

# Thomas Parr

## List of Publications by Year in descending order

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Version: 2024-02-01

84  
papers

3,901  
citations

136740

32  
h-index

155451

55  
g-index

99  
all docs

99  
docs citations

99  
times ranked

1556  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | The graphical brain: Belief propagation and active inference. <i>Network Neuroscience</i> , 2017, 1, 381-414.  | 1.4 | 260       |
| 2  | The Markov blankets of life: autonomy, active inference and the free energy principle. <i>Journal of the Royal Society Interface</i> , 2018, 15, 20170792.                               | 1.5 | 241       |
| 3  | Deep temporal models and active inference. <i>Neuroscience and Biobehavioral Reviews</i> , 2017, 77, 388-402.  | 2.9 | 159       |
| 4  | Uncertainty, epistemics and active inference. <i>Journal of the Royal Society Interface</i> , 2017, 14, 20170376.  | 1.5 | 150       |
| 5  | Working memory, attention, and salience in active inference. <i>Scientific Reports</i> , 2017, 7, 14678.   | 1.6 | 148       |
| 6  | The Anatomy of Inference: Generative Models and Brain Structure. <i>Frontiers in Computational Neuroscience</i> , 2018, 12, 90.  | 1.2 | 126       |
| 7  | Active inference on discrete state-spaces: A synthesis. <i>Journal of Mathematical Psychology</i> , 2020, 99, 102447.  | 1.0 | 119       |
| 8  | Generalised free energy and active inference. <i>Biological Cybernetics</i> , 2019, 113, 495-513.  | 0.6 | 105       |
| 9  | Computational Neuropsychology and Bayesian Inference. <i>Frontiers in Human Neuroscience</i> , 2018, 12, 61.   | 1.0 | 104       |
| 10 | Deeply Felt Affect: The Emergence of Valence in Deep Active Inference. <i>Neural Computation</i> , 2021, 33, 398-446.  | 1.3 | 94        |
| 11 | Attention or salience?. <i>Current Opinion in Psychology</i> , 2019, 29, 1-5.  | 2.5 | 93        |
| 12 | Neuronal message passing using Mean-field, Bethe, and Marginal approximations. <i>Scientific Reports</i> , 2019, 9, 1889.  | 1.6 | 88        |
| 13 | Markov blankets, information geometry and stochastic thermodynamics. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20190159. | 1.6 | 84        |
| 14 | Active Inference: Demystified and Compared. <i>Neural Computation</i> , 2021, 33, 674-712.   | 1.3 | 77        |
| 15 | The active construction of the visual world. <i>Neuropsychologia</i> , 2017, 104, 92-101.  | 0.7 | 75        |
| 16 | Simulating Emotions: An Active Inference Model of Emotional State Inference and Emotion Concept Learning. <i>Frontiers in Psychology</i> , 2019, 10, 2844.                               | 1.1 | 73        |
| 17 | Free-energy minimization in joint agent-environment systems: A niche construction perspective. <i>Journal of Theoretical Biology</i> , 2018, 455, 161-178.                               | 0.8 | 71        |
| 18 | Sophisticated Inference. <i>Neural Computation</i> , 2021, 33, 713-763.  | 1.3 | 65        |

