

István Ulbert

List of Publications by Year in descending order

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Version: 2024-02-01

98
papers

10,140
citations

57758

44
h-index

39675

94
g-index

101
all docs

101
docs citations

101
times ranked

9391
citing authors

#	ARTICLE	IF	CITATIONS
1	Entrainment of Neuronal Oscillations as a Mechanism of Attentional Selection. <i>Science</i> , 2008, 320, 110-113.	12.6	1,474
2	An Oscillatory Hierarchy Controlling Neuronal Excitability and Stimulus Processing in the Auditory Cortex. <i>Journal of Neurophysiology</i> , 2005, 94, 1904-1911.	1.8	1,086
3	Phase Entrainment of Human Delta Oscillations Can Mediate the Effects of Expectation on Reaction Speed. <i>Journal of Neuroscience</i> , 2010, 30, 13578-13585.	3.6	364
4	Coupling of Total Hemoglobin Concentration, Oxygenation, and Neural Activity in Rat Somatosensory Cortex. <i>Neuron</i> , 2003, 39, 353-359.	8.1	360
5	Suppressed Neuronal Activity and Concurrent Arteriolar Vasoconstriction May Explain Negative Blood Oxygenation Level-Dependent Signal. <i>Journal of Neuroscience</i> , 2007, 27, 4452-4459.	3.6	345
6	The Human K-Complex Represents an Isolated Cortical Down-State. <i>Science</i> , 2009, 324, 1084-1087.	12.6	328
7	Current-source density estimation based on inversion of electrostatic forward solution: Effects of finite extent of neuronal activity and conductivity discontinuities. <i>Journal of Neuroscience Methods</i> , 2006, 154, 116-133.	2.5	325
8	Responses of Human Anterior Cingulate Cortex Microdomains to Error Detection, Conflict Monitoring, Stimulus-Response Mapping, Familiarity, and Orienting. <i>Journal of Neuroscience</i> , 2005, 25, 604-613.	3.6	276
9	Intermodal Selective Attention in Monkeys. I: Distribution and Timing of Effects across Visual Areas. <i>Cerebral Cortex</i> , 2000, 10, 343-358.	2.9	241
10	The generation and propagation of the human alpha rhythm. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 23772-23782.	7.1	229
11	Parvalbumin-Containing Fast-Spiking Basket Cells Generate the Field Potential Oscillations Induced by Cholinergic Receptor Activation in the Hippocampus. <i>Journal of Neuroscience</i> , 2010, 30, 15134-15145.	3.6	225
12	Coupling of the cortical hemodynamic response to cortical and thalamic neuronal activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 3822-3827.	7.1	207
13	Laminar analysis of slow wave activity in humans. <i>Brain</i> , 2010, 133, 2814-2829.	7.6	207
14	Stimulus-Induced Changes in Blood Flow and 2-Deoxyglucose Uptake Dissociate in Ipsilateral Somatosensory Cortex. <i>Journal of Neuroscience</i> , 2008, 28, 14347-14357.	3.6	184
15	Heterogeneous neuronal firing patterns during interictal epileptiform discharges in the human cortex. <i>Brain</i> , 2010, 133, 1668-1681.	7.6	168
16	Multisensory convergence in auditory cortex, I. Cortical connections of the caudal superior temporal plane in macaque monkeys. <i>Journal of Comparative Neurology</i> , 2007, 502, 894-923.	1.6	166
17	Mapping human brain networks with cortico-cortical evoked potentials. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014, 369, 20130528.	4.0	165
18	Intrinsic functional architecture predicts electrically evoked responses in the human brain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 10308-10313.	7.1	161

