High performance communication by people with paral brain-computer interface

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#	Article	IF	Citations
1	Retrospectively supervised click decoder calibration for self-calibrating point-and-click brainâ€“computer interfaces. Journal of Physiology (Paris), 2016, 110, 382-391.	2.1	17
2	Review: Human Intracortical Recording and Neural Decoding for Brainâ€“Computer Interfaces. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1687-1696.	2.7	80
3	Motor Cortical Visuomotor Feedback Activity Is Initially Isolated from Downstream Targets in Output-Null Neural State Space Dimensions. Neuron, 2017, 95, 195-208.e9.	3.8	90
4	Cryptographic decoding of movement. Nature Biomedical Engineering, 2017, 1, 929-930.	11.6	0
5	Augmenting intracortical brain-machine interface with neurally driven error detectors. Journal of Neural Engineering, 2017, 14, 066007.	1.8	23
6	Restoring Touch through Intracortical Microstimulation of Human Somatosensory Cortex. , 2017, , .		4
7	Editorial. Advancement in brainâ€“machine interfaces for patients with tetraplegia: neurosurgical perspective. Neurosurgical Focus, 2017, 43, E5.	1.0	9
8	Inertial sensors and muscle electrical signals in human-computer interaction. , 2017, , .		12
9	Electrode Array for Neural Interfaces. Toxinology, 2017, , 1-30.	0.2	0
10	A Comparison of Intention Estimation Methods for Decoder Calibration in Intracortical Brainâ€“Computer Interfaces. IEEE Transactions on Biomedical Engineering, 2018, 65, 2066-2078.	2.5	19
11	Neural Population Dynamics Underlying Motor Learning Transfer. Neuron, 2018, 97, 1177-1186.e3.	3.8	100
12	Rapid calibration of an intracortical brainâ€“computer interface for people with tetraplegia. Journal of Neural Engineering, 2018, 15, 026007.	1.8	95
13	Computational Intelligence for Pattern Recognition in EEG Signals. Studies in Computational Intelligence, 2018, , 291-320.	0.7	4
14	Feasibility of Automatic Error Detect-and-Undo System in Human Intracortical Brainâ€“Computer Interfaces. IEEE Transactions on Biomedical Engineering, 2018, 65, 1771-1784.	2.5	12
15	Brainâ€“Computer Interfaces for Augmentative and Alternative Communication: Separating the Reality From the Hype. Perspectives of the ASHA Special Interest Groups, 2018, 3, 13-23.	0.4	4
16	Brain-computer interfaces based on intracortical recordings of neural activity for restoration of movement and communication of people with paralysis. , 2018, , .		1
17	Signal processing methods for reducing artifacts in microelectrode brain recordings caused by functional electrical stimulation. Journal of Neural Engineering, 2018, 15, 026014.	1.8	26
18	Neural Prostheses for Reaching and Grasping. , 2018, , .		0

#	Article	IF	Citations
19	Silicon Valley new focus on brain computer interface: hype or hope for new applications?. F1000Research, 2018, 7, 1327.	0.8	9
20	Innovations in electrical stimulation harness neural plasticity to restore motor function. Bioelectronics in Medicine, 2018, 1, 251-263.	2.0	5
21	Brain-machine interface cursor position only weakly affects monkey and human motor cortical activity in the absence of arm movements. Scientific Reports, 2018, 8, 16357.	1.6	8
22	Cortical control of a tablet computer by people with paralysis. PLoS ONE, 2018, 13, e0204566.	1.1	108
23	The Time-Varying Network Patterns in Motor Imagery Revealed by Adaptive Directed Transfer Function Analysis for fMRI. IEEE Access, 2018, 6, 60339-60352.	2.6	10
24	Brainâ€“Computer Interfaces. , 2018, , 341-356.		2
25	Decoding Speech from Intracortical Multielectrode Arrays in Dorsal â€œArm/Hand Areasâ€•of Human Motor Cortex. , 2018, 2018, 93-97.		16
