impaired Numerical Ability Affects Supra-Second TimeÂEstimation. Timing and Time Perception, 2014, 2, 169-187.	0.6	11
58	Arithmetic learning modifies the functional connectivity of the fronto-parietal network. Cortex, 2019, 111, 51-62.	2.4	11
59	Statistics: What Seems Natural?. Science, 2001, 292, 853c-855.	12.6	10
60	Characterizing ontogeny of quantity discrimination in zebrafish. Proceedings of the Royal Society B: Biological Sciences, 2022, 289, 20212544.	2.6	9
61	Why frequencies are natural. Behavioral and Brain Sciences, 2007, 30, 259-260.	0.7	7
62	The influence of memory updating and number sense on junior high school math attainment. Learning and Individual Differences, 2017, 54, 30-40.	2.7	5
63	Numerical activities of daily living: a short version. Neurological Sciences, 2022, 43, 967-978.	1.9	5
64	Special Needs in Research and Instruction in Whole Number Arithmetic. New ICMI Study Series, 2018, , 375-397.	1.0	3
65	Mathematical Expertise. , 0, , 616-633.		2
66	Commentary on â€œHow Can Syntax Support Number Word Acquisition?â€•by Kristen Syrett, Julien Musolino, and Rochel Gelman. Language Learning and Development, 2012, 8, 186-189.	1.4	1
67	Low Numeracy: From Brain to Education. New ICMI Study Series, 2018, , 477-488.	1.0	1
68	A Visit with Oscar and Clara Marin. Cognitive and Behavioral Neurology, 2015, 28, 138-139.	0.9	0
69	æ•°å¦è ƒ½åŠ›ã®ç™ºé”ãƒ»æ•™è‚²ãƒ»é€²åŒ–. The Proceedings of the Annual Convention of the Japanese Psychological Association, S20-S20.	0.0	0