Terence D Sanger

List of Publications by Year
in descending order

111 papers	5,697 citations	126907 33 h-index	82547 72 g-index
117 all docs	117 docs citations	117 times ranked	5338 citing authors

#	Article	IF	Citations
1	Harnessing neuroplasticity for clinical applications. Brain, 2011, 134, 1591-1609.	7.6	907
2	Classification and Definition of Disorders Causing Hypertonia in Childhood. Pediatrics, 2003, 111, e89-e97.	2.1	641
3	Definition and classification of hyperkinetic movements in childhood. Movement Disorders, 2010, 25, 1538-1549.	3.9	374
4	Prospective Open-Label Clinical Trial of Trihexyphenidyl in Children With Secondary Dystonia due to Cerebral Palsy. Journal of Child Neurology, 2007, 22, 530-537.	1.4	243
5	Definition and Classification of Negative Motor Signs in Childhood. Pediatrics, 2006, 118, 2159-2167.	2.1	226
6	Clinical and molecular characterisation of hereditary dopamine transporter deficiency syndrome: an observational cohort and experimental study. Lancet Neurology, The, 2011, 10, 54-62.	10.2	179
7	Abnormalities of spatial and temporal sensory discrimination in writer's cramp. Movement Disorders, 2001, 16, 94-99.	3.9	172
8	Sensory discrimination capabilities in patients with focal hand dystonia. Annals of Neurology, 2000, 47, 377-380.	5.3	157
9	Deep brain stimulation in children: experience and technical pearls. Journal of Neurosurgery: Pediatrics, 2011, 8, 566-574.	1.3	137
10	Testing objective measures of motor impairment in early Parkinson's disease: Feasibility study of an atâ€home testing device. Movement Disorders, 2009, 24, 551-556.	3.9	130
11	Theoretical Considerations for the Analysis of Population Coding in Motor Cortex. Neural Computation, 1994, 6, 29-37.	2.2	115
12	Neural population codes. Current Opinion in Neurobiology, 2003, 13, 238-249.	4.2	111
13	Bayesian Filtering of Myoelectric Signals. Journal of Neurophysiology, 2007, 97, 1839-1845.	1.8	103
14	Advances in management of movement disorders in children. Lancet Neurology, The, 2016, 15, 719-735.	10.2	84
15	Pathophysiology of Pediatric Movement Disorders. Journal of Child Neurology, 2003, 18, S9-S24.	1.4	80
16	Clinical Management of Pediatric Acute-Onset Neuropsychiatric Syndrome: Part IIâ€"Use of Immunomodulatory Therapies. Journal of Child and Adolescent Psychopharmacology, 2017, 27, 574-593.	1.3	79
17	Computational Model of the Role of Sensory Disorganization in Focal Task-Specific Dystonia. Journal of Neurophysiology, 2000, 84, 2458-2464.	1.8	78
18	Abnormalities of Tactile Sensory Function in Children With Dystonic and Diplegic Cerebral Palsy. Journal of Child Neurology, 2007, 22, 289-293.	1.4	71

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19	Deep brain stimulation in children and young adults with secondary dystonia: the Children's Hospital Los Angeles experience. Neurosurgical Focus, 2013, 35, E7.	2.3	69
20	Arm Trajectories in Dyskinetic Cerebral Palsy Have Increased Random Variability. Journal of Child Neurology, 2006, 21, 551-557.	1.4	61
21	Does dystonia always include co-contraction? A study of unconstrained reaching in children with primary and secondary dystonia. Experimental Brain Research, 2007, 176, 206-216.	1.5	56
22	Robustness and Reliability of Synergy-Based Myocontrol of a Multiple Degree of Freedom Robotic Arm. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 940-950.	4.9	54
23	Nonlinear sensory cortex response to simultaneous tactile stimuli in writer's cramp. Movement Disorders, 2002, 17, 105-111.	3.9	52
24	Failure of Motor Learning for Large Initial Errors. Neural Computation, 2004, 16, 1873-1886.	2.2	52
25	Botulinum Toxin Type B Improves the Speed of Reaching in Children With Cerebral Palsy and Arm Dystonia: An Open-Label, Dose-Escalation Pilot Study. Journal of Child Neurology, 2007, 22, 116-122.	1.4	49
26	Prolonged Electromyogram Biofeedback Improves Upper Extremity Function in Children With Cerebral Palsy. Journal of Child Neurology, 2010, 25, 1480-1484.	1.4	43
27	Pediatric Deep Brain Stimulation Using Awake Recording and Stimulation for Target Selection in an Inpatient Neuromodulation Monitoring Unit. Brain Sciences, 2018, 8, 135.	2.3	42
28	A Tree-Structured Algorithm for Reducing Computation in Networks with Separable Basis Functions. Neural Computation, 1991, 3, 67-78.	2.2	40
29	Cathodal Transcranial Direct Current Stimulation in Children With Dystonia. Journal of Child Neurology, 2013, 28, 1238-1244.	1.4	38
30	Cathodal Transcranial Direct Current Stimulation in Children With Dystonia. Journal of Child Neurology, 2014, 29, 232-239.	1.4	38
31	Noninvasive neuromodulation in essential tremor demonstrates relief in a shamâ€controlled pilot trial. Movement Disorders, 2018, 33, 1182-1183.	3.9	38
32	Reaching Movements in Childhood Dystonia Contain Signal-Dependent Noise. Journal of Child Neurology, 2005, 20, 489-496.	1.4	37
33	Toward a definition of childhood dystonia. Current Opinion in Pediatrics, 2004, 16, 623-627.	2.0	35
34	Multiscale modeling in the clinic: diseases of the brain and nervous system. Brain Informatics, 2017, 4, 219-230.	3.0	33
35	PEDiDBS: The pediatric international deep brain stimulation registry project. European Journal of Paediatric Neurology, 2017, 21, 218-222.	1.6	31
36	Speed-Accuracy Testing on the Apple iPad^{Â®} Provides a Quantitative Test of Upper Extremity Motor Performance in Children with Dystonia. Journal of Child Neurology, 2014, 29, 1460-1466.	1.4	30

