

# Christoph Koch

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

388  
papers

48,656  
citations

102  
h-index

215  
g-index

461  
ext. papers

59,949  
ext. citations

10.7  
avg, IF

7.92  
L-index

| #   | Paper   | IF   | Citations |
|-----|---|------|-----------|
| 388 | IIT, half masked and half disfigured.. <i>Behavioral and Brain Sciences</i> , <b>2022</b> , 45, e60   | 0.9  | 0         |
| 387 | Local connectivity and synaptic dynamics in mouse and human neocortex.. <i>Science</i> , <b>2022</b> , 375, eabj5861  | 33.3 | 7         |
| 386 | Morphological diversity of single neurons in molecularly defined cell types. <i>Nature</i> , <b>2021</b> , 598, 174-181   | 50.4 | 21        |
| 385 | Human neocortical expansion involves glutamatergic neuron diversification. <i>Nature</i> , <b>2021</b> , 598, 151-158   | 50.4 | 21        |
| 384 | Comparative cellular analysis of motor cortex in human, marmoset and mouse. <i>Nature</i> , <b>2021</b> , 598, 111-119  | 50.4 | 31        |
| 383 | Removing independent noise in systems neuroscience data using DeepInterpolation. <i>Nature Methods</i> , <b>2021</b> , 18, 1401-1408  | 21.6 | 7         |
| 382 | Relationship between simultaneously recorded spiking activity and fluorescence signal in GCaMP6 transgenic mice. <i>ELife</i> , <b>2021</b> , 10,                                     | 8.9  | 42        |
| 381 | Making the hard problem of consciousness easier. <i>Science</i> , <b>2021</b> , 372, 911-912  | 33.3 | 28        |
| 380 | Reconciling functional differences in populations of neurons recorded with two-photon imaging and electrophysiology. <i>ELife</i> , <b>2021</b> , 10,                                 | 8.9  | 5         |
| 379 | Computational Models of Interoception and Body Regulation. <i>Trends in Neurosciences</i> , <b>2021</b> , 44, 63-76   | 13.3 | 35        |
| 378 | Perceptual awareness negativity: a physiological correlate of sensory consciousness. <i>Trends in Cognitive Sciences</i> , <b>2021</b> , 25, 660-670                                  | 14   | 10        |
| 377 | Signature morpho-electric, transcriptomic, and dendritic properties of human layer 5 neocortical pyramidal neurons. <i>Neuron</i> , <b>2021</b> , 109, 2914-2927.e5                   | 13.9 | 9         |
| 376 | Adaptation supports short-term memory in a visual change detection task. <i>PLoS Computational Biology</i> , <b>2021</b> , 17, e1009246   | 5    | 1         |
| 375 | Single-cell and single-nucleus RNA-seq uncovers shared and distinct axes of variation in dorsal LGN neurons in mice, non-human primates, and humans. <i>ELife</i> , <b>2021</b> , 10, | 8.9  | 6         |
| 374 | Survey of spiking in the mouse visual system reveals functional hierarchy. <i>Nature</i> , <b>2021</b> , 592, 86-92   | 50.4 | 58        |
| 373 | Integrated Morphoelectric and Transcriptomic Classification of Cortical GABAergic Cells. <i>Cell</i> , <b>2020</b> , 183, 935-953.e19   | 56.2 | 78        |
| 372 | The Allen Mouse Brain Common Coordinate Framework: A 3D Reference Atlas. <i>Cell</i> , <b>2020</b> , 181, 936-953.e20   | 57.2 | 191       |