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|----|--|-----|-----------|
| 19 | On Markov blankets and hierarchical self-organisation. <i>Journal of Theoretical Biology</i> , 2020, 486, 110089.  | 0.8 | 63        |
| 20 | Neurocomputational mechanisms underlying emotional awareness: Insights afforded by deep active inference and their potential clinical relevance. <i>Neuroscience and Biobehavioral Reviews</i> , 2019, 107, 473-491. | 2.9 | 60        |
| 21 | Perceptual awareness and active inference. <i>Neuroscience of Consciousness</i> , 2019, 2019, niz012.  | 1.4 | 55        |
| 22 | Generative models, linguistic communication and active inference. <i>Neuroscience and Biobehavioral Reviews</i> , 2020, 118, 42-64.  | 2.9 | 55        |
| 23 | Precision and False Perceptual Inference. <i>Frontiers in Integrative Neuroscience</i> , 2018, 12, 39.   | 1.0 | 50        |
| 24 | Parcels and particles: Markov blankets in the brain. <i>Network Neuroscience</i> , 2021, 5, 211-251.   | 1.4 | 48        |
| 25 | An Active Inference Approach to Modeling Structure Learning: Concept Learning as an Example Case. <i>Frontiers in Computational Neuroscience</i> , 2020, 14, 41.   | 1.2 | 46        |
| 26 | Active Inference and Auditory Hallucinations. <i>Computational Psychiatry</i> , 2020, 2, 183.  | 1.1 | 45        |
| 27 | The Discrete and Continuous Brain: From Decisions to Movement—And Back Again. <i>Neural Computation</i> , 2018, 30, 2319-2347.   | 1.3 | 43        |
| 28 | Introducing a Bayesian model of selective attention based on active inference. <i>Scientific Reports</i> , 2019, 9, 13915.   | 1.6 | 43        |
| 29 | Searching for an anchor in an unpredictable world: A computational model of obsessive compulsive disorder. <i>Psychological Review</i> , 2020, 127, 672-699.   | 2.7 | 43        |
| 30 | The Computational Anatomy of Visual Neglect. <i>Cerebral Cortex</i> , 2018, 28, 777-790.   | 1.6 | 41        |
| 31 | Dynamic causal modelling of COVID-19. <i>Wellcome Open Research</i> , 2020, 5, 89.   | 0.9 | 41        |
| 32 | Second waves, social distancing, and the spread of COVID-19 across America. <i>Wellcome Open Research</i> , 2020, 5, 103.  | 0.9 | 40        |
| 33 | Prefrontal Computation as Active Inference. <i>Cerebral Cortex</i> , 2020, 30, 682-695.  | 1.6 | 38        |
| 34 | Active listening. <i>Hearing Research</i> , 2021, 399, 107998.   | 0.9 | 37        |
| 35 | Everything is connected: Inference and attractors in delusions. <i>Schizophrenia Research</i> , 2022, 245, 5-22.   | 1.1 | 36        |
| 36 | Stochastic Chaos and Markov Blankets. <i>Entropy</i> , 2021, 23, 1220.   | 1.1 | 36        |

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|----|---|-----|-----------|
| 37 | The emergence of synchrony in networks of mutually inferring neurons. <i>Scientific Reports</i> , 2019, 9, 6412.  | 1.6 | 35        |
| 38 | Modules or Mean-Fields?. <i>Entropy</i> , 2020, 22, 552.  | 1.1 | 34        |
| 39 | Active inference, stressors, and psychological trauma: A neuroethological model of (mal)adaptive explore-exploit dynamics in ecological context. <i>Behavioural Brain Research</i> , 2020, 380, 112421. | 1.2 | 33        |
| 40 | Future climates: Markov blankets and active inference in the biosphere. <i>Journal of the Royal Society Interface</i> , 2020, 17, 20200503.   | 1.5 | 33        |
| 41 | Active inference and the anatomy of oculomotion. <i>Neuropsychologia</i> , 2018, 111, 334-343.  | 0.7 | 32        |
| 42 | Dynamic causal modelling of COVID-19. <i>Wellcome Open Research</i> , 2020, 5, 89.  | 0.9 | 32        |
| 43 | Degeneracy and Redundancy in Active Inference. <i>Cerebral Cortex</i> , 2020, 30, 5750-5766.  | 1.6 | 31        |
| 44 | Hallucinations both in and out of context: An active inference account. <i>PLoS ONE</i> , 2019, 14, e0212379.   | 1.1 | 30        |
| 45 | An Investigation of the Free Energy Principle for Emotion Recognition. <i>Frontiers in Computational Neuroscience</i> , 2020, 14, 30.   | 1.2 | 30        |
| 46 | Markov blankets in the brain. <i>Neuroscience and Biobehavioral Reviews</i> , 2021, 125, 88-97.   | 2.9 | 29        |
| 47 | With an eye on uncertainty: Modelling pupillary responses to environmental volatility. <i>PLoS Computational Biology</i> , 2019, 15, e1007126.  | 1.5 | 27        |
| 48 | The computational neurology of movement under active inference. <i>Brain</i> , 2021, 144, 1799-1818.  | 3.7 | 27        |
| 49 | Bayesian Filtering with Multiple Internal Models: Toward a Theory of Social Intelligence. <i>Neural Computation</i> , 2019, 31, 2390-2431.  | 1.3 | 25        |
| 50 | Some Interesting Observations on the Free Energy Principle. <i>Entropy</i> , 2021, 23, 1076.  | 1.1 | 24        |
| 51 | The evolution of brain architectures for predictive coding and active inference. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2022, 377, 20200531.                   | 1.8 | 23        |
| 52 | From Computation to the First-Person: Auditory-Verbal Hallucinations and Delusions of Thought Interference in Schizophrenia-Spectrum Psychoses. <i>Schizophrenia Bulletin</i> , 2019, 45, S56-S66.      | 2.3 | 22        |
| 53 | Neural Dynamics under Active Inference: Plausibility and Efficiency of Information Processing. <i>Entropy</i> , 2021, 23, 454.  | 1.1 | 22        |
| 54 | Thalamocortical dynamics underlying spontaneous transitions in beta power in Parkinsonism. <i>NeuroImage</i> , 2019, 193, 103-114.  | 2.1 | 21        |