26	Differential Representation of Articulatory Gestures and Phonemes in Precentral and Inferior Frontal Gyri. Journal of Neuroscience, 2018, 38, 9803-9813.	1.7	62
27	Training in Use of Brainâ€“Machine Interface-Controlled Robotic Hand Improves Accuracy Decoding Two Types of Hand Movements. Frontiers in Neuroscience, 2018, 12, 478.	1.4	12
28	Meeting brainâ€“computer interface user performance expectations using a deep neural network decoding framework. Nature Medicine, 2018, 24, 1669-1676.	15.2	123
29	Feasibility of identifying the ideal locations for motor intention decoding using unimodal and multimodal classification at 7T-fMRI. Scientific Reports, 2018, 8, 15556.	1.6	4
30	Neurolinguistics Research Advancing Development of a Direct-Speech Brain-Computer Interface. IScience, 2018, 8, 103-125.	1.9	58
31	The critical stability task: quantifying sensory-motor control during ongoing movement in nonhuman primates. Journal of Neurophysiology, 2018, 120, 2164-2181.	0.9	1
32	Latent Factors and Dynamics in Motor Cortex and Their Application to Brainâ€“Machine Interfaces. Journal of Neuroscience, 2018, 38, 9390-9401.	1.7	81
33	Recovering Motor Activation with Chronic Peripheral Nerve Computer Interface. Scientific Reports, 2018, 8, 14149.	1.6	12
34	Inferring single-trial neural population dynamics using sequential auto-encoders. Nature Methods, 2018, 15, 805-815.	9.0	388
35	Robust Closed-Loop Control of a Cursor in a Person with Tetraplegia using Gaussian Process Regression. Neural Computation, 2018, 30, 2986-3008.	1.3	20
36	Intracortical Microstimulation Modulates Cortical Induced Responses. Journal of Neuroscience, 2018, 38, 7774-7786.	1.7	19

#	Article	IF	Citations
37	Closed-Loop Deep Brain Stimulation for Refractory Chronic Pain. Frontiers in Computational Neuroscience, 2018, 12, 18.	1.2	42
38	Feature Selection Methods for Robust Decoding of Finger Movements in a Non-human Primate. Frontiers in Neuroscience, 2018, 12, 22.	1.4	9
39	Decoding Inner Speech Using Electrocorticography: Progress and Challenges Toward a Speech Prosthesis. Frontiers in Neuroscience, 2018, 12, 422.	1.4	68
40	Stable long-term BCI-enabled communication in ALS and locked-in syndrome using LFP signals. Journal of Neurophysiology, 2018, 120, 343-360.	0.9	91
41	A rodent brain-machine interface paradigm to study the impact of paraplegia on BMI performance. Journal of Neuroscience Methods, 2018, 306, 103-114.	1.3	7
42	Brain-Machine Interfaces: Powerful Tools for Clinical Treatment and Neuroscientific Investigations. Neuroscientist, 2019, 25, 139-154.	2.6	51
43	Real-time Closed Loop Neural Decoding on a Neuromorphic chip. , 2019, , .		9
44	Clustering Neural Patterns in Kernel Reinforcement Learning Assists Fast Brain Control in Brain-Machine Interfaces. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 1684-1694.	2.7	19
45	Clinical neuroprosthetics: Today and tomorrow. Journal of Clinical Neuroscience, 2019, 68, 13-19.	0.8	13
46	Towards a Distributed, Chronically-Implantable Neural Interface. , 2019, , .		41
47	Sound- and current-driven laminar profiles and their application method mimicking acoustic responses in the mouse auditory cortex in vivo. Brain Research, 2019, 1721, 146312.	1.1	6
48	Real-time decoding of question-and-answer speech dialogue using human cortical activity. Nature Communications, 2019, 10, 3096.	5.8	144
49	Human motor decoding from neural signals: a review. BMC Biomedical Engineering, 2019, 1, 22.	1.7	44
50	BCI decoder performance comparison of an LSTM recurrent neural network and a Kalman filter in retrospective simulation. , 2019, , .		28