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|-----|---|------|-----|
| 371 | Transcriptomic evidence that von Economo neurons are regionally specialized extratelencephalic-projecting excitatory neurons. <i>Nature Communications</i> , <b>2020</b> , 11, 1172 | 17.4 | 31  |
| 370 | Systematic Integration of Structural and Functional Data into Multi-scale Models of Mouse Primary Visual Cortex. <i>Neuron</i> , <b>2020</b> , 106, 388-403.e18                     | 13.9 | 48  |
| 369 | Brain Modeling ToolKit: An open source software suite for multiscale modeling of brain circuits. <i>PLoS Computational Biology</i> , <b>2020</b> , 16, e1008386                     | 5    | 7   |
| 368 | A large-scale standardized physiological survey reveals functional organization of the mouse visual cortex. <i>Nature Neuroscience</i> , <b>2020</b> , 23, 138-151                  | 25.5 | 94  |
| 367 | Hot or not. <i>Nature Human Behaviour</i> , <b>2020</b> , 4, 991-992  | 12.8 | 1   |
| 366 | Distinct Transcriptomic Cell Types and Neural Circuits of the Subiculum and Prosubiculum along the Dorsal-Ventral Axis. <i>Cell Reports</i> , <b>2020</b> , 31, 107648              | 10.6 | 19  |
| 365 | Conserved cell types with divergent features in human versus mouse cortex. <i>Nature</i> , <b>2019</b> , 573, 61-68   | 50.4 | 569 |
| 364 | Classification of electrophysiological and morphological neuron types in the mouse visual cortex. <i>Nature Neuroscience</i> , <b>2019</b> , 22, 1182-1195                          | 25.5 | 160 |
| 363 | High-density extracellular probes reveal dendritic backpropagation and facilitate neuron classification. <i>Journal of Neurophysiology</i> , <b>2019</b> , 121, 1831-1847           | 3.2  | 23  |
| 362 | Hierarchical organization of cortical and thalamic connectivity. <i>Nature</i> , <b>2019</b> , 575, 195-202   | 50.4 | 155 |
| 361 | The Feeling of Life Itself <b>2019</b> ,  |      | 52  |
| 360 | Generalized leaky integrate-and-fire models classify multiple neuron types. <i>Nature Communications</i> , <b>2018</b> , 9, 709   | 17.4 | 83  |
| 359 | Systematic generation of biophysically detailed models for diverse cortical neuron types. <i>Nature Communications</i> , <b>2018</b> , 9, 710                                       | 17.4 | 66  |
| 358 | Challenges and opportunities for large-scale electrophysiology with Neuropixels probes. <i>Current Opinion in Neurobiology</i> , <b>2018</b> , 50, 92-100                           | 7.6  | 130 |
| 357 | Conscious machines: Defining questions. <i>Science</i> , <b>2018</b> , 359, 400   | 33.3 | 17  |
| 356 | The ethics of experimenting with human brain tissue. <i>Nature</i> , <b>2018</b> , 556, 429-432   | 50.4 | 86  |
| 355 | Sparse recurrent excitatory connectivity in the microcircuit of the adult mouse and human cortex. <i>ELife</i> , <b>2018</b> , 7,   | 8.9  | 71  |
| 354 | Visual physiology of the layer 4 cortical circuit in silico. <i>PLoS Computational Biology</i> , <b>2018</b> , 14, e1006535   | 5    | 40  |

