Dirk Feldmeyer

List of Publications by Year in Descending Order

80 papers	8,498 citations	44 h-index	88 g-index
88 ext. papers	9,775 ext. citations	8.9 avg, IF	5.89 L-index

#	Paper	IF	Citations
80	Cell-Type Specific Neuromodulation of Excitatory and Inhibitory Neurons Muscarinic Acetylcholine Receptors in Layer 4 of Rat Barrel Cortex.. *Frontiers in Neural Circuits*, **2022**, 16, 843025	3.5	0
79	Cholinergic and Adenosinergic Modulation of Synaptic Release. *Neuroscience*, **2021**, 456, 114-130	3.9	3
78	Layer-Specific Inhibitory Microcircuits of Layer 6 Interneurons in Rat Prefrontal Cortex. *Cerebral Cortex*, **2021**, 31, 32-47	5.1	3
77	Muscarinic and Nicotinic Modulation of Neocortical Layer 6A Synaptic Microcircuits Is Cooperative and Cell-Specific. *Cerebral Cortex*, **2020**, 30, 3528-3542	5.1	4
76	Unveiling the Synaptic Function and Structure Using Paired Recordings From Synaptically Coupled Neurons. *Frontiers in Synaptic Neuroscience*, **2020**, 12, 5	3.5	5
75	A community-based transcriptomics classification and nomenclature of neocortical cell types. *Nature Neuroscience*, **2020**, 23, 1456-1468	25.5	76
74	Morphological and Functional Characterization of Non-fast-Spiking GABAergic Interneurons in Layer 4 Microcircuitry of Rat Barrel Cortex. *Cerebral Cortex*, **2018**, 28, 1439-1457	5.1	16
73	Inhibitory interneurons and their circuit motifs in the many layers of the barrel cortex. *Neuroscience* , **2018**, 368, 132-151	3.9	64
72	Layer- and Cell Type-Specific Modulation of Excitatory Neuronal Activity in the Neocortex. *Frontiers in Neuroanatomy*, **2018**, 12, 1	3.6	62
71	Sociability Deficits and Altered Amygdala Circuits in Mice Lacking Pcdh10, an Autism Associated Gene. *Biological Psychiatry*, **2017**, 81, 193-202	7.9	38
70	Adenosine Differentially Modulates Synaptic Transmission of Excitatory and Inhibitory Microcircuits in Layer 4 of Rat Barrel Cortex. *Cerebral Cortex*, **2017**, 27, 4411-4422	5.1	22
69	Neocortical Layer 6B as a Remnant of the Subplate - A Morphological Comparison. *Cerebral Cortex*, **2017**, 27, 1011-1026	5.1	31
68	Dendritic Target Region-Specific Formation of Synapses Between Excitatory Layer 4 Neurons and Layer 6 Pyramidal Cells. *Cerebral Cortex*, **2016**, 26, 1569-1579	5.1	16
67	Sensory encoding in Neuregulin 1 mutants. *Brain Structure and Function*, **2016**, 221, 1067-81	4	12
66	Altered resonance properties of somatosensory responses in mice deficient for the schizophrenia risk gene Neuregulin 1. *Brain Structure and Function*, **2016**, 221, 4383-4398	4	4
65	Paired Recordings from Synaptically Coupled Neurones in Acute Neocortical Slices. *Neuromethods*, **2016**, 171-191	0.4	2
64	S1 Microcircuits **2016**, 547-563		

63	Comment on "Principles of connectivity among morphologically defined cell types in adult neocortex". *Science*, **2016**, 353, 1108	33.3	16
62	Structural determinants underlying the high efficacy of synaptic transmission and plasticity at synaptic boutons in layer 4 of the adult rat barrel cortex. *Brain Structure and Function*, **2015**, 220, 3185-209	4	21
61	Synaptic Microcircuits in the Barrel Cortex **2015**, 59-108		5
60	Morphological and physiological characterization of pyramidal neuron subtypes in rat medial prefrontal cortex. *Cerebral Cortex*, **2015**, 25, 788-805	5.1	91
59	Electrophysiological and morphological characterization of neuronal microcircuits in acute brain slices using paired patch-clamp recordings. *Journal of Visualized Experiments*, **2015**, 52358	1.6	18
58	Contribution of intracolumnar layer 2/3-to-layer 2/3 excitatory connections in shaping the response to whisker deflection in rat barrel cortex. *Cerebral Cortex*, **2015**, 25, 849-58	5.1	16
57	Cell type-specific effects of adenosine on cortical neurons. *Cerebral Cortex*, **2015**, 25, 772-87	5.1	44
56	A barrel-related interneuron in layer 4 of rat somatosensory cortex with a high intrabarrel connectivity. *Cerebral Cortex*, **2015**, 25, 713-25	5.1	45
55	Electrical Activity in Neurons **2013**, 113-143		
54	Barrel cortex function. *Progress in Neurobiology*, **2013**, 103, 3-27	10.9	230
53	New insights into the classification and nomenclature of cortical GABAergic interneurons. *Nature Reviews Neuroscience*, **2013**, 14, 202-16	13.5	532
52	Morphology and physiology of excitatory neurons in layer 6b of the somatosensory rat barrel cortex. *Cerebral Cortex*, **2013**, 23, 2803-17	5.1	48
51	Improved biocytin labeling and neuronal 3D reconstruction. *Nature Protocols*, **2012**, 7, 394-407	18.8	73
50	Excitatory neuronal connectivity in the barrel cortex. *Frontiers in Neuroanatomy*, **2012**, 6, 24	3.6	194
49	Neuronale Schaltkreise als kleinste Einheit kortikaler Netzwerke Struktur und Funktion **2012**, 15-20		
48	Morpho-Functional Mapping of Cortical Networks in Brain Slice Preparations Using Paired Electrophysiological Recordings. *Neuromethods*, **2011**, 405-431	0.4	4
47	The Axon of Excitatory Neurons in the Neocortex: Projection Patterns and Target Specificity **2010**, 157-178		5
46	Axons Predict Neuronal Connectivity Within and Between Cortical Columns and Serve as Primary Classifiers of Interneurons in a Cortical Column **2010**, 141-155		10