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|----|--|-----|-----------|
| 55 | Second waves, social distancing, and the spread of COVID-19 across the USA. Wellcome Open Research, 2020, 5, 103.                                  | 0.9 | 20        |
| 56 | Generative Models for Active Vision. Frontiers in Neurorobotics, 2021, 15, 651432.   | 1.6 | 17        |
| 57 | Dynamic Causal Modelling of Active Vision. Journal of Neuroscience, 2019, 39, 6265-6275.   | 1.7 | 15        |
| 58 | Immunoceptive inference: why are psychiatric disorders and immune responses intertwined?. Biology and Philosophy, 2021, 36, 27.                    | 0.7 | 15        |
| 59 | The computational pharmacology of oculomotion. Psychopharmacology, 2019, 236, 2473-2484.   | 1.5 | 12        |
| 60 | Memory and Markov Blankets. Entropy, 2021, 23, 1105.   | 1.1 | 12        |
| 61 | Testing and tracking in the UK: A dynamic causal modelling study. Wellcome Open Research, 0, 5, 144.   | 0.9 | 12        |
| 62 | Deep Active Inference and Scene Construction. Frontiers in Artificial Intelligence, 2020, 3, 509354.   | 2.0 | 12        |
| 63 | Impulsivity and Active Inference. Journal of Cognitive Neuroscience, 2019, 31, 202-220.  | 1.1 | 11        |
| 64 | Paradoxical lesions, plasticity and active inference. Brain Communications, 2020, 2, fcaa164.  | 1.5 | 11        |
| 65 | Understanding, Explanation, and Active Inference. Frontiers in Systems Neuroscience, 2021, 15, 772641.   | 1.2 | 10        |
| 66 | A Bayesian Account of Psychopathy: A Model of Lacks Remorse and Self-Aggrandizing. Computational Psychiatry, 2020, 2, 92.                          | 1.1 | 9         |
| 67 | The Predictive Brain Must Have a Limitation in Short-Term Memory Capacity. Current Directions in Psychological Science, 0, , 096372142110299.      | 2.8 | 9         |
| 68 | Active Inference, Novelty and Neglect. Current Topics in Behavioral Neurosciences, 2018, 41, 115-128.  | 0.8 | 7         |
| 69 | Effective immunity and second waves: a dynamic causal modelling study. Wellcome Open Research, 2020, 5, 204.                                       | 0.9 | 7         |
| 70 | Effective immunity and second waves: a dynamic causal modelling study. Wellcome Open Research, 2020, 5, 204.                                       | 0.9 | 6         |
| 71 | Active inference, selective attention, and the cocktail party problem. Neuroscience and Biobehavioral Reviews, 2021, 131, 1288-1304.               | 2.9 | 6         |
| 72 | A Bayesian Account of Generalist and Specialist Formation Under the Active Inference Framework. Frontiers in Artificial Intelligence, 2020, 3, 69. | 2.0 | 5         |

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|----|--|-----|-----------|
| 73 | Inferring What to Do (And What Not to). Entropy, 2020, 22, 536.  | 1.1 | 5         |
| 74 | Contextual perception under active inference. Scientific Reports, 2021, 11, 16223.                                   | 1.6 | 5         |
| 75 | Choosing a Markov blanket. Behavioral and Brain Sciences, 2020, 43, e112.  | 0.4 | 5         |
| 76 | Passive motion and active inference. Physics of Life Reviews, 2019, 30, 112-115.                                     | 1.5 | 4         |
| 77 | Inferential dynamics. Physics of Life Reviews, 2022, , .   | 1.5 | 4         |
| 78 | Testing and tracking in the UK: A dynamic causal modelling study. Wellcome Open Research, 0, 5, 144.                 | 0.9 | 3         |
| 79 | Message Passing and Metabolism. Entropy, 2021, 23, 606.  | 1.1 | 3         |
| 80 | Dynamic causal modelling of immune heterogeneity. Scientific Reports, 2021, 11, 11400.                               | 1.6 | 3         |
| 81 | Bayesian Brains and the Rényi Divergence. Neural Computation, 2022, 34, 829-855.                                     | 1.3 | 3         |
| 82 | Second waves, social distancing, and the spread of COVID-19 across the USA. Wellcome Open Research, 0, 5, 103.       | 0.9 | 2         |
| 83 | Active Inference, Bayesian Optimal Design, and Expected Utility. , 2022, , 124-146.                                  |     | 2         |
| 84 | Editorial: Probabilistic Perspectives on Brain (Dys)function. Frontiers in Artificial Intelligence, 2021, 4, 710179. | 2.0 | 1         |