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37	Pediatric movement disorders. Current Opinion in Neurology, 2003, 16, 529-535.	3.6	29
38	Visual Feedback Reduces Co-contraction in Children With Dystonia. Journal of Child Neurology, 2011, 26, 37-43.	1.4	29
39	Current and emerging strategies for treatment of childhood dystonia. Journal of Hand Therapy, 2015, 28, 185-194.	1.5	29
40	Multitarget Multiscale Simulation for Pharmacological Treatment of Dystonia in Motor Cortex. Frontiers in Pharmacology, 2016, 7, 157.	3.5	29
41	A robotic forearm orthosis using soft fabric-based helical actuators. , 2019, , .		28
42	Pediatric movement disorders. Current Opinion in Neurology, 2003, 16, 529-35.	3.6	28
43	Multiday Transcranial Direct Current Stimulation Causes Clinically Insignificant Changes in Childhood Dystonia. Journal of Child Neurology, 2015, 30, 1604-1615.	1.4	27
44	Neuromorphic meets neuromechanics, part I: the methodology and implementation. Journal of Neural Engineering, 2017, 14, 025001.	3.5	27
45	Deep Brain Stimulation Initiative: Toward Innovative Technology, New Disease Indications, and Approaches to Current and Future Clinical Challenges in Neuromodulation Therapy. Frontiers in Neurology, 2020, 11, 597451.	2.4	27
46	Force variability during isometric biceps contraction in children with secondary dystonia due to cerebral palsy. Movement Disorders, 2009, 24, 1299-1305.	3.9	25
47	Risk-Aware Control. Neural Computation, 2014, 26, 2669-2691.	2.2	25
48	Perceived Cost and Intrinsic Motor Variability Modulate the Speed-Accuracy Trade-Off. PLoS ONE, 2015, 10, e0139988.	2.5	22
49	Neuromorphic meets neuromechanics, part II: the role of fusimotor drive. Journal of Neural Engineering, 2017, 14, 025002.	3.5	22
50	Deep brain stimulation for cerebral palsy: where are we now?. Developmental Medicine and Child Neurology, 2020, 62, 28-33.	2.1	22
51	Deep Brain Stimulation Evoked Potentials May Relate to Clinical Benefit in Childhood Dystonia. Brain Stimulation, 2014, 7, 718-726.	1.6	21
52	Increased task-uncorrelated muscle activity in childhood dystonia. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 52.	4.6	21
53	Speed-Accuracy Trade-Off in a Trajectory-Constrained Self-Feeding Task. Journal of Child Neurology, 2015, 30, 1676-1685.	1.4	21
54	Children With and Without Dystonia Share Common Muscle Synergies While Performing Writing Tasks. Annals of Biomedical Engineering, 2017, 45, 1949-1962.	2.5	20

