Chris Fields

List of Publications by Year
in descending order

113	9,465	22	95
papers	citations	h-index	g-index
		304743	38395

116	116	116	6496
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Information flow in context-dependent hierarchical Bayesian inference. Journal of Experimental and Theoretical Artificial Intelligence, 2022, 34, 111-142.	2.8	19
2	Symmetry in Quantum Theory of Gravity. Symmetry, 2022, 14, 775.	2.2	0
3	Metacognition as a Consequence of Competing Evolutionary Time Scales. Entropy, 2022, 24, 601.	2.2	11
4	A free energy principle for generic quantum systems. Progress in Biophysics and Molecular Biology, 2022, 173, 36-59.	2.9	29
5	Neurons as hierarchies of quantum reference frames. BioSystems, 2022, 219, 104714.	2.0	12
6	Competency in Navigating Arbitrary Spaces as an Invariant for Analyzing Cognition in Diverse Embodiments. Entropy, 2022, 24, 819.	2.2	37
7	Quantum Neural Networks and Topological Quantum Field Theories. Neural Networks, 2022, 153, 164-178.	5.9	9
8	Fitness Beats Truth in the Evolution of Perception. Acta Biotheoretica, 2021, 69, 319-341.	1.5	14
9	Object Permanence. , 2021, , 5505-5510.		0
10	Reference Frame Induced Symmetry Breaking on Holographic Screens. Symmetry, 2021, 13, 408.	2.2	15
11	Minimal physicalism as a scale-free substrate for cognition and consciousness. Neuroscience of Consciousness, 2021, 2021, niab013.	2.6	24
12	Generalized Holographic Principle, Gauge Invariance and the Emergence of Gravity Ã la Wilczek. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	12
13	Metabolic limits on classical information processing by biological cells. BioSystems, 2021, 209, 104513.	2.0	13
14	Markov blankets are general physical interaction surfaces. Physics of Life Reviews, 2020, 33, 109-111.	2.8	8
15	Morphological Coordination: A Common Ancestral Function Unifying Neural and Non-Neural Signaling. Physiology, 2020, 35, 16-30.	3.1	58
16	How Do Living Systems Create Meaning?. Philosophies, 2020, 5, 36.	0.7	20
17	Editorial: Epistemic Feelings: Phenomenology, Implementation, and Role in Cognition. Frontiers in Psychology, 2020, 11, 606046.	2.1	4
18	Why isnâ€™t sex optional? Stem-cell competition, loss of regenerative capacity, and cancer in metazoan evolution. Communicative and Integrative Biology, 2020, 13, 170-183.	1.4	8

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19	Equivalence of the Frame and Halting Problems. Algorithms, 2020, 13, 175.	2.1	8
20	Fact, Fiction, and Fitness. Entropy, 2020, 22, 514.	2.2	22
21	Scaleâ€Free Biology: Integrating Evolutionary and Developmental Thinking. BioEssays, 2020, 42, e1900228.	2.5	31
22	Representing Measurement as a Thermodynamic Symmetry Breaking. Symmetry, 2020, 12, 810.	2.2	14
23	Do Process-1 simulations generate the epistemic feelings that drive Process-2 decision making?. Cognitive Processing, 2020, 21, 533-553.	1.4	11
24	Holographic Screens Are Classical Information Channels. Quantum Reports, 2020, 2, 326-336.	1.3	12
25	Does regeneration recapitulate phylogeny? Planaria as a model of body-axis specification in ancestral eumetazoa. Communicative and Integrative Biology, 2020, 13, 27-38.	1.4	7
26	Scale-free architectures support representational diversity. Behavioral and Brain Sciences, 2020, 43, e133.	0.7	0
27	Somatic multicellularity as a satisficing solution to the prediction-error minimization problem. Communicative and Integrative Biology, 2019, 12, 119-132.	1.4	12
28	A mosaic of Chu spaces and Channel Theory II: applications to object identification and mereological complexity. Journal of Experimental and Theoretical Artificial Intelligence, 2019, 31, 237-265.	2.8	12
29	The Role of Early Bioelectric Signals in the Regeneration of Planarian Anterior/Posterior Polarity. Biophysical Journal, 2019, 116, 948-961.	0.5	70
30	Decoherence as a sequence of entanglement swaps. Results in Physics, 2019, 12, 1888-1892.	4.1	7
31	Sharing Nonfungible Information Requires Shared Nonfungible Information. Quantum Reports, 2019, 1, 252-259.	1.3	12
32	Using AI Methods to Evaluate a Minimal Model for Perception. Open Philosophy, 2019, 2, 503-524.	0.4	2
33	A mosaic of Chu spaces and Channel Theory I: Category-theoretic concepts and tools. Journal of Experimental and Theoretical Artificial Intelligence, 2019, 31, 177-213.	2.8	15
34	Are Planaria Individuals? What Regenerative Biology is Telling Us About the Nature of Multicellularity. Evolutionary Biology, 2018, 45, 237-247.	1.1	38
35	Conscious agent networks: Formal analysis and application to cognition. Cognitive Systems Research, 2018, 47, 186-213.	2.7	17
36	Multiscale memory and bioelectric error correction in the cytoplasmâ€“cytoskeletonâ€membrane system. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2018, 10, e1410.	6.6	32

