

# James L McClelland

## List of Publications by Citations

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136  
papers

44,364  
citations

61  
h-index

161  
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161  
ext. papers

49,732  
ext. citations

5.4  
avg, IF

7.53  
L-index

#	Paper	IF	Citations
136	Parallel Distributed Processing <b>1986</b> ,		10987
135	An interactive activation model of context effects in letter perception: I. An account of basic findings.. <i>Psychological Review</i> , <b>1981</b> , 88, 375-407	6.3	3769
134	Why there are complementary learning systems in the hippocampus and neocortex: insights from the successes and failures of connectionist models of learning and memory. <i>Psychological Review</i> , <b>1995</b> , 102, 419-457	6.3	3699
133	A distributed, developmental model of word recognition and naming. <i>Psychological Review</i> , <b>1989</b> , 96, 523-68	6.3	2962
132	Understanding normal and impaired word reading: computational principles in quasi-regular domains. <i>Psychological Review</i> , <b>1996</b> , 103, 56-115	6.3	2164
131	The TRACE model of speech perception. <i>Cognitive Psychology</i> , <b>1986</b> , 18, 1-86	3.1	2063
130	On the control of automatic processes: a parallel distributed processing account of the Stroop effect. <i>Psychological Review</i> , <b>1990</b> , 97, 332-61	6.3	1614
129	The time course of perceptual choice: the leaky, competing accumulator model. <i>Psychological Review</i> , <b>2001</b> , 108, 550-92	6.3	1561
128	On the time relations of mental processes: An examination of systems of processes in cascade.. <i>Psychological Review</i> , <b>1979</b> , 86, 287-330	6.3	1203
127	An interactive activation model of context effects in letter perception: II. The contextual enhancement effect and some tests and extensions of the model.. <i>Psychological Review</i> , <b>1982</b> , 89, 60-94	6.3	1035
126	Distributed memory and the representation of general and specific information.. <i>Journal of Experimental Psychology: General</i> , <b>1985</b> , 114, 159-188	4.7	842
125	Structure and deterioration of semantic memory: a neuropsychological and computational investigation. <i>Psychological Review</i> , <b>2004</b> , 111, 205-35	6.3	741
124	Hippocampal conjunctive encoding, storage, and recall: avoiding a trade-off. <i>Hippocampus</i> , <b>1994</b> , 4, 661-82	6.3	685
123	Learning the structure of event sequences.. <i>Journal of Experimental Psychology: General</i> , <b>1991</b> , 120, 235-253	4.7	640
122	A computational model of semantic memory impairment: Modality specificity and emergent category specificity.. <i>Journal of Experimental Psychology: General</i> , <b>1991</b> , 120, 339-357	4.7	634
121	Rethinking infant knowledge: toward an adaptive process account of successes and failures in object permanence tasks. <i>Psychological Review</i> , <b>1997</b> , 104, 686-713	6.3	479
120	Artificial intelligence. Autonomous mental development by robots and animals. <i>Science</i> , <b>2001</b> , 291, 599-600	6.3	434