51	Development of neural interfaces and energy harvesters towards self-powered implantable systems for healthcare monitoring and rehabilitation purposes. Nano Energy, 2019, 65, 104039.	8.2	101
52	Experimental Comparison of Hardware-Amenable Spike Detection Algorithms for iBMIs. , 2019, , .		3
53	Decoding Kinematics from Human Parietal Cortex using Neural Networks. , 2019, , .		10
54	Brain implants that let you speak your mind. Nature, 2019, 568, 466-467.	13.7	10

#	Article	IF	Citations
55	The future potential of the Stentrode. Expert Review of Medical Devices, 2019, 16, 841-843.	1.4	9
56	Technical considerations for generating somatosensation via cortical stimulation in a closed-loop sensory/motor brain-computer interface system in humans. Journal of Clinical Neuroscience, 2019, 63, 116-121.	0.8	19
57	Noninvasive neuroimaging enhances continuous neural tracking for robotic device control. Science Robotics, 2019, 4, .	9.9	227
58	Principled BCI Decoder Design and Parameter Selection Using a Feedback Control Model. Scientific Reports, 2019, 9, 8881.	1.6	28
59	Accurate Estimation of Neural Population Dynamics without Spike Sorting. Neuron, 2019, 103, 292-308.e4.	3.8	195
60	Speech synthesis from neural decoding of spoken sentences. Nature, 2019, 568, 493-498.	13.7	518
61	Speech synthesis from ECoG using densely connected 3D convolutional neural networks. Journal of Neural Engineering, 2019, 16, 036019.	1.8	138
62	Brain-Computer Interfaces in Quadriplegic Patients. Neurosurgery Clinics of North America, 2019, 30, 275-281.	0.8	11
63	Prediction of Forelimb Reach Results From Motor Cortex Activities Based on Calcium Imaging and Deep Learning. Frontiers in Cellular Neuroscience, 2019, 13, 88.	1.8	15
64	In-home and remote use of robotic body surrogates by people with profound motor deficits. PLoS ONE, 2019, 14, e0212904.	1.1	18
65	Towards neural co-processors for the brain: combining decoding and encoding in brainâ€“computer interfaces. Current Opinion in Neurobiology, 2019, 55, 142-151.	2.0	36
66	Biomarkers for closed-loop deep brain stimulation in Parkinson disease and beyond. Nature Reviews Neurology, 2019, 15, 343-352.	4.9	132
67	Volitional control of single-electrode high gamma local field potentials by people with paralysis. Journal of Neurophysiology, 2019, 121, 1428-1450.	0.9	12
68	A prototype of a P300 based brain-robot interface to enable multi-modal interaction for patients with limited mobility. , 2019, , .		3
69	Is my Neural Network Neuromorphic? Taxonomy, Recent Trends and Future Directions in Neuromorphic Engineering. , 2019, , .		8
70	Towards Intelligent Intracortical BMI (i^{2}BMI): Low-Power Neuromorphic Decoders That Outperform Kalman Filters. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 1615-1624.	2.7	18
71	Recovery of Event Related Potential Signals using Compressive Sensing and Kronecker Technique. , 2019, , .		6
72	Electrochemical Evaluation of Layer-by-Layer Drug Delivery Coating for Neural Interfaces. ACS Applied Bio Materials, 2019, 2, 5597-5607.	2.3	5

#	Article	IF	Citations
73	The neurology clinic needs monkey research. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 26255-26258.	3.3	9
74	Restoring Speech Using Neuroprosthetic Technology: A New Frontier for Patients with Aphasia. World Neurosurgery, 2019, 132, 437-438.	0.7	0
75	Optimising non-invasive brain-computer interface systems for free communication between naÃ¯ve human participants. Scientific Reports, 2019, 9, 18705.	1.6	23
76	Generating Natural, Intelligible Speech From Brain Activity in Motor, Premotor, and Inferior Frontal Cortices. Frontiers in Neuroscience, 2019, 13, 1267.	1.4	76
77	Regenerative Medicine in the Digital Age. Computers in Health Care, 2019, , 71-83.	0.2	1