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37	Sciences of Observation. Philosophies, 2018, 3, 29.	0.7	4
38	Some Consequences of the Thermodynamic Cost of System Identification. Entropy, 2018, 20, 797.	2.2	15
39	Cover Image, Volume 10, Issue 2. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2018, 10, e1420.	6.6	0
40	Disrupted development and imbalanced function in the global neuronal workspace: a positive-feedback mechanism for the emergence of ASD in early infancy. Cognitive Neurodynamics, 2017, 11, 1-21.	4.0	28
41	Object Permanence. , 2017, , 1-6.		1
42	Building the Observer into the System: Toward a Realistic Description of Human Interaction with the World. Systems, 2016, 4, 32.	2.3	10
43	Editorial: How Humans Recognize Objects: Segmentation, Categorization and Individual Identification. Frontiers in Psychology, 2016, 7, 400.	2.1	1
44	Nobel numbers: Timeâ€dependent centrality measures on coauthorship graphs. Journal of the Association for Information Science and Technology, 2016, 67, 2212-2222.	2.9	0
45	Decompositional Equivalence: A Fundamental Symmetry Underlying Quantum Theory. Axiomathes, 2016, 26, 279-311.	0.6	1
46	Visual re-identification of individual objects: a core problem for organisms and AI. Cognitive Processing, 2016, 17, 1-13.	1.4	12
47	Effective Dark Energy from Decoherence. Theoretical Physics, 2016, 1, .	0.1	0
48	Reverse engineering the world: a commentary on Hoffman, Singh, and Prakash, â€œThe interface theory of perceptionâ€. Psychonomic Bulletin and Review, 2015, 22, 1526-1529.	2.8	1
49	Close to the edge: co-authorship proximity of Nobel laureates in Physiology or Medicine, 1991â€"2010, to cross-disciplinary brokers. Scientometrics, 2015, 103, 267-299.	3.0	8
50	Science Generates Limit Paradoxes. Axiomathes, 2015, 25, 409-432.	0.6	1
51	Co-authorship proximity of A. M. Turing Award and John von Neumann Medal winners to the disciplinary boundaries of computer science. Scientometrics, 2015, 104, 809-825.	3.0	4
52	How small is the center of science? Short cross-disciplinary cycles in co-authorship graphs. Scientometrics, 2015, 102, 1287-1306.	3.0	8
53	Motion, identity and the bias toward agency. Frontiers in Human Neuroscience, 2014, 8, 597.	2.0	8
54	Equivalence of the Symbol Grounding and Quantum System Identification Problems. Information (Switzerland), 2014, 5, 172-189.	2.9	7