119	The parallel distributed processing approach to semantic cognition. <i>Nature Reviews Neuroscience</i> , <b>2003</b> , 4, 310-22	13.5	418
118	Semantic Cognition <b>2004</b> ,		347
117	A reexamination of the evidence for the somatic marker hypothesis: what participants really know in the Iowa gambling task. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2004</b> , 101, 16075-80	11.5	339
116	Letting structure emerge: connectionist and dynamical systems approaches to cognition. <i>Trends in Cognitive Sciences</i> , <b>2010</b> , 14, 348-56	14	324
115	Finite State Automata and Simple Recurrent Networks. <i>Neural Computation</i> , <b>1989</b> , 1, 372-381	2.9	322
114	Rules or connections in past-tense inflections: what does the evidence rule out?. <i>Trends in Cognitive Sciences</i> , <b>2002</b> , 6, 465-472	14	300
113	Familiarity breeds differentiation: a subjective-likelihood approach to the effects of experience in recognition memory. <i>Psychological Review</i> , <b>1998</b> , 105, 724-60	6.3	264
112	Learning and applying contextual constraints in sentence comprehension. <i>Artificial Intelligence</i> , <b>1990</b> , 46, 217-257	3.6	262
111	Constituent attachment and thematic role assignment in sentence processing: Influences of content-based expectations. <i>Journal of Memory and Language</i> , <b>1988</b> , 27, 597-632	3.8	262
110	Loss aversion and inhibition in dynamical models of multialternative choice. <i>Psychological Review</i> , <b>2004</b> , 111, 757-69	6.3	245
109	Cognitive penetration of the mechanisms of perception: Compensation for coarticulation of lexically restored phonemes. <i>Journal of Memory and Language</i> , <b>1988</b> , 27, 143-165	3.8	244
108	What Learning Systems do Intelligent Agents Need? Complementary Learning Systems Theory Updated. <i>Trends in Cognitive Sciences</i> , <b>2016</b> , 20, 512-534	14	229
107	A Parallel Distributed Processing Approach to Automaticity. <i>American Journal of Psychology</i> , <b>1992</b> , 105, 239	0.5	202
106	Generalization through the recurrent interaction of episodic memories: a model of the hippocampal system. <i>Psychological Review</i> , <b>2012</b> , 119, 573-616	6.3	190
105	Preliminary letter identification in the perception of words and nonwords.. <i>Journal of Experimental Psychology: Human Perception and Performance</i> , <b>1976</b> , 2, 80-91	2.6	190
104	Considerations arising from a complementary learning systems perspective on hippocampus and neocortex. <i>Hippocampus</i> , <b>1996</b> , 6, 654-65	3.5	178
103	Success and failure in teaching the [r]-[l] contrast to Japanese adults: tests of a Hebbian model of plasticity and stabilization in spoken language perception. <i>Cognitive, Affective and Behavioral Neuroscience</i> , <b>2002</b> , 2, 89-108	3.5	171
102	Are there interactive processes in speech perception?. <i>Trends in Cognitive Sciences</i> , <b>2006</b> , 10, 363-9	14	168

101	The role of familiar units in perception of words and nonwords. <i>Perception &amp; Psychophysics</i> , <b>1977</b> , 22, 249-261		149
100	Incorporating rapid neocortical learning of new schema-consistent information into complementary learning systems theory. <i>Journal of Experimental Psychology: General</i> , <b>2013</b> , 142, 1190-1210	4.7	148
99	Integration of sensory and reward information during perceptual decision-making in lateral intraparietal cortex (LIP) of the macaque monkey. <i>PLoS ONE</i> , <b>2010</b> , 5, e9308	3.7	143
98	Levels indeed! A response to Broadbent.. <i>Journal of Experimental Psychology: General</i> , <b>1985</b> , 114, 193-197	1.7	138
97	The place of modeling in cognitive science. <i>Topics in Cognitive Science</i> , <b>2009</b> , 1, 11-38	2.5	136
96	Unsupervised learning of vowel categories from infant-directed speech. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 13273-8	11.5	130
95	Visual factors in word perception. <i>Perception &amp; Psychophysics</i> , <b>1973</b> , 14, 365-370		128
94	Graded state machines: The representation of temporal contingencies in simple recurrent networks. <i>Machine Learning</i> , <b>1991</b> , 7, 161-193	4	126
93	Experimental tests of a hierarchical model of word identification. <i>Journal of Verbal Learning and Verbal Behavior</i> , <b>1980</b> , 19, 503-524		126
92	Extending a biologically inspired model of choice: multi-alternatives, nonlinearity and value-based multidimensional choice. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2007</b> , 362, 1655-70	5.8	125
91	Connectionist models of development. <i>Developmental Science</i> , <b>2003</b> , 6, 413-429	4.5	121
90	Deficits in phonology and past-tense morphology: What's the connection?. <i>Journal of Memory and Language</i> , <b>2003</b> , 48, 502-526	3.8	108
89	Stochastic interactive processes and the effect of context on perception. <i>Cognitive Psychology</i> , <b>1991</b> , 23, 1-44	3.1	108
88	Alternatives to the combinatorial paradigm of linguistic theory based on domain general principles of human cognition. <i>Linguistic Review</i> , <b>2005</b> , 22,	0.5	94
87	The Morton-Massaro law of information integration: implications for models of perception. <i>Psychological Review</i> , <b>2001</b> , 108, 113-48	6.3	94
86	Neural models of memory. <i>Current Opinion in Neurobiology</i> , <b>1999</b> , 9, 184-8	7.6	93
85	Modelling the N400 brain potential as change in a probabilistic representation of meaning. <i>Nature Human Behaviour</i> , <b>2018</b> , 2, 693-705	12.8	92
84	Principles of Semantic Cognition: A Parallel Distributed Processing Approach. <i>Behavioral and Brain Sciences</i> , <b>2008</b> , 31, 689-714	0.9	85