45	Cholinergic filtering in the recurrent excitatory microcircuit of cortical layer 4. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 11753-8	11.5	81
44	The relation between dendritic geometry, electrical excitability, and axonal projections of L2/3 interneurons in rat barrel cortex. *Cerebral Cortex*, **2009**, 19, 938-50	5.1	55
43	Neuronal correlates of local, lateral, and translaminar inhibition with reference to cortical columns. *Cerebral Cortex*, **2009**, 19, 926-37	5.1	85
42	L2/3 interneuron groups defined by multiparameter analysis of axonal projection, dendritic geometry, and electrical excitability. *Cerebral Cortex*, **2009**, 19, 951-62	5.1	54
41	Developmental alterations in the functional properties of excitatory neocortical synapses. *Journal of Physiology*, **2009**, 587, 1889-96	3.9	43
40	Petilla terminology: nomenclature of features of GABAergic interneurons of the cerebral cortex. *Nature Reviews Neuroscience*, **2008**, 9, 557-68	13.5	1092
39	Monosynaptic connections between pairs of L5A pyramidal neurons in columns of juvenile rat somatosensory cortex. *Cerebral Cortex*, **2008**, 18, 397-406	5.1	75
38	Efficient recruitment of layer 2/3 interneurons by layer 4 input in single columns of rat somatosensory cortex. *Journal of Neuroscience*, **2008**, 28, 8273-84	6.6	81
37	Postnatal development of synaptic transmission in local networks of L5A pyramidal neurons in rat somatosensory cortex. *Journal of Physiology*, **2007**, 585, 103-16	3.9	60
36	Reconstruction of an average cortical column in silico. *Brain Research Reviews*, **2007**, 55, 193-203		72
35	Excitatory signal flow and connectivity in a cortical column: focus on barrel cortex. *Brain Structure and Function*, **2007**, 212, 3-17	4	164
34	Modeling a layer 4-to-layer 2/3 module of a single column in rat neocortex: interweaving in vitro and in vivo experimental observations. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 16353-8	11.5	77
33	Efficacy and connectivity of intracolumnar pairs of layer 2/3 pyramidal cells in the barrel cortex of juvenile rats. *Journal of Physiology*, **2006**, 575, 583-602	3.9	202
32	Monosynaptic connections between pairs of spiny stellate cells in layer 4 and pyramidal cells in layer 5A indicate that lemniscal and paralemniscal afferent pathways converge in the infragranular somatosensory cortex. *Journal of Neuroscience*, **2005**, 25, 3423-31	6.6	97
31	Morphologie und synaptische Interaktion von Neuronen einer kortikalen Kolumne. *E-Neuroforum*, **2004**, 10, 220-228		
30	Morphometric analysis of the columnar innervation domain of neurons connecting layer 4 and layer 2/3 of juvenile rat barrel cortex. *Cerebral Cortex*, **2003**, 13, 1051-63	5.1	166
29	High-probability uniquantal transmission at excitatory synapses in barrel cortex. *Science*, **2003**, 302, 1981-4	33.3	184
28	Synaptic connections between layer 4 spiny neurone-layer 2/3 pyramidal cell pairs in juvenile rat barrel cortex: physiology and anatomy of interlaminar signalling within a cortical column. *Journal of Physiology*, **2002**, 538, 803-22	3.9	353