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55	On the Ollivierâ€"Poulinâ€"Zurek Definition of Objectivity. Axiomathes, 2014, 24, 137-156.	0.6	7
56	Consistent Quantum Mechanics Admits No Mereotopology. Axiomathes, 2014, 24, 9-18.	0.6	4
57	A Physics-Based Metaphysics is a Metaphysics-Based Metaphysics. Acta Analytica, 2014, 29, 131-148.	0.3	2
58	Long-range gap junctional signaling controls oncogene-mediated tumorigenesis in Xenopus laevis embryos. Frontiers in Physiology, 2014, 5, 519.	2.8	63
59	Some Effects of the Human Genome Project on the ErdÅ‘s Collaboration Graph. Journal of Humanistic Mathematics, 2014, 4, [3]-24.	0.1	4
60	Metaphorical motion in mathematical reasoning: further evidence for pre-motor implementation of structure mapping in abstract domains. Cognitive Processing, 2013, 14, 217-229.	1.4	11
61	How humans solve the frame problem. Journal of Experimental and Theoretical Artificial Intelligence, 2013, 25, 441-456.	2.8	13
62	The Principle of Persistence, Leibniz's Law, and the Computational Task of Object Re-Identification. Human Development, 2013, 56, 147-166.	2.0	7
63	A whole box of Pandoras: systems, boundaries and free will in quantum theory1. Journal of Experimental and Theoretical Artificial Intelligence, 2013, 25, 291-302.	2.8	3
64	Bell's theorem from Moore's theorem. International Journal of General Systems, 2013, 42, 376-385.	2.5	5
65	Do autism spectrum disorders involve a generalized object categorization and identification dysfunction?. Medical Hypotheses, 2012, 79, 344-351.	1.5	6
66	A model-theoretic interpretation of environment-induced superselection. International Journal of General Systems, 2012, 41, 847-859.	2.5	12
67	Implementation of Classical Communication in a Quantum World. Information (Switzerland), 2012, 3, 809-831.	2.9	4
68	If Physics Is an Information Science, What Is an Observer?. Information (Switzerland), 2012, 3, 92-123.	2.9	23
69	Motion as manipulation: implementation of forceâ€"motion analogies by event-file binding and action planning. Cognitive Processing, 2012, 13, 231-241.	1.4	5
70	The very same thing: Extending the object token concept to incorporate causal constraints on individual identity. Advances in Cognitive Psychology, 2012, 8, 234-47.	0.5	6
71	The very same thing: Extending the object token concept to incorporate causal constraints on individual identity. Advances in Cognitive Psychology, 2012, 8, 234-247.	0.5	23
72	Trajectory Recognition as the Basis for Object Individuation: A Functional Model of Object File Instantiation and Object-Token Encoding. Frontiers in Psychology, 2011, 2, 49.	2.1	14

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73	From â€œOh, OKâ€•to â€œAh, yesâ€•to â€œAha!â€• Hyper-systemizing and the rewards of insight. Personality and Individual Differences, 2011, 50, 1159-1167.	2.9	9
74	Implementation of structure-mapping inference by event-file binding and action planning: a model of tool-improvisation analogies. Psychological Research, 2011, 75, 129-142.	1.7	8
75	A REEVALUATION OF EVIDENCE FOR LIGHT NEUTRAL BOSONS IN NUCLEAR EMULSIONS. International Journal of Modern Physics E, 2011, 20, 1787-1803.	1.0	8
76	Classical system boundaries cannot be determined within quantum Darwinism. Physics Essays, 2011, 24, 518-522.	0.4	16
77	Quantum Darwinism Requires an Extra-Theoretical Assumption of Encoding Redundancy. International Journal of Theoretical Physics, 2010, 49, 2523-2527.	1.2	21
78	The role of aesthetics in problem solving: some observations and a manifesto. Journal of Experimental and Theoretical Artificial Intelligence, 2004, 16, 41-55.	2.8	1
79	Why do we talk to ourselves?. Journal of Experimental and Theoretical Artificial Intelligence, 2002, 14, 255-272.	2.8	20
80	The Genome Sequence DataBase version 1.0 (GSDB): from low pass sequences to complete genomes. Nucleic Acids Research, 1997, 25, 18-23.	14.5	15
81	Informatics for ubiquitous sequencing. Trends in Biotechnology, 1996, 14, 286-289.	9.3	3
82	The Genome Sequence DataBase (GSDB): meeting the challenge of genomic sequencing. Nucleic Acids Research, 1996, 24, 13-16.	14.5	20
83	Informatics and Genomic Research. , 1996, , 221-238.		0
84	Whole-Genome Random Sequencing and Assembly of <i>Haemophilus influenzae</i> Rd. Science, 1995, 269, 496-512.	12.6	5,619
85	Observables, measurements, and virtual machines. Journal of Experimental and Theoretical Artificial Intelligence, 1995, 7, 271-274.	2.8	0
86	The role of the frame problem in Fodor's modularity thesis: a case study of rationalist cognitive science. Journal of Experimental and Theoretical Artificial Intelligence, 1995, 7, 279-289.	2.8	0
87	Analysis of gene expression by tissue and developmental stage. Current Opinion in Biotechnology, 1994, 5, 595-598.	6.6	16
88	How many genes in the human genome?. Nature Genetics, 1994, 7, 345-346.	21.4	304
89	Reply to â€” Predicting the total number of human genes. Nature Genetics, 1994, 8, 114-114.	21.4	8
90	A model for high-throughput automated DNA sequencing and analysis core facilities. Nature, 1994, 368, 474-475.	27.8	42