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55	Poor Penmanship in Children Correlates With Abnormal Rhythmic Tapping: A Broad Functional Temporal Impairment. Journal of Child Neurology, 2007, 22, 543-549.	1.4	19
56	Hypertonia in childhood secondary dystonia due to cerebral palsy is associated with reflex muscle activation. Movement Disorders, 2009, 24, 965-971.	3.9	19
57	Emulated muscle spindle and spiking afferents validates VLSI neuromorphic hardware as a testbed for sensorimotor function and disease. Frontiers in Computational Neuroscience, 2014, 8, 141.	2.1	19
58	Hypertonia in children: How and when to treat. Current Treatment Options in Neurology, 2005, 7, 427-439.	1.8	18
59	Optimizing Assisted Communication Devices for Children With Motor Impairments Using a Model of Information Rate and Channel Capacity. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2007, 15, 458-468.	4.9	18
60	The Tuning of Human Motor Response to Risk in a Dynamic Environment Task. PLoS ONE, 2015, 10, e0125461.	2.5	18
61	Finger muscle control in children with dystonia. Movement Disorders, 2011, 26, 1290-1296.	3.9	16
62	Distributed Control of Uncertain Systems Using Superpositions of Linear Operators. Neural Computation, 2011, 23, 1911-1934.	2.2	16
63	Birth-related syndromes of athetosis and kernicterus. Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn, 2011, 100, 387-395.	1.8	16
64	Similarity of Involuntary Postures between Different Children with Dystonia. Movement Disorders Clinical Practice, 2017, 4, 870-874.	1.5	16
65	Expansion coding and computation in the cerebellum: 50 years after the Marrâ€“Albus codon theory. Journal of Physiology, 2020, 598, 913-928.	2.9	16
66	Contributors to excess antagonist activity during movement in children with secondary dystonia due to cerebral palsy. Journal of Neurophysiology, 2011, 105, 2100-2107.	1.8	15
67	Movement Disorders in Cerebral Palsy. Journal of Pediatric Neurology, 2015, 13, 198-207.	0.2	15
68	Electroencephalogram and Clinical Focalities in Juvenile Myoclonic Epilepsy. Journal of Child Neurology, 1998, 13, 541-545.	1.4	14
69	Children With Dystonia Can Learn a Novel Motor Skill: Strategies That are Tolerant to High Variability. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 847-858.	4.9	14
70	Case Report: Targeting for Deep Brain Stimulation Surgery Using Chronic Recording and Stimulation in an Inpatient Neuromodulation Monitoring Unit, With Implantation of Electrodes in GPi and Vim in a 7-Year-Old Child With Progressive Generalized Dystonia. Journal of Child Neurology, 2018, 33, 776-783.	1.4	13
71	MERRF syndrome with overwhelming lactic acidosis. Pediatric Neurology, 1996, 14, 57-61.	2.1	12
72	Portable Motion-Analysis Device for Upper-Limb Research, Assessment, and Rehabilitation in Non-Laboratory Settings. IEEE Journal of Translational Engineering in Health and Medicine, 2019, 7, 1-14.	3.7	12

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73	Scaled Vibratory Feedback Can Bias Muscle Use in Children With Dystonia During a Redundant, 1-Dimensional Myocontrol Task. Journal of Child Neurology, 2017, 32, 161-169.	1.4	11
74	Rapid antibody testing for SARS-CoV-2 vaccine response in pediatric healthcare workers. International Journal of Infectious Diseases, 2021, 113, 1-6.	3.3	11
75	Use of Surface Electromyography (EMG) in the Diagnosis of Childhood Hypertonia: A Pilot Study. Journal of Child Neurology, 2008, 23, 644-648.	1.4	10
76	Controlling Variability. Journal of Motor Behavior, 2010, 42, 401-407.	0.9	10
77	A Nonlinear Stochastic Filter for Continuous-Time State Estimation. IEEE Transactions on Automatic Control, 2015, 60, 2161-2165.	5.7	9
78	A Computational Model of Deep-Brain Stimulation for Acquired Dystonia in Children. Frontiers in Computational Neuroscience, 2018, 12, 77.	2.1	9
79	Effect of target distance on controllability for myocontrol. International Journal of Human Computer Studies, 2020, 140, 102432.	5.6	9
80	Decoding Neural Spike Trains: Calculating the Probability That a Spike Train and an External Signal Are Related. Journal of Neurophysiology, 2002, 87, 1659-1663.	1.8	8
81	Vowel generation for children with cerebral palsy using myocontrol of a speech synthesizer. Frontiers in Human Neuroscience, 2014, 8, 1077.	2.0	8
82	Muscle synergies in children with dystonia capture “healthy” patterns regardless the altered motor performance. , 2015, 2015, 2099-102.		8
83	Increased long-latency reflex activity as a sufficient explanation for childhood hypertonic dystonia: a neuromorphic emulation study. Journal of Neural Engineering, 2015, 12, 036010.	3.5	8
84	Comparison of speed-accuracy tradeoff between linear and nonlinear filtering algorithms for myocontrol. Journal of Neurophysiology, 2018, 119, 2030-2035.	1.8	8
85	Evoked Potentials During Peripheral Stimulation Confirm Electrode Location in Thalamic Subnuclei in Children With Secondary Dystonia. Journal of Child Neurology, 2020, 35, 799-807.	1.4	8
86	Neuro-mechanical control using differential stochastic operators. , 2010, 2010, 4494-7.		7
87	Opportunities for Regulatory Changes to Promote Pediatric Device Innovation in the United States: Joint Recommendations From Pediatric Innovator Roundtables. IEEE Journal of Translational Engineering in Health and Medicine, 2021, 9, 1-5.	3.7	7
88	Transient Complete Resolution of Tourette Syndrome Symptoms Following Personalized Depth Electrode Placement. Brain Sciences, 2021, 11, 1559.	2.3	7
89	Basic and Translational Neuroscience of Childhood-Onset Dystonia: A Control-Theory Perspective. Annual Review of Neuroscience, 2018, 41, 41-59.	10.7	6
90	A Model to Estimate the Optimal Layout for Assistive Communication Touchscreen Devices in Children With Dyskinetic Cerebral Palsy. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1371-1380.	4.9	6