27	Axonal projection, input and output synapses, and synaptic physiology of Cajal-Retzius cells in the developing rat neocortex. *Journal of Neuroscience*, **2002**, 22, 6908-19	6.6	88
26	Synaptic connections between layer 4 spiny neurone- layer 2/3 pyramidal cell pairs in juvenile rat barrel cortex: physiology and anatomy of interlaminar signalling within a cortical column **2002**, 538, 803		1
25	Columnar organization of dendrites and axons of single and synaptically coupled excitatory spiny neurons in layer 4 of the rat barrel cortex. *Journal of Neuroscience*, **2000**, 20, 5300-11	6.6	237
24	Point mutation in an AMPA receptor gene rescues lethality in mice deficient in the RNA-editing enzyme ADAR2. *Nature*, **2000**, 406, 78-81	50.4	737
23	Synaptic efficacy and reliability of excitatory connections between the principal neurones of the input (layer 4) and output layer (layer 5) of the neocortex. *Journal of Physiology*, **2000**, 525 Pt 1, 31-9	3.9	64
22	Neuronal basic helix-loop-helix proteins (NEX and BETA2/Neuro D) regulate terminal granule cell differentiation in the hippocampus. *Journal of Neuroscience*, **2000**, 20, 3714-24	6.6	206
21	Connexin expression in electrically coupled postnatal rat brain neurons. *Proceedings of the National Academy of Sciences of the United States of America*, **2000**, 97, 10260-5	11.5	218
20	Coincidence detection and changes of synaptic efficacy in spiny stellate neurons in rat barrel cortex. *Nature Neuroscience*, **1999**, 2, 1098-105	25.5	315
19	Reliable synaptic connections between pairs of excitatory layer 4 neurones within a single ŧbarrelT of developing rat somatosensory cortex. *Journal of Physiology*, **1999**, 521 Pt 1, 169-90	3.9	316
18	Neurological dysfunctions in mice expressing different levels of the Q/R site-unedited AMPAR subunit GluR-B. *Nature Neuroscience*, **1999**, 2, 57-64	25.5	190
17	NMDA receptor diversity in the cerebellum: identification of subunits contributing to functional receptors. *Neuropharmacology*, **1998**, 37, 1369-80	5.5	72
16	Functional correlation of NMDA receptor epsilon subunits expression with the properties of single-channel and synaptic currents in the developing cerebellum. *Journal of Neuroscience*, **1996**, 16, 4376-82	6.6	156
15	Identification of a native low-conductance NMDA channel with reduced sensitivity to Mg2+ in rat central neurones. *Journal of Physiology*, **1996**, 494 (Pt 2), 479-92	3.9	130
14	Effect of RNA editing and subunit co-assembly single-channel properties of recombinant kainate receptors. *Journal of Physiology*, **1996**, 492 (Pt 1), 129-42	3.9	144
13	Functional consequences of changes in NMDA receptor subunit expression during development. *Journal of Neurocytology*, **1996**, 25, 857-67		64
12	Early-onset epilepsy and postnatal lethality associated with an editing-deficient GluR-B allele in mice. *Science*, **1995**, 270, 1677-80	33.3	476
11	Calcium current reactivation after flash photolysis of nifedipine in skeletal muscle fibres of the frog. *Journal of Physiology*, **1995**, 487, 51-6	3.9	11
10	NMDA-receptor channel diversity in the developing cerebellum. *Nature*, **1994**, 368, 335-9	50.4	277

9	Neurotransmitters. Elusive glutamate receptors. *Current Biology*, **1994**, 4, 82-4	6.3	19
8	A possible role of sarcoplasmic Ca2+ release in modulating the slow Ca2+ current of skeletal muscle. *Pflugers Archiv European Journal of Physiology*, **1993**, 425, 54-61	4.6	20
7	Modulation of calcium current gating in frog skeletal muscle by conditioning depolarization. *Journal of Physiology*, **1992**, 457, 639-53	3.9	21
6	Fast gating kinetics of the slow Ca2+ current in cut skeletal muscle fibres of the frog. *Journal of Physiology*, **1990**, 425, 347-67	3.9	46
5	Effects of gallopamil on calcium release and intramembrane charge movements in frog skeletal muscle fibres. *Journal of Physiology*, **1990**, 421, 343-62	3.9	24
4	Effects of lanthanum on contractile inactivation and D600-induced paralysis in twitch muscle fibres of the frog. *Pflugers Archiv European Journal of Physiology*, **1989**, 414, 373-5	4.6	
3	Effects of guanidinium on EC coupling and tension generation in frog skeletal muscle. *Journal of Muscle Research and Cell Motility*, **1988**, 9, 541-51	3.5	6
2	Layer-specific inhibitory microcircuits of layer 6 interneurons in rat prefrontal cortex		1
1	Cell Type-Specific Modulation of Layer 6A Excitatory Microcircuits by Acetylcholine in Rat Barrel Cortex		3