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91	Interoperability of Biological Data Bases: A Meeting Report. Systematic Biology, 1994, 43, 585-589.	5.6	2
92	Real Machines and Virtual Intentionality. , 1994, , 71-90.		0
93	3,400 new expressed sequence tags identify diversity of transcripts in human brain. Nature Genetics, 1993, 4, 256-267.	21.4	303
94	Rapid cDNA sequencing (expressed sequence tags) from a directionally cloned human infant brain cDNA library. Nature Genetics, 1993, 4, 373-380.	21.4	370
95	The use of deficiencies to determine essential gene content in the let-56â€"unc-22 region of Caenorhabditis elegans. Genome, 1993, 36, 1148-1156.	2.0	5
96	A quality control algorithm for DNA sequencing projects. Nucleic Acids Research, 1993, 21, 3829-3838.	14.5	31
97	ANALYSIS OF EXPRESSED SEQUENCE TAGS FROM HUMAN BRAIN CDNAS. , 1993, , .		0
98	IDENTIFICATION OF GENES IN GENOMIC AND EST SEQUENCES. , 1993, , .		0
99	Splicing signals inDrosophila: intron size, information content, and consensus sequences. Nucleic Acids Research, 1992, 20, 4255-4262.	14.5	419
100	Temporal signal processing with high-speed hybrid analog-digital neural networks. Analog Integrated Circuits and Signal Processing, 1992, 2, 367.	1.4	2
101	Information contents and dinucleotide compositions of plant intron sequences vary with evolutionary origin. Plant Molecular Biology, 1992, 19, 1057-1064.	3.9	45
102	Sequence identification of 2,375 human brain genes. Nature, 1992, 355, 632-634.	27.8	808
103	Introns in sequence tags. Nature, 1992, 357, 367-368.	27.8	9
104	Caenorhabditis elegans expressed sequence tags identify gene families and potential disease gene homologues. Nature Genetics, 1992, 1, 124-131.	21.4	199
105	Genome sequence analysis: scientific objectives and practical strategies. Trends in Biotechnology, 1992, 10, 8-11.	9.3	13
106	Data exchange and inter-database communication in genome projects. Trends in Biotechnology, 1992, 10, 58-61.	9.3	6
107	Information content ofCaenorhabditis eleganssplice site sequences varies with intron length. Nucleic Acids Research, 1990, 18, 1509-1512.	14.5	92
108	Consequences of nonclassical measurement for the algorithmic description of continuous dynamical systems. Journal of Experimental and Theoretical Artificial Intelligence, 1989, 1, 171-178.	2.8	17

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109	Experimental and theoretical artificial intelligence. Journal of Experimental and Theoretical Artificial Intelligence, 1989, 1, 1-4.	2.8	8
110	Sequence comparisons of developmentally regulated collagen genes of Caenorhabditis elegans. Gene, 1989, 76, 331-344.	2.2	70
111	Domain organization and intron positions inCaenorhabditis elegans collagen genes: The 54-bp module hypothesis revisited. Journal of Molecular Evolution, 1988, 28, 55-63.	1.8	8
112	Humanâ€computer interaction: A critical synthesis. Social Epistemology, 1987, 1, 5-25.	1.2	9
113	The AI Wars, 1950â€"2000, and Their Consequences. Journal of Artificial Intelligence and Consciousness, 0, , 2130001.	1.2	1