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|-----|---|------|-----|
| 353 | Shared and distinct transcriptomic cell types across neocortical areas. <i>Nature</i> , <b>2018</b> , 563, 72-78  | 50.4 | 674 |
| 352 | h-Channels Contribute to Divergent Intrinsic Membrane Properties of Supragranular Pyramidal Neurons in Human versus Mouse Cerebral Cortex. <i>Neuron</i> , <b>2018</b> , 100, 1194-1208.e5          | 13.9 | 60  |
| 351 | BioNet: A Python interface to NEURON for modeling large-scale networks. <i>PLoS ONE</i> , <b>2018</b> , 13, e02016307   | 3.7  | 30  |
| 350 | What Is Consciousness?. <i>Scientific American</i> , <b>2018</b> , 318, 60-64   | 0.5  | 9   |
| 349 | A robust ex vivo experimental platform for molecular-genetic dissection of adult human neocortical cell types and circuits. <i>Scientific Reports</i> , <b>2018</b> , 8, 8407                       | 4.9  | 38  |
| 348 | Human single neuron activity precedes emergence of conscious perception. <i>Nature Communications</i> , <b>2018</b> , 9, 2057   | 17.4 | 25  |
| 347 | Scene-selective coding by single neurons in the human parahippocampal cortex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 1153-1158 | 11.5 | 22  |
| 346 | From Maxwell's equations to the theory of current-source density analysis. <i>European Journal of Neuroscience</i> , <b>2017</b> , 45, 1013-1023  | 3.5  | 21  |
| 345 | . <i>IEEE Spectrum</i> , <b>2017</b> , 54, 64-69  | 1.7  | 4   |
| 344 | A robot for high yield electrophysiology and morphology of single neurons in vivo. <i>Nature Communications</i> , <b>2017</b> , 8, 15604  | 17.4 | 15  |
| 343 | Persistent Single-Neuron Activity during Working Memory in the Human Medial Temporal Lobe. <i>Current Biology</i> , <b>2017</b> , 27, 1026-1032   | 6.3  | 60  |
| 342 | Spatial Organization of Chromatic Pathways in the Mouse Dorsal Lateral Geniculate Nucleus. <i>Journal of Neuroscience</i> , <b>2017</b> , 37, 1102-1116   | 6.6  | 31  |
| 341 | Are the Neural Correlates of Consciousness in the Front or in the Back of the Cerebral Cortex? Clinical and Neuroimaging Evidence. <i>Journal of Neuroscience</i> , <b>2017</b> , 37, 9603-9613     | 6.6  | 192 |
| 340 | Fully integrated silicon probes for high-density recording of neural activity. <i>Nature</i> , <b>2017</b> , 551, 232-236   | 50.4 | 849 |
| 339 | Are we underestimating the richness of visual experience?. <i>Neuroscience of Consciousness</i> , <b>2017</b> , 2017, niw023  | 3.3  | 32  |
| 338 | Organization of the connections between claustrum and cortex in the mouse. <i>Journal of Comparative Neurology</i> , <b>2017</b> , 525, 1317-1346   | 3.4  | 91  |
| 337 | A Computational Analysis of the Function of Three Inhibitory Cell Types in Contextual Visual Processing. <i>Frontiers in Computational Neuroscience</i> , <b>2017</b> , 11, 28                      | 3.5  | 21  |
| 336 | The Relationship Between Consciousness and Top-Down Attention <b>2016</b> , 71-91   |      | 13  |