83	Putting Knowledge in its Place: A Scheme for Programming Parallel Processing Structures on the Fly. <i>Cognitive Science</i> , <b>1985</b> , 9, 113-146	2.2	84
82	'Words or Rules' cannot exploit the regularity in exceptions. <i>Trends in Cognitive Sciences</i> , <b>2002</b> , 6, 464-465	4	83
81	Using domain-general principles to explain children's causal reasoning abilities. <i>Developmental Science</i> , <b>2007</b> , 10, 333-56	4.5	76
80	Concepts, control, and context: A connectionist account of normal and disordered semantic cognition. <i>Psychological Review</i> , <b>2018</b> , 125, 293-328	6.3	74
79	Perceptual interactions in two-word displays: Familiarity and similarity effects.. <i>Journal of Experimental Psychology: Human Perception and Performance</i> , <b>1986</b> , 12, 18-35	2.6	71
78	Why bilateral damage is worse than unilateral damage to the brain. <i>Journal of Cognitive Neuroscience</i> , <b>2013</b> , 25, 2107-23	3.1	68
77	A single-system account of semantic and lexical deficits in five semantic dementia patients. <i>Cognitive Neuropsychology</i> , <b>2008</b> , 25, 136-64	2.3	68
76	Using Time-Varying Evidence to Test Models of Decision Dynamics: Bounded Diffusion vs. the Leaky Competing Accumulator Model. <i>Frontiers in Neuroscience</i> , <b>2012</b> , 6, 79	5.1	67
75	Parallel Distributed Processing at 25: further explorations in the microstructure of cognition. <i>Cognitive Science</i> , <b>2014</b> , 38, 1024-77	2.2	59
74	Perception and masking of wholes and parts.. <i>Journal of Experimental Psychology: Human Perception and Performance</i> , <b>1978</b> , 4, 210-223	2.6	58
73	An interactive Hebbian account of lexically guided tuning of speech perception. <i>Psychonomic Bulletin and Review</i> , <b>2006</b> , 13, 958-65	4.1	56
72	Interactive activation and mutual constraint satisfaction in perception and cognition. <i>Cognitive Science</i> , <b>2014</b> , 38, 1139-89	2.2	51
71	Emergence in cognitive science. <i>Topics in Cognitive Science</i> , <b>2010</b> , 2, 751-70	2.5	48
70	Categorization and discrimination of nonspeech sounds: differences between steady-state and rapidly-changing acoustic cues. <i>Journal of the Acoustical Society of America</i> , <b>2004</b> , 116, 1198-207	2.2	48
69	The basis of hyperspecificity in autism: a preliminary suggestion based on properties of neural nets. <i>Journal of Autism and Developmental Disorders</i> , <b>2000</b> , 30, 497-502	4.6	48
68	Locating object knowledge in the brain: comment on Bowers's (2009) attempt to revive the grandmother cell hypothesis. <i>Psychological Review</i> , <b>2010</b> , 117, 284-8	6.3	47
67	A mathematical theory of semantic development in deep neural networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 11537-11546	11.5	43
66	Testing multi-alternative decision models with non-stationary evidence. <i>Frontiers in Neuroscience</i> , <b>2011</b> , 5, 63	5.1	43