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19	Selective GABAergic Control of Higher-Order Thalamic Relays. <i>Neuron</i> , 2005, 45, 929-940.	8.1	157
20	Multiple microelectrode-recording system for human intracortical applications. <i>Journal of Neuroscience Methods</i> , 2001, 106, 69-79.	2.5	155
21	Multisensory convergence in auditory cortex, II. Thalamocortical connections of the caudal superior temporal plane. <i>Journal of Comparative Neurology</i> , 2007, 502, 924-952.	1.6	149
22	Laminar Population Analysis: Estimating Firing Rates and Evoked Synaptic Activity From Multielectrode Recordings in Rat Barrel Cortex. <i>Journal of Neurophysiology</i> , 2007, 97, 2174-2190.	1.8	148
23	Time Multiplexed Active Neural Probe with 1356 Parallel Recording Sites. <i>Sensors</i> , 2017, 17, 2388.	3.8	141
24	First-Pass Selectivity for Semantic Categories in Human Anteroventral Temporal Lobe. <i>Journal of Neuroscience</i> , 2011, 31, 18119-18129.	3.6	129
25	Dissociation of broadband high-frequency activity and neuronal firing in the neocortex. <i>Science Advances</i> , 2020, 6, eabb0977.	10.3	115
26	Ongoing Network State Controls the Length of Sleep Spindles via Inhibitory Activity. <i>Neuron</i> , 2014, 82, 1367-1379.	8.1	109
27	Corticocortical Evoked Potentials Reveal Projectors and Integrators in Human Brain Networks. <i>Journal of Neuroscience</i> , 2014, 34, 9152-9163.	3.6	107
28	Drivers of the Primate Thalamus. <i>Journal of Neuroscience</i> , 2012, 32, 17894-17908.	3.6	100
29	Sources of Somatosensory Input to the Caudal Belt Areas of Auditory Cortex. <i>Perception</i> , 2007, 36, 1419-1430.	1.2	89
30	Input-Output Features of Anatomically Identified CA3 Neurons during Hippocampal Sharp Wave/Ripple Oscillation In Vitro. <i>Journal of Neuroscience</i> , 2013, 33, 11677-11691.	3.6	87
31	Separation of mismatch negativity and the N1 wave in the auditory cortex of the cat: a topographic study. <i>Clinical Neurophysiology</i> , 2001, 112, 778-784.	1.5	86
32	Laminar Analysis of Human Neocortical Interictal Spike Generation and Propagation: Current Source Density and Multiunit Analysis In Vivo. <i>Epilepsia</i> , 2004, 45, 48-56.	5.1	83
33	Physiological sharp wave-ripples and interictal events in vitro: what's the difference?. <i>Brain</i> , 2014, 137, 463-485.	7.6	79
34	Structural Correlates of Efficient GABAergic Transmission in the Basal Ganglia-Thalamus Pathway. <i>Journal of Neuroscience</i> , 2008, 28, 3090-3102.	3.6	73
35	Evoked effective connectivity of the human neocortex. <i>Human Brain Mapping</i> , 2014, 35, 5736-5753.	3.6	72
36	Processing stages underlying word recognition in the anteroventral temporal lobe. <i>NeuroImage</i> , 2006, 30, 1401-1413.	4.2	69

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37	Slow insertion of silicon probes improves the quality of acute neuronal recordings. <i>Scientific Reports</i> , 2019, 9, 111.	3.3	67
38	The epileptic human hippocampal cornu ammonis 2 region generates spontaneous interictal-like activity in vitro. <i>Brain</i> , 2009, 132, 3032-3046.	7.6	66
39	A silicon-based neural probe with densely-packed low-impedance titanium nitride microelectrodes for ultrahigh-resolution in vivo recordings. <i>Biosensors and Bioelectronics</i> , 2018, 106, 86-92.	10.1	61
40	Associative and plastic thalamic signaling to the lateral amygdala controls fear behavior. <i>Nature Neuroscience</i> , 2020, 23, 625-637.	14.8	58
41	Superficial Slow Rhythms Integrate Cortical Processing in Humans. <i>Scientific Reports</i> , 2018, 8, 2055.	3.3	56
42	Short and long term biocompatibility of NeuroProbes silicon probes. <i>Journal of Neuroscience Methods</i> , 2010, 189, 216-229.	2.5	55
43	Phase Advancement and Nucleus-Specific Timing of Thalamocortical Activity during Slow Cortical Oscillation. <i>Journal of Neuroscience</i> , 2011, 31, 607-617.	3.6	55
44	Properties of in vivo interictal spike generation in the human subiculum. <i>Brain</i> , 2008, 131, 485-499.	7.6	52
45	Experimental validation of the influence of white matter anisotropy on the intracranial EEG forward solution. <i>Journal of Computational Neuroscience</i> , 2010, 29, 371-387.	1.0	52
46	Two-Dimensional Multi-Channel Neural Probes With Electronic Depth Control. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2011, 5, 403-412.	4.0	51
47	Early discrimination of coherent versus incoherent motion by multiunit and synaptic activity in human putative MT+. <i>Human Brain Mapping</i> , 2001, 13, 226-238.	3.6	46
48	Effect of deviant probability and interstimulus/interdeviant interval on the auditory N1 and mismatch negativity in the cat auditory cortex. <i>Cognitive Brain Research</i> , 2002, 13, 249-253.	3.0	43
49	Laminar profile of spontaneous and evoked theta: Rhythmic modulation of cortical processing during word integration. <i>Neuropsychologia</i> , 2015, 76, 108-124.	1.6	43
50	Attention and arousal related modulation of spontaneous gamma-activity in the auditory cortex of the cat. <i>Cognitive Brain Research</i> , 2004, 19, 1-9.	3.0	42
51	Human entorhinal gamma and theta oscillations selective for remote autobiographical memory. <i>Hippocampus</i> , 2010, 20, 166-173.	1.9	41
52	CMOS-Based High-Density Silicon Microprobe Arrays for Electronic Depth Control in Intracortical Neural Recording—Characterization and Application. <i>Journal of Microelectromechanical Systems</i> , 2012, 21, 1426-1435.	2.5	41
53	Heterogeneous Origins of Human Sleep Spindles in Different Cortical Layers. <i>Journal of Neuroscience</i> , 2018, 38, 3013-3025.	3.6	40
54	Spike detection and sorting with deep learning. <i>Journal of Neural Engineering</i> , 2020, 17, 016038.	3.5	39