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|-----|---|------|------|
| 335 | Worldwide initiatives to advance brain research. <i>Nature Neuroscience</i> , <b>2016</b> , 19, 1118-22   | 25.5 | 69   |
| 334 | Visual statistical learning produces implicit and explicit knowledge about temporal order information and scene chunks: Evidence from direct and indirect measures. <i>Visual Cognition</i> , <b>2016</b> , 24, 155-172 | 1.8  | 2    |
| 333 | Comprehensive cellular-resolution atlas of the adult human brain. <i>Journal of Comparative Neurology</i> , <b>2016</b> , 524, Spc1-Spc1  | 3.4  | 4    |
| 332 | Comprehensive cellular-resolution atlas of the adult human brain. <i>Journal of Comparative Neurology</i> , <b>2016</b> , 524, 3127-481   | 3.4  | 174  |
| 331 | Big Science, Team Science, and Open Science for Neuroscience. <i>Neuron</i> , <b>2016</b> , 92, 612-616   | 13.9 | 32   |
| 330 | To the Cloud! A Grassroots Proposal to Accelerate Brain Science Discovery. <i>Neuron</i> , <b>2016</b> , 92, 622-627  | 13.9 | 34   |
| 329 | A reply to Barrett (2016). <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2016</b> , 371, 20150452  | 5.8  |      |
| 328 | Reevaluating excess success in psychological science. <i>Psychonomic Bulletin and Review</i> , <b>2016</b> , 23, 1602-1606  | 1.06 | 3    |
| 327 | Walking the open science walk. <i>Science</i> , <b>2016</b> , 351, 927  | 33.3 |      |
| 326 | Adult mouse cortical cell taxonomy revealed by single cell transcriptomics. <i>Nature Neuroscience</i> , <b>2016</b> , 19, 335-46   | 25.5 | 1007 |
| 325 | Low-level awareness accompanies "unconscious" high-level processing during continuous flash suppression. <i>Journal of Vision</i> , <b>2016</b> , 16, 3   | 0.4  | 30   |
| 324 | The Computational Properties of a Simplified Cortical Column Model. <i>PLoS Computational Biology</i> , <b>2016</b> , 12, e1005045  | 5    | 25   |
| 323 | Inferring cortical function in the mouse visual system through large-scale systems neuroscience. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 7337-44    | 11.5 | 55   |
| 322 | Effects of Chronic Sleep Restriction during Early Adolescence on the Adult Pattern of Connectivity of Mouse Secondary Motor Cortex. <i>ENeuro</i> , <b>2016</b> , 3,  | 3.9  | 14   |
| 321 | Integrated information theory: from consciousness to its physical substrate. <i>Nature Reviews Neuroscience</i> , <b>2016</b> , 17, 450-61  | 13.5 | 543  |
| 320 | Neural correlates of consciousness: progress and problems. <i>Nature Reviews Neuroscience</i> , <b>2016</b> , 17, 307-315   | 23.5 | 591  |
| 319 | Posterior and anterior cortex - where is the difference that makes the difference?. <i>Nature Reviews Neuroscience</i> , <b>2016</b> , 17, 666  | 13.5 | 30   |
| 318 | Local Field Potentials Encode Place Cell Ensemble Activation during Hippocampal Sharp Wave Ripples. <i>Neuron</i> , <b>2015</b> , 87, 590-604   | 13.9 | 36   |

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|-----|--|------|------|
| 317 | Cell type- and activity-dependent extracellular correlates of intracellular spiking. <i>Journal of Neurophysiology</i> , <b>2015</b> , 114, 608-23                             | 3.2  | 43   |
| 316 | Physiology of layer 5 pyramidal neurons in mouse primary visual cortex: coincidence detection through bursting. <i>PLoS Computational Biology</i> , <b>2015</b> , 11, e1004090 | 5    | 58   |
| 315 | Consciousness: here, there and everywhere?. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2015</b> , 370,                                 | 5.8  | 250  |
| 314 | A Biological Imitation Game. <i>Cell</i> , <b>2015</b> , 163, 277-80   | 56.2 | 8    |
| 313 | Optogenetics: 10 years after Chr2 in neurons--views from the community. <i>Nature Neuroscience</i> , <b>2015</b> , 18, 1202-12   | 25.5 | 98   |
| 312 | Neurodata Without Borders: Creating a Common Data Format for Neurophysiology. <i>Neuron</i> , <b>2015</b> , 88, 629-34   | 13.9 | 96   |
| 311 | Ephaptic coupling to endogenous electric field activity: why bother?. <i>Current Opinion in Neurobiology</i> , <b>2015</b> , 31, 95-103  | 7.6  | 69   |
| 310 | Emergence of Slow-Switching Assemblies in Structured Neuronal Networks. <i>PLoS Computational Biology</i> , <b>2015</b> , 11, e1004196   | 5    | 30   |
| 309 | Automated High-Throughput Characterization of Single Neurons by Means of Simplified Spiking Models. <i>PLoS Computational Biology</i> , <b>2015</b> , 11, e1004275             | 5    | 47   |
| 308 | Canonical genetic signatures of the adult human brain. <i>Nature Neuroscience</i> , <b>2015</b> , 18, 1832-44  | 25.5 | 301  |
| 307 | Quantification and classification of neuronal responses in kernel-smoothed peristimulus time histograms. <i>Journal of Neurophysiology</i> , <b>2015</b> , 113, 1260-74        | 3.2  | 5    |
| 306 | A mesoscale connectome of the mouse brain. <i>Nature</i> , <b>2014</b> , 508, 207-14   | 50.4 | 1380 |
| 305 | Keep it in Mind. <i>Scientific American Mind</i> , <b>2014</b> , 25, 26-29   |      | 5    |
| 304 | Revealing cell assemblies at multiple levels of granularity. <i>Journal of Neuroscience Methods</i> , <b>2014</b> , 236, 92-106  | 3    | 24   |
| 303 | Exploring cortex in a high-throughput manner by building brain observatories. <i>BMC Neuroscience</i> , <b>2014</b> , 15,  | 3.2  | 78   |
| 302 | The computational properties of a simplified cortical column model. <i>BMC Neuroscience</i> , <b>2014</b> , 15,  | 3.2  | 78   |
| 301 | Theta phase segregation of input-specific gamma patterns in entorhinal-hippocampal networks. <i>Neuron</i> , <b>2014</b> , 84, 470-85  | 13.9 | 252  |
| 300 | Consciousness science: real progress and lingering misconceptions. <i>Trends in Cognitive Sciences</i> , <b>2014</b> , 18, 556-7   | 14   | 21   |