65	Dynamic integration of reward and stimulus information in perceptual decision-making. <i>PLoS ONE</i> , <b>2011</b> , 6, e16749	3.7	42
64	Predicting Native English-Like Performance by Native Japanese Speakers. <i>Journal of Phonetics</i> , <b>2011</b> , 39, 571-584	2.2	40
63	Effects of Attention on the Strength of Lexical Influences on Speech Perception: Behavioral Experiments and Computational Mechanisms. <i>Cognitive Science</i> , <b>2008</b> , 32, 398-417	2.2	39
62	Are there mental lexicons? The role of semantics in lexical decision. <i>Brain Research</i> , <b>2010</b> , 1365, 66-81	3.7	37
61	Differentiating the differentiation models: A comparison of the retrieving effectively from memory model (REM) and the subjective likelihood model (SLiM). <i>Journal of Memory and Language</i> , <b>2006</b> , 55, 447-460	3.8	36
60	Success and failure of new speech category learning in adulthood: consequences of learned Hebbian attractors in topographic maps. <i>Cognitive, Affective and Behavioral Neuroscience</i> , <b>2007</b> , 7, 53-73 <sup>3.5</sup>	3.5	35
59	Connectionist Models of Cognition <b>2001</b> , 23-58		34
58	Understanding failures of learning: Hebbian learning, competition for representational space, and some preliminary experimental data. <i>Progress in Brain Research</i> , <b>1999</b> , 121, 75-80	2.9	34
57	You shall know an object by the company it keeps: An investigation of semantic representations derived from object co-occurrence in visual scenes. <i>Neuropsychologia</i> , <b>2015</b> , 76, 52-61	3.2	33
56	Integrating probabilistic models of perception and interactive neural networks: a historical and tutorial review. <i>Frontiers in Psychology</i> , <b>2013</b> , 4, 503	3.4	32
55	Can native Japanese listeners learn to differentiate /rɿ/ on the basis of F3 onset frequency?*. <i>Bilingualism</i> , <b>2012</b> , 15, 255-274	3.2	31
54	Structural factors in figure perception. <i>Perception &amp; Psychophysics</i> , <b>1979</b> , 26, 221-229		29
53	Speech Perception as a Cognitive Process: The Interactive Activation Model. <i>Speech and Language: Advances in Basic Research and Practice</i> , <b>1984</b> , 337-374		27
52	U-Shaped Curves in Development: A PDP Approach. <i>Journal of Cognition and Development</i> , <b>2004</b> , 5, 137-145	3.5	26
51	Graded State Machines: The Representation of Temporal Contingencies in Simple Recurrent Networks. <i>Machine Learning</i> , <b>1991</b> , 7, 161-193	4	25
50	Payoff Information Biases a Fast Guess Process in Perceptual Decision Making under Deadline Pressure: Evidence from Behavior, Evoked Potentials, and Quantitative Model Comparison. <i>Journal of Neuroscience</i> , <b>2015</b> , 35, 10989-1011	6.6	23
49	Gradience of Gradience: A reply to Jackendoff. <i>Linguistic Review</i> , <b>2007</b> , 24,	0.5	23
48	A PDP approach to set size effects within the Stroop task: Reply to Kanne, Balota, Spieler, and Faust (1998).. <i>Psychological Review</i> , <b>1998</b> , 105, 188-194	6.3	23

47	Learning Continuous Probability Distributions with Symmetric Diffusion Networks. <i>Cognitive Science</i> , <b>1993</b> , 17, 463-496	2.2	23
46	The Case for Interactionism in Language Processing <b>1987</b> ,		22
45	Two mechanisms of human contingency learning. <i>Psychological Science</i> , <b>2012</b> , 23, 59-68	7.9	21
44	Connectionist perspectives on language learning, representation and processing. <i>Wiley Interdisciplinary Reviews: Cognitive Science</i> , <b>2015</b> , 6, 235-47	4.5	20
43	A differentiation account of recognition memory: evidence from fMRI. <i>Journal of Cognitive Neuroscience</i> , <b>2013</b> , 25, 421-35	3.1	20
42	Bayesian analysis of simulation-based models. <i>Journal of Mathematical Psychology</i> , <b>2016</b> , 72, 191-199	1.2	19
41	A connectionist model of a continuous developmental transition in the balance scale task. <i>Cognition</i> , <b>2009</b> , 110, 395-411	3.5	16
40	Is a Machine Realization of Truly Human-Like Intelligence Achievable?. <i>Cognitive Computation</i> , <b>2009</b> , 1, 17-21	4.4	16
39	Computational and behavioral investigations of lexically induced delays in phoneme recognition. <i>Journal of Memory and Language</i> , <b>2005</b> , 52, 416-435	3.8	16
38	Integration of new information in memory: new insights from a complementary learning systems perspective. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2020</b> , 375, 20190637	5.8	16
37	Can native Japanese listeners learn to differentiate/r-l/on the basis of F3 onset frequency?. <i>Bilingualism</i> , <b>2012</b> , 15, 434-435	3.2	14
36	Differentiation and integration in human language. Reply to Marslen-Wilson and Tyler. <i>Trends in Cognitive Sciences</i> , <b>2003</b> , 7, 63-64	14	13
35	Stipulating versus discovering representations. <i>Behavioral and Brain Sciences</i> , <b>2000</b> , 23, 489-491	0.9	13
34	Value-based decision making: An interactive activation perspective. <i>Psychological Review</i> , <b>2020</b> , 127, 153-185	6.3	13
33	Placing language in an integrated understanding system: Next steps toward human-level performance in neural language models. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 25966-25974	11.5	13
32	Numerosity discrimination in deep neural networks: Initial competence, developmental refinement and experience statistics. <i>Developmental Science</i> , <b>2020</b> , 23, e12940	4.5	12
31	Quasi-compositional mapping from form to meaning: a neural network-based approach to capturing neural responses during human language comprehension. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2020</b> , 375, 20190313	5.8	11
30	Developing the knowledge of number digits in a child-like robot. <i>Nature Machine Intelligence</i> , <b>2019</b> , 1, 594-605	22.5	11