78	Frequency Shifts and Depth Dependence of Premotor Beta Band Activity during Perceptual Decision-Making. Journal of Neuroscience, 2019, 39, 1420-1435.	1.7	22
79	Encoding of kinetic and kinematic movement parameters in the sensorimotor cortex: A Brainâ€€Computer Interface perspective. European Journal of Neuroscience, 2019, 50, 2755-2772.	1.2	23
80	Closed-loop cortical control of virtual reach and posture using Cartesian and joint velocity commands. Journal of Neural Engineering, 2019, 16, 026011.	1.8	14
81	Toward a Speech Neuroprosthesis. JAMA - Journal of the American Medical Association, 2020, 323, 413.	3.8	18
82	Deep Learning Neural Encoders for Motor Cortex. IEEE Transactions on Biomedical Engineering, 2020, 67, 2145-2158.	2.5	7
83	Estimating Risk for Future Intracranial, Fully Implanted, Modular Neuroprosthetic Systems: A Systematic Review of Hardware Complications in Clinical Deep Brain Stimulation and Experimental Human Intracortical Arrays. Neuromodulation, 2020, 23, 411-426.	0.4	40
84	Evaluation of Non-collocated Force Feedback Driven by Signal-independent Noise. , 2020, , .		0
85	From unstable input to robust output. Nature Biomedical Engineering, 2020, 4, 665-667.	11.6	5
86	Spatiotemporal Maps of Proprioceptive Inputs to the Cervical Spinal Cord During Three-Dimensional Reaching and Grasping. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1668-1677.	2.7	8
87	Classifying Intracortical Brain-Machine Interface Signal Disruptions Based on System Performance and Applicable Compensatory Strategies: A Review. Frontiers in Neurorobotics, 2020, 14, 558987.	1.6	14
88	Power-saving design opportunities for wireless intracortical brainâ€“computer interfaces. Nature Biomedical Engineering, 2020, 4, 984-996.	11.6	66
89	A low-power band of neuronal spiking activity dominated by local single units improves the performance of brainâ€“machine interfaces. Nature Biomedical Engineering, 2020, 4, 973-983.	11.6	73
90	Towards Autonomous Intra-Cortical Brain Machine Interfaces: Applying Bandit Algorithms for Online Reinforcement Learning. , 2020, , .		1

#	Article	IF	Citations
91	Dorsolateral prefrontal cortex-based control with an implanted brainâ€“computer interface. Scientific Reports, 2020, 10, 15448.	1.6	10
92	Ground Truth Dataset for EEG-Based Emotion Recognition With Visual Indication. IEEE Access, 2020, 8, 188503-188514.	2.6	2
93	Combination of Augmented Reality Based Brain- Computer Interface and Computer Vision for High-Level Control of a Robotic Arm. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 3140-3147.	2.7	58
94	Identifying gaps in using artificial intelligence to support students with intellectual disabilities from education and health perspectives. Aslib Journal of Information Management, 2020, 73, 101-128.	1.3	7
95	Reinforcement Learning Based Fast Self-Recalibrating Decoder for Intracortical Brainâ€“Machine Interface. Sensors, 2020, 20, 5528.	2.1	2
96	Ultra-small carbon fiber electrode recording site optimization and improved in vivo chronic recording yield. Journal of Neural Engineering, 2020, 17, 026037.	1.8	51
97	Human visual skills for brain-computer interface use: a tutorial. Disability and Rehabilitation: Assistive Technology, 2020, 15, 799-809.	1.3	6
98	Materials for flexible bioelectronic systems as chronic neural interfaces. Nature Materials, 2020, 19, 590-603.	13.3	277
99	The combination of brain-computer interfaces and artificial intelligence: applications and challenges. Annals of Translational Medicine, 2020, 8, 712-712.	0.7	31
100	Brain-computer interfaces for people with amyotrophic lateral sclerosis. Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn, 2020, 168, 33-38.	1.0	10