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|-----|---|------|-----|
| 299 | Temporal structure coding with and without awareness. <i>Cognition</i> , <b>2014</b> , 131, 404-14  | 3.5  | 19  |
| 298 | Information integration without awareness. <i>Trends in Cognitive Sciences</i> , <b>2014</b> , 18, 488-96   | 14   | 166 |
| 297 | Spike-timing control by dendritic plateau potentials in the presence of synaptic barrages. <i>Frontiers in Computational Neuroscience</i> , <b>2014</b> , 8, 89       | 3.5  | 4   |
| 296 | The Secrets of Salient Object Segmentation <b>2014</b> ,  |      | 558 |
| 295 | A direct comparison of unconscious face processing under masking and interocular suppression. <i>Frontiers in Psychology</i> , <b>2014</b> , 5, 659                   | 3.4  | 29  |
| 294 | Evolution of integrated causal structures in animats exposed to environments of increasing complexity. <i>PLoS Computational Biology</i> , <b>2014</b> , 10, e1003966 | 5    | 55  |
| 293 | Advances in Learning Visual Saliency: From Image Primitives to Semantic Contents <b>2014</b> , 335-360  |      | 2   |
| 292 | Single-cell responses to face adaptation in the human medial temporal lobe. <i>Neuron</i> , <b>2014</b> , 84, 363-9   | 13.9 | 28  |
| 291 | Inferring the direction of implied motion depends on visual awareness. <i>Journal of Vision</i> , <b>2014</b> , 14,   | 0.4  | 14  |
| 290 | Multisensory integration in complete unawareness: evidence from audiovisual congruency priming. <i>Psychological Science</i> , <b>2014</b> , 25, 2006-16              | 7.9  | 59  |
| 289 | Bewusstsein <b>2013</b> ,   |      | 10  |
| 288 | Extracellular field signatures of CA1 spiking cell assemblies during sharp wave-ripple complexes. <i>BMC Neuroscience</i> , <b>2013</b> , 14,                         | 3.2  | 78  |
| 287 | A biophysically detailed model of neocortical local field potentials predicts the critical role of active membrane currents. <i>Neuron</i> , <b>2013</b> , 79, 375-90 | 13.9 | 197 |
| 286 | Neuroscience thinks big (and collaboratively). <i>Nature Reviews Neuroscience</i> , <b>2013</b> , 14, 659-64  | 13.5 | 153 |
| 285 | Brain cells for grandmother. <i>Scientific American</i> , <b>2013</b> , 308, 30-5   | 0.5  | 27  |
| 284 | Pupil responses allow communication in locked-in syndrome patients. <i>Current Biology</i> , <b>2013</b> , 23, R647-8   | 6.3  | 56  |
| 283 | Learning saliency-based visual attention: A review. <i>Signal Processing</i> , <b>2013</b> , 93, 1401-1407  | 4.4  | 63  |
| 282 | Differential processing of invisible congruent and incongruent scenes: a case for unconscious integration. <i>Journal of Vision</i> , <b>2013</b> , 13, 24            | 0.4  | 19  |