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91	EMG-based vibro-tactile biofeedback training: effective learning accelerator for children and adolescents with dystonia? A pilot crossover trial. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 150.	4.6	6
92	Crouching tiger, hidden dimensions. Nature Neuroscience, 2014, 17, 338-340.	14.8	4
93	A neuromorphic model of motor overflow in focal hand dystonia due to correlated sensory input. Journal of Neural Engineering, 2016, 13, 055001.	3.5	4
94	A Cerebellar Computational Mechanism for Delay Conditioning at Precise Time Intervals. Neural Computation, 2020, 32, 2069-2084.	2.2	4
95	Provider Antibody Serology Study of Virus in the Emergency Room (PASSOVER) Study: Special Population COVID-19 Seroprevalence. Western Journal of Emergency Medicine, 2021, 22, 565-571.	1.1	4
96	Feedback Error Learning with basis function networks. , 2006, , .		3
97	Vibro-tactile EMG-based biofeedback induces changes of muscle activity patterns in childhood dystonia. , 2019, , .		3
98	Increasing Consistency of Evoked Response in Thalamic Nuclei During Repetitive Burst Stimulation of Peripheral Nerve in Humans. Lecture Notes in Computer Science, 2021, , 238-247.	1.3	3
99	High-fidelity transmission of high-frequency burst stimuli from peripheral nerve to thalamic nuclei in children with dystonia. Scientific Reports, 2021, 11, 8498.	3.3	3
100	Severe resting clonus caused by thyrotoxicosis in a 16-year-old girl with hereditary spastic paraparesis: A case report. Movement Disorders, 2004, 19, 712-713.	3.9	2
101	Hyperkinetic Disorders in Childhood. , 2012, , 221-258.		2
102	Constraint-induced intervention as an emergent phenomenon from synaptic competition in biological systems. Journal of Computational Neuroscience, 2021, 49, 175-188.	1.0	2
103	Can spatial filtering separate voluntary and involuntary components in children with dyskinetic cerebral palsy?. PLoS ONE, 2021, 16, e0250001.	2.5	2
104	Continuous-time estimation of latent variables from Poisson-spiking neurons. , 2013, , .		1
105	Tuning of Standing Postural Responses to Instability and Cost Function. Neuroscience, 2020, 428, 100-110.	2.3	1
106	Abnormalities of spatial and temporal sensory discrimination in writer's cramp. , 2001, 16, 94.		1
107	SARS-CoV-2 Serology Testing in an Asymptomatic, At-Risk Population: Methods, Results, Pitfalls. Infectious Disease Reports, 2021, 13, 910-916.	3.1	1
108	Learning Visually Guided Risk-Aware Reaching on a Robot Controlled by a GPU Spiking Neural Network. Lecture Notes in Computer Science, 2016, , 282-289.	1.3	1

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109	Uniform Boundedness of Feedback Error Learning for a Class of Stochastic Nonlinear Systems. , 2006, , .		0
110	Efficient parallel implementation of stochastic dynamic operators for robot control. , 2017, , .		0
111	NCS Assessments of the Motor, Sensory, and Physical Health Domains. Frontiers in Pediatrics, 2021, 9, 622542.	1.9	0