101	The Discriminative Kalman Filter for Bayesian Filtering with Nonlinear and Nongaussian Observation Models. Neural Computation, 2020, 32, 969-1017.	1.3	13
102	Hand Knob Area of Premotor Cortex Represents the Whole Body in a Compositional Way. Cell, 2020, 181, 396-409.e26.	13.5	101
103	A state-based probabilistic method for decoding hand position during movement from ECoG signals in non-human primate. Journal of Neural Engineering, 2020, 17, 026042.	1.8	6
104	Brain-computer interfaces for communication. Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn, 2020, 168, 67-85.	1.0	23
105	Applications of brain-computer interfaces to the control of robotic and prosthetic arms. Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn, 2020, 168, 87-99.	1.0	37
106	BETA: A Large Benchmark Database Toward SSVEP-BCI Application. Frontiers in Neuroscience, 2020, 14, 627.	1.4	86
107	An Artificial Neural Network Processor With a Custom Instruction Set Architecture for Embedded Applications. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 5200-5210.	3.5	10
108	Speech-related dorsal motor cortex activity does not interfere with iBCI cursor control. Journal of Neural Engineering, 2020, 17, 016049.	1.8	21

#	Article	IF	Citations
109	Sparse Ensemble Machine Learning to Improve Robustness of Long-Term Decoding in iBMIs. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 380-389.	2.7	7
110	A Sub-mu W Reconfigurable Front-End for Invasive Neural Recording That Exploits the Spectral Characteristics of the Wideband Neural Signal. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 1426-1437.	3.5	16
111	Clinician awareness of brain computer interfaces: a Canadian national survey. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 2.	2.4	16
112	Engineering magnetic nanoparticles for repairing nerve injuries. , 2020, , 167-200.		2
113	Stabilization of a brainâ€“computer interface via the alignment of low-dimensional spaces of neural activity. Nature Biomedical Engineering, 2020, 4, 672-685.	11.6	118
114	Neural decoding of electrocorticographic signals using dynamic mode decomposition. Journal of Neural Engineering, 2020, 17, 036009.	1.8	19
115	Extracellular voltage thresholds for maximizing information extraction in primate auditory cortex: implications for a brain computer interface. Journal of Neural Engineering, 2021, 18, 036010.	1.8	3
116	Electroencephalography of completely locked-in state patients with amyotrophic lateral sclerosis. Neuroscience Research, 2021, 162, 45-51.	1.0	11
117	Neuropsychological and neurophysiological aspects of brainâ€computerâ€interface (BCI) control in paralysis. Journal of Physiology, 2021, 599, 2351-2359.	1.3	45
119	Motor neuroprosthesis implanted with neurointerventional surgery improves capacity for activities of daily living tasks in severe paralysis: first in-human experience. Journal of NeuroInterventional Surgery, 2021, 13, 102-108.	2.0	106
120	EEG Motor Imagery Classification With Sparse Spectrotemporal Decomposition and Deep Learning. IEEE Transactions on Automation Science and Engineering, 2021, 18, 541-551.	3.4	42
121	Plug-and-play control of a brainâ€“computer interface through neural map stabilization. Nature Biotechnology, 2021, 39, 326-335.	9.4	60
122	Motor Planning Modulates Neural Activity Patterns in Early Human Auditory Cortex. Cerebral Cortex, 2021, 31, 2952-2967.	1.6	14
123	Assessment of anticholinesterase effect of polyvinylpyrrolidone/silver nanocomposite biosynthesized by Pandanus atrocarpus extract. Materials Today: Proceedings, 2021, 42, 2578-2583.	0.9	8
124	Transhumanism. Cognitive Systems Monographs, 2021, , 55-72.	0.1	0