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|-----|--|------|------|
| 281 | The minimal complexity of adapting agents increases with fitness. <i>PLoS Computational Biology</i> , <b>2013</b> , 9, e1003111  | 5    | 26   |
| 280 | The influence of synaptic weight distribution on neuronal population dynamics. <i>PLoS Computational Biology</i> , <b>2013</b> , 9, e1003248   | 5    | 48   |
| 279 | Boundary Detection Benchmarking: Beyond F-Measures <b>2013</b> ,   |      | 19   |
| 278 | Simultaneous modeling of visual saliency and value computation improves predictions of economic choice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, E3858-67 | 11.5 | 131  |
| 277 | The Conscious Infant. <i>Scientific American Mind</i> , <b>2013</b> , 24, 24-25  |      | 2    |
| 276 | Biophysics of Extracellular Spikes <b>2013</b> , 15-36   |      | 5    |
| 275 | The Neuroscience of Consciousness <b>2013</b> , 1091-1103  |      | 1    |
| 274 | The unimodal distribution of sub-threshold, ongoing activity in cortical networks. <i>Frontiers in Neural Circuits</i> , <b>2013</b> , 7, 116  | 3.5  | 4    |
| 273 | Image Signature: Highlighting Sparse Salient Regions. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2012</b> , 34, 194-201  | 13.3 | 549  |
| 272 | Attention and consciousness: related yet different. <i>Trends in Cognitive Sciences</i> , <b>2012</b> , 16, 103-5  | 14   | 48   |
| 271 | Relative visual saliency differences induce sizable bias in consumer choice. <i>Journal of Consumer Psychology</i> , <b>2012</b> , 22, 67-74   | 3.1  | 176  |
| 270 | An anatomically comprehensive atlas of the adult human brain transcriptome. <i>Nature</i> , <b>2012</b> , 489, 391-399   | 9.4  | 1525 |
| 269 | The spiking component of oscillatory extracellular potentials in the rat hippocampus. <i>Journal of Neuroscience</i> , <b>2012</b> , 32, 11798-811   | 6.6  | 139  |
| 268 | Top-down attention and consciousness: comment on Cohen et al. <i>Trends in Cognitive Sciences</i> , <b>2012</b> , 16, 527; author reply 528  | 14   | 17   |
| 267 | Changes in functional connectivity support conscious object recognition. <i>NeuroImage</i> , <b>2012</b> , 63, 1909-17   | 7.9  | 24   |
| 266 | Spatial attention is attracted in a sustained fashion toward singular points in the optic flow. <i>PLoS ONE</i> , <b>2012</b> , 7, e41040  | 3.7  | 10   |
| 265 | Learning visual saliency by combining feature maps in a nonlinear manner using AdaBoost. <i>Journal of Vision</i> , <b>2012</b> , 12, 22   | 0.4  | 62   |
| 264 | Systems biology. Modular biological complexity. <i>Science</i> , <b>2012</b> , 337, 531-2  | 33.3 | 39   |



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|-----|---|------|------|
| 263 | The origin of extracellular fields and currents--EEG, ECoG, LFP and spikes. <i>Nature Reviews Neuroscience</i> , <b>2012</b> , 13, 407-20         | 13.5 | 2191 |
| 262 | Finding Free Will. <i>Scientific American Mind</i> , <b>2012</b> , 23, 22-27  |      | 8    |
| 261 | Visual rivalry without spatial conflict. <i>Psychological Science</i> , <b>2012</b> , 23, 410-8   | 7.9  | 5    |
| 260 | Neuroscience: Observatories of the mind. <i>Nature</i> , <b>2012</b> , 483, 397-8   | 50.4 | 77   |
| 259 | Evidence for two distinct mechanisms directing gaze in natural scenes. <i>Journal of Vision</i> , <b>2012</b> , 12, 9                             | 0.4  | 24   |
| 258 | AdaBoost for Text Detection in Natural Scene <b>2011</b> ,  |      | 99   |
| 257 | Ephaptic coupling of cortical neurons. <i>Nature Neuroscience</i> , <b>2011</b> , 14, 217-23  | 25.5 | 322  |
| 256 | A test for consciousness. <i>Scientific American</i> , <b>2011</b> , 304, 44-7  | 0.5  | 61   |
| 255 | A category-specific response to animals in the right human amygdala. <i>Nature Neuroscience</i> , <b>2011</b> , 14, 1247-9                        | 25.5 | 97   |
| 254 | Learning visual saliency <b>2011</b> ,  |      | 6    |
| 253 | Two Roads Less Travelled by Psychoanalysis. <i>Neuropsychanalysis</i> , <b>2011</b> , 13, 48-50   | 0.8  |      |
| 252 | Selectivity of pyramidal cells and interneurons in the human medial temporal lobe. <i>Journal of Neurophysiology</i> , <b>2011</b> , 106, 1713-21 | 3.2  | 44   |
| 251 | Learning a saliency map using fixated locations in natural scenes. <i>Journal of Vision</i> , <b>2011</b> , 11,                                   | 0.4  | 177  |
| 250 | Not all information is created equal. <i>Cognitive Neuroscience</i> , <b>2011</b> , 2, 120-1  | 1.7  | 2    |
| 249 | Probing the Unconscious Mind. <i>Scientific American Mind</i> , <b>2011</b> , 22, 20-21   |      | 2    |
| 248 | Integrated information increases with fitness in the evolution of animats. <i>PLoS Computational Biology</i> , <b>2011</b> , 7, e1002236          | 5    | 64   |
| 247 | On-line, voluntary control of human temporal lobe neurons. <i>Nature</i> , <b>2010</b> , 467, 1104-8  | 50.4 | 114  |
| 246 | Pupil dilation betrays the timing of decisions. <i>Frontiers in Human Neuroscience</i> , <b>2010</b> , 4, 18                                      | 3.3  | 88   |