29	Context, cortex, and associations: a connectionist developmental approach to verbal analogies. <i>Frontiers in Psychology</i> , <b>2013</b> , 4, 857	3.4	8
28	Modeling Unsupervised Perceptual Category Learning. <i>IEEE Transactions on Autonomous Mental Development</i> , <b>2009</b> , 1, 35-43		8
27	A PDP model of the simultaneous perception of multiple objects. <i>Connection Science</i> , <b>2011</b> , 23, 161-172	2.8	8
26	Developing a domain-general framework for cognition: What is the best approach?. <i>Behavioral and Brain Sciences</i> , <b>2003</b> , 26, 611-614	0.9	8
25	Learning and Applying Contextual Constraints in Sentence Comprehension <b>1988</b> ,		8
24	The dynamics of multimodal integration: The averaging diffusion model. <i>Psychonomic Bulletin and Review</i> , <b>2017</b> , 24, 1819-1843	4.1	7
23	A simple model from a powerful framework that spans levels of analysis. <i>Behavioral and Brain Sciences</i> , <b>2008</b> , 31, 729-749	0.9	7
22	An Interactive Activation Model of Context Effects in Letter Perception: Part I. An Account of Basic Findings <b>1988</b> , 580-596		7
21	Neural Network Models and Cognitive Neuropsychology. <i>Psychiatric Annals</i> , <b>1992</b> , 22, 148-153	0.5	5
20	Semantics without categorization 88-119		4
19	Memory as a Constructive Process <b>2010</b> , 129-149		4
18	Different presentations of a mathematical concept can support learning in complementary ways.. <i>Journal of Educational Psychology</i> , <b>2018</b> , 110, 664-682	5.3	4
17	Do estimates of numerosity really adhere to Weber's law? A reexamination of two case studies. <i>Psychonomic Bulletin and Review</i> , <b>2021</b> , 28, 158-168	4.1	4
16	Building on prior knowledge without building it in. <i>Behavioral and Brain Sciences</i> , <b>2017</b> , 40, e268	0.9	3
15	Intrusions into the shadow of attention: A new take on illusory conjunctions. <i>Attention, Perception, and Psychophysics</i> , <b>2020</b> , 82, 564-584	2	2
14	Exemplar models are useful and deep neural networks overcome their limitations: A commentary on Ambridge (2020). <i>First Language</i> , <b>2020</b> , 40, 612-615	1.5	2
13	Cognitive Neuroscience <b>2015</b> , 95-102		2
12	Category learning. Learning the general but not the specific. <i>Current Biology</i> , <b>1994</b> , 4, 357-8	6.3	2



11	Resilient properties of thought and experience. <i>Language, Cognition and Neuroscience</i> , <b>2015</b> , 30, 917-918	11.4	1
10	Transforming task representations to perform novel tasks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 32970-32981	11.5	1
9	Connectionism and the Emergence of Mind <b>2014</b> ,		1
8	Postscript: Parallel distributed processing in localist models without thresholds.. <i>Psychological Review</i> , <b>2010</b> , 117, 289-290	6.3	1
7	Interactive Processing Through Spreading Activation <b>2017</b> , 37-60		1
6	The Unit Circle as a Grounded Conceptual Structure in Precalculus Trigonometry <b>2017</b> , 247-269		
5	Retrospective. R. Duncan Luce (1925-2012). <i>Science</i> , <b>2012</b> , 337, 1619	33.3	
4	How do we get from propositions to behavior?. <i>Behavioral and Brain Sciences</i> , <b>2009</b> , 32, 226-227	0.9	
3	Double dissociations never license simple inferences about underlying brain organization, especially in developmental cases. <i>Behavioral and Brain Sciences</i> , <b>2002</b> , 25, 763-764	0.9	
2	Bayesian statistics to test Bayes optimality. <i>Behavioral and Brain Sciences</i> , <b>2018</b> , 41, e246	0.9	
1	Studying Individual Differences in Reading <b>1978</b> , 191-202		