125	Decoding and perturbing decision states in real time. Nature, 2021, 591, 604-609.	13.7	64
126	Auditory cues reveal intended movement information in middle frontal gyrus neuronal ensemble activity of a person with tetraplegia. Scientific Reports, 2021, 11, 98.	1.6	12
128	Restoring upper extremity function with brain-machine interfaces. International Review of Neurobiology, 2021, 159, 153-186.	0.9	0

#	Article	IF	Citations
129	Effects of Peripheral Haptic Feedback on Intracortical Brain-Computer Interface Control and Associated Sensory Responses in Motor Cortex. IEEE Transactions on Haptics, 2021, 14, 762-775.	1.8	5
130	An Open Dataset for Wearable SSVEP-Based Brain-Computer Interfaces. Sensors, 2021, 21, 1256.	2.1	28
131	Speech-imagery-based brainâ€“computer interface system using ear-EEG. Journal of Neural Engineering, 2021, 18, 016023.	1.8	19
132	Impact of referencing scheme on decoding performance of LFP-based brain-machine interface. Journal of Neural Engineering, 2021, 18, 016028.	1.8	7
133	Virtual Reality for Neurorehabilitation and Cognitive Enhancement. Brain Sciences, 2021, 11, 221.	1.1	53
134	Progress in Brain Computer Interface: Challenges and Opportunities. Frontiers in Systems Neuroscience, 2021, 15, 578875.	1.2	128
136	Brainâ€“Computer Interfaces in Neurorecovery and Neurorehabilitation. Seminars in Neurology, 2021, 41, 206-216.	0.5	11
137	Generalizing neural signal-to-text brain-computer interfaces. Biomedical Physics and Engineering Express, 2021, 7, 035023.	0.6	0
138	Decoding Saccade Intention From Primate Prefrontal Cortical Local Field Potentials Using Spectral, Spatial, and Temporal Dimensionality Reduction. International Journal of Neural Systems, 2021, 31, 2150023.	3.2	3
139	Human Somatosensory Cortex Is Modulated during Motor Planning. Journal of Neuroscience, 2021, 41, 5909-5922.	1.7	34
140	An artificial intelligence that increases simulated brainâ€“computer interface performance. Journal of Neural Engineering, 2021, 18, 046053.	1.8	6
141	Brainâ€“Machine Interfaces: Closed-Loop Control in an Adaptive System. Annual Review of Control, Robotics, and Autonomous Systems, 2021, 4, 167-189.	7.5	10
142	A Diagnostic Circuit for Crosstalk Detection in Microelectrode Arrays. , 2021, 2021, 544-547.		3
143	Neural interface translates thoughts into type. Nature, 2021, 593, 197-198.	13.7	3
144	High-performance brain-to-text communication via handwriting. Nature, 2021, 593, 249-254.	13.7	409
145	A brain-computer interface that evokes tactile sensations improves robotic arm control. Science, 2021, 372, 831-836.	6.0	245
146	Electroencephalogram (EEG) Based Imagined Speech Decoding and Recognition. Journal of Applied Materials and Technology, 2021, 2, 74-84.	1.4	5
147	Physical principles of brainâ€“computer interfaces and their applications for rehabilitation, robotics and control of human brain states. Physics Reports, 2021, 918, 1-133.	10.3	88

#	Article	IF	Citations
148	Laser ablation of the pia mater for insertion of high-density microelectrode arrays in a translational sheep model. Journal of Neural Engineering, 2021, 18, 045008.	1.8	3
149	Neuroprosthesis for Decoding Speech in a Paralyzed Person with Anarthria. New England Journal of Medicine, 2021, 385, 217-227.	13.9	209
150	A Bidirectional Neural Interface SoC With Adaptive IIR Stimulation Artifact Cancelers. IEEE Journal of Solid-State Circuits, 2021, 56, 2142-2157.	3.5	16
151	Interpreting Volitional Movement Intent From Biological Signals: A Review. IEEE Signal Processing Magazine, 2021, 38, 23-33.	4.6	0
152	Freedom of Speech. New England Journal of Medicine, 2021, 385, 278-279.	13.9	1