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|-----|--|------|-----|
| 245 | Time course of target recognition in visual search. <i>Frontiers in Human Neuroscience</i> , <b>2010</b> , 4, 31   | 3.3  | 10  |
| 244 | Visual saliency computations: mechanisms, constraints, and the effect of feedback. <i>Journal of Neuroscience</i> , <b>2010</b> , 30, 12831-43   | 6.6  | 56  |
| 243 | Opposing effects of attention and consciousness on afterimages. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 8883-8   | 11.5 | 105 |
| 242 | Optimal reward harvesting in complex perceptual environments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 5232-7   | 11.5 | 121 |
| 241 | Responses of human medial temporal lobe neurons are modulated by stimulus repetition. <i>Journal of Neurophysiology</i> , <b>2010</b> , 103, 97-107  | 3.2  | 43  |
| 240 | Transcranial electric stimulation entrains cortical neuronal populations in rats. <i>Journal of Neuroscience</i> , <b>2010</b> , 30, 11476-85  | 6.6  | 275 |
| 239 | Wiring nanoscale biosensors with piezoelectric nanomechanical resonators. <i>Nano Letters</i> , <b>2010</b> , 10, 1769-73  | 7.3  | 20  |
| 238 | The effect of spatially inhomogeneous extracellular electric fields on neurons. <i>Journal of Neuroscience</i> , <b>2010</b> , 30, 1925-36   | 6.6  | 139 |
| 237 | Consciousness and attention: on sufficiency and necessity. <i>Frontiers in Psychology</i> , <b>2010</b> , 1, 217   | 3.4  | 124 |
| 236 | Faces and text attract gaze independent of the task: Experimental data and computer model. <i>Journal of Vision</i> , <b>2009</b> , 9, 10.1-15   | 0.4  | 198 |
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| 82 | System implementations of analog VLSI velocity sensors. <i>IEEE Micro</i> , <b>1996</b> , 16, 40-49  | 1.8  | 15  |
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| 80 | A brief history of time (constants). <i>Cerebral Cortex</i> , <b>1996</b> , 6, 93-101  | 5.1  | 151 |
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| 77 | From stimulus encoding to feature extraction in weakly electric fish. <i>Nature</i> , <b>1996</b> , 384, 564-7   | 50.4 | 196 |
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| 27 | Modeling robust and efficient coding in the mouse primary visual cortex using computational perturbations   |      | 1  |
| 26 | Brain-wide single neuron reconstruction reveals morphological diversity in molecularly defined striatal, thalamic, cortical and claustral neuron types  |      | 2  |
| 25 | Visual physiology of the Layer 4 cortical circuit in silico   |      | 1  |
| 24 | Sparse recurrent excitatory connectivity in the microcircuit of the adult mouse and human cortex  |      | 2  |
| 23 | High-density extracellular probes reveal dendritic backpropagation and facilitate neuron classification   |      | 2  |
| 22 | A motion illusion reveals the temporally discrete nature of visual awareness <sup>521-535</sup>   |      | 6  |
| 21 | Are the neural correlates of consciousness in the front or in the back of the cerebral cortex? Clinical and neuroimaging evidence                       |      | 2  |
| 20 | Toward an integrated classification of neuronal cell types: morphoelectric and transcriptomic characterization of individual GABAergic cortical neurons |      | 12 |
| 19 | Evolution of cellular diversity in primary motor cortex of human, marmoset monkey, and mouse  |      | 33 |
| 18 | Human cortical expansion involves diversification and specialization of supragranular intratelencephalic-projecting neurons                             |      | 19 |
| 17 | Single-neuron models linking electrophysiology, morphology and transcriptomics across cortical cell types   |      | 5  |
| 16 | Reconciling functional differences in populations of neurons recorded with two-photon imaging and electrophysiology                                     |      | 4  |
| 15 | Removing independent noise in systems neuroscience data using DeepInterpolation   |      | 4  |
| 14 | Signature morpho-electric, transcriptomic, and dendritic properties of extratelencephalic-projecting human layer 5 neocortical pyramidal neurons        |      | 3  |
| 13 | Single-cell RNA-seq uncovers shared and distinct axes of variation in dorsal LGN neurons in mice, non-human primates and humans                         |      | 2  |
| 12 | Shared and distinct transcriptomic cell types across neocortical areas  |      | 13 |

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| 11 | The organization of intracortical connections by layer and cell class in the mouse brain   | 23 |
| 10 | h-channels contribute to divergent electrophysiological properties of supragranular pyramidal neurons in human versus mouse cerebral cortex            | 3  |
| 9  | A large-scale, standardized physiological survey reveals higher order coding throughout the mouse visual cortex  | 48 |
| 8  | Classification of electrophysiological and morphological types in mouse visual cortex  | 7  |
| 7  | Conserved cell types with divergent features between human and mouse cortex  | 14 |
| 6  | Systematic Integration of Structural and Functional Data into Multi-Scale Models of Mouse Primary Visual Cortex  | 6  |
| 5  | Brain-wide single neuron reconstruction reveals morphological diversity in molecularly defined striatal, thalamic, cortical and claustral neuron types | 16 |
| 4  | Relationship between simultaneously recorded spiking activity and fluorescence signal in GCaMP6 transgenic mice  | 9  |
| 3  | On the correspondence of electrical and optical physiology in in vivo population-scale two-photon calcium imaging                                      | 9  |
| 2  | A survey of spiking activity reveals a functional hierarchy of mouse corticothalamic visual areas  | 32 |
| 1  | Local Connectivity and Synaptic Dynamics in Mouse and Human Neocortex  | 3  |