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55	Complex Propagation Patterns Characterize Human Cortical Activity during Slow-Wave Sleep. <i>Journal of Neuroscience</i> , 2011, 31, 8770-8779.	3.6	38
56	Laminar analysis of the slow wave activity in the somatosensory cortex of anesthetized rats. <i>European Journal of Neuroscience</i> , 2016, 44, 1935-1951.	2.6	37
57	Model-based source localization of extracellular action potentials. <i>Journal of Neuroscience Methods</i> , 2005, 147, 126-137.	2.5	36
58	Hybrid intracerebral probe with integrated bare LED chips for optogenetic studies. <i>Biomedical Microdevices</i> , 2017, 19, 49.	2.8	36
59	Hyperexcitability of the network contributes to synchronization processes in the human epileptic neocortex. <i>Journal of Physiology</i> , 2018, 596, 317-342.	2.9	35
60	In vivo laminar electrophysiology co-registered with histology in the hippocampus of patients with temporal lobe epilepsy. <i>Experimental Neurology</i> , 2004, 187, 310-318.	4.1	33
61	Large-scale recording of thalamocortical circuits: in vivo electrophysiology with the two-dimensional electronic depth control silicon probe. <i>Journal of Neurophysiology</i> , 2016, 116, 2312-2330.	1.8	33
62	Estimation of Thalamocortical and Intracortical Network Models from Joint Thalamic Single-Electrode and Cortical Laminar-Electrode Recordings in the Rat Barrel System. <i>PLoS Computational Biology</i> , 2009, 5, e1000328.	3.2	30
63	A Multimodal, SU-8 - Platinum - Polyimide Microelectrode Array for Chronic In Vivo Neurophysiology. <i>PLoS ONE</i> , 2015, 10, e0145307.	2.5	30
64	A novel multisite silicon probe for high quality laminar neural recordings. <i>Sensors and Actuators A: Physical</i> , 2011, 166, 14-21.	4.1	28
65	The neural tissue around SU-8 implants: A quantitative in vivo biocompatibility study. <i>Materials Science and Engineering C</i> , 2020, 112, 110870.	7.3	28
66	Localization of single-cell current sources based on extracellular potential patterns: the spike CSD method. <i>European Journal of Neuroscience</i> , 2012, 36, 3299-3313.	2.6	26
67	Fine-scale mapping of cortical laminar activity during sleep slow oscillations using high-density linear silicon probes. <i>Journal of Neuroscience Methods</i> , 2019, 316, 58-70.	2.5	25
68	Control and data acquisition software for high-density CMOS-based microprobe arrays implementing electronic depth control. <i>Biomedizinische Technik</i> , 2010, 55, 183-191.	0.8	23
69	Intracranial neuronal ensemble recordings and analysis in epilepsy. <i>Journal of Neuroscience Methods</i> , 2016, 260, 261-269.	2.5	21
70	Intracranial microprobe for evaluating neuro-hemodynamic coupling in unanesthetized human neocortex. <i>Journal of Neuroscience Methods</i> , 2009, 179, 208-218.	2.5	20
71	Long-term recording performance and biocompatibility of chronically implanted cylindrically-shaped, polymer-based neural interfaces. <i>Biomedizinische Technik</i> , 2018, 63, 301-315.	0.8	20
72	The hippocampal CA3 region can generate two distinct types of sharp wave-ripple complexes, in vitro. <i>Hippocampus</i> , 2015, 25, 169-186.	1.9	19