153	A convolutional neural-network framework for modelling auditory sensory cells and synapses. Communications Biology, 2021, 4, 827.	2.0	16
154	Noninvasive Neural Interfacing With Wearable Muscle Sensors: Combining Convolutive Blind Source Separation Methods and Deep Learning Techniques for Neural Decoding. IEEE Signal Processing Magazine, 2021, 38, 103-118.	4.6	37
155	Neuropathological effects of chronically implanted, intracortical microelectrodes in a tetraplegic patient. Journal of Neural Engineering, 2021, 18, 0460b9.	1.8	24
156	Home Use of a Percutaneous Wireless Intracortical Brain-Computer Interface by Individuals With Tetraplegia. IEEE Transactions on Biomedical Engineering, 2021, 68, 2313-2325.	2.5	83
157	Generalizable cursor click decoding using grasp-related neural transients. Journal of Neural Engineering, 2021, 18, 0460e9.	1.8	8
158	Brain-Machine Interfaces. Hand Clinics, 2021, 37, 391-399.	0.4	1
159	Building communication neurotechnology for high stakes communications. Nature Reviews Neuroscience, 2021, 22, 587-588.	4.9	5
160	Detection of human white matter activation and evaluation of its function in movement decoding using stereo-electroencephalography (SEEG). Journal of Neural Engineering, 2021, 18, 0460c6.	1.8	13
161	Multi-scale neural decoding and analysis. Journal of Neural Engineering, 2021, 18, 045013.	1.8	16
162	A modular strategy for next-generation upper-limb sensory-motor neuroprostheses. Med, 2021, 2, 912-937.	2.2	16
163	Practical real-time MEG-based neural interfacing with optically pumped magnetometers. BMC Biology, 2021, 19, 158.	1.7	14
164	The science and engineering behind sensitized brain-controlled bionic hands. Physiological Reviews, 2022, 102, 551-604.	13.1	32
165	Ã‰crire par la pensÃ©e. Pourlascience Fr, 2021, NÂ° 527 - septembre, 66-70.	0.0	0

#	Article	IF	Citations
166	Real-time linear prediction of simultaneous and independent movements of two finger groups using an intracortical brain-machine interface. Neuron, 2021, 109, 3164-3177.e8.	3.8	24
167	Long-term stability of the chronic epidural wireless recorder WIMAGINE in tetraplegic patients. Journal of Neural Engineering, 2021, 18, 056026.	1.8	16
168	Brain Computer Interfaces for Assisted Communication in Paralysis and Quality of Life. International Journal of Neural Systems, 2021, 31, 2130003.	3.2	10
169	Real-time synthesis of imagined speech processes from minimally invasive recordings of neural activity. Communications Biology, 2021, 4, 1055.	2.0	46
170	Developments and challenges in human performance enhancement technology. Medicine in Novel Technology and Devices, 2021, 12, 100095.	0.9	4
171	A neural decoding algorithm that generates language from visual activity evoked by natural images. Neural Networks, 2021, 144, 90-100.	3.3	6
172	Brain Co-processors: Using AI to Restore and Augment Brain Function. , 2021, , 1-36.		2
173	Design a Novel BCI for Neurorehabilitation Using Concurrent LFP and EEG Features: A Case Study. IEEE Transactions on Biomedical Engineering, 2022, 69, 1554-1563.	2.5	12
174	Brainâ€“Computer Interfaces. , 2020, , 131-183.		53
175	Intracortical Brainâ€“Machine Interfaces. , 2020, , 185-221.		5
176	Electrode Array for Neural Interfaces. Micro/Nano Technologies, 2018, , 1437-1465.	0.1	2
177	Neural Representation of Observed, Imagined, and Attempted Grasping Force in Motor Cortex of Individuals with Chronic Tetraplegia. Scientific Reports, 2020, 10, 1429.	1.6	16
178	Computational challenges and opportunities for a bi-directional artificial retina. Journal of Neural Engineering, 2020, 17, 055002.	1.8	26
179	Distance- and speed-informed kinematics decoding improves M/EEG based upper-limb movement decoder accuracy. Journal of