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73	Spatial Information Based OSort for Real-Time Spike Sorting Using FPGA. IEEE Transactions on Biomedical Engineering, 2021, 68, 99-108.	4.2	19
74	Durability of high surface area platinum deposits on microelectrode arrays for acute neural recordings. Journal of Materials Science: Materials in Medicine, 2014, 25, 931-940.	3.6	18
75	Recording site placement on planar silicon-based probes affects signal quality in acute neuronal recordings. Scientific Reports, 2021, 11, 2028.	3.3	16
76	Combined two-photon imaging, electrophysiological, and anatomical investigation of the human neocortex <i>in vitro</i> . Neurophotonics, 2014, 1, 011013.	3.3	14
77	Mental and emotional representations of "weight loss" free-word association networks in members of bariatric surgery-related social media communities. Surgery for Obesity and Related Diseases, 2020, 16, 1312-1320.	1.2	14
78	Revealing the distribution of transmembrane currents along the dendritic tree of a neuron from extracellular recordings. ELife, 2017, 6, .	6.0	14
79	Specific increase of human entorhinal population synaptic and neuronal activity during retrieval. NeuroImage, 2007, 37, 618-622.	4.2	13
80	In Vivo Measurements With Robust Silicon-Based Multielectrode Arrays With Extreme Shaft Lengths. IEEE Sensors Journal, 2013, 13, 3263-3269.	4.7	13
81	The laminar profile of sleep spindles in humans. NeuroImage, 2021, 226, 117587.	4.2	13
82	Neurosurgical access to cortical areas in the lateral fissure of primates. Journal of Neuroscience Methods, 2005, 141, 103-113.	2.5	11
83	Delay differential analysis for dynamical sleep spindle detection. Journal of Neuroscience Methods, 2019, 316, 12-21.	2.5	11
84	Presence of synchrony-generating hubs in the human epileptic neocortex. Journal of Physiology, 2019, 597, 5639-5670.	2.9	10
85	Emergence of polarized opinions from free association networks. Behavior Research Methods, 2019, 51, 280-294.	4.0	9
86	In vivo validation of the electronic depth control probes. Biomedizinische Technik, 2014, 59, 283-9.	0.8	8
87	The association between reinforcement sensitivity and substance use is mediated by individual differences in dispositional affectivity in adolescents. Addictive Behaviors, 2021, 114, 106719.	3.0	8
88	ELVISort: encoding latent variables for instant sorting, an artificial intelligence-based end-to-end solution. Journal of Neural Engineering, 2021, 18, 046033.	3.5	7
89	Bursting of excitatory cells is linked to interictal epileptic discharge generation in humans. Scientific Reports, 2022, 12, 6280.	3.3	6
90	A polymer-based spiky microelectrode array for electrocorticography. Microsystem Technologies, 2015, 21, 619-624.	2.0	5

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91	Dataset of cortical activity recorded with high spatial resolution from anesthetized rats. Scientific Data, 2021, 8, 180.	5.3	5
92	From End to End: Gaining, Sorting, and Employing High-Density Neural Single Unit Recordings. Frontiers in Neuroinformatics, 0, 16, .	2.5	5
93	Response to Comment on "The Human K-Complex Represents an Isolated Cortical Down-State". Science, 2010, 330, 35-35.	12.6	3
94	Method for spike detection from microelectrode array recordings contaminated by artifacts of simultaneous two-photon imaging. PLoS ONE, 2019, 14, e0221510.	2.5	3
95	Laminar distribution of electrically evoked hippocampal short latency ripple activity highlights the importance of the subiculum in vivo in human epilepsy, an intraoperative study. Epilepsy Research, 2021, 169, 106509.	1.6	3
96	Automatic channel selection and neural signal estimation across channels of neural probes. , 2014, , .		2
97	A silicon-based spiky probe providing improved cell accessibility during in vitro slice recordings. Sensors and Actuators B: Chemical, 2019, 297, 126649.	7.8	2
98	Synergism of spectral and coupling modalities in epileptic focus localization from iEEG recordings. , 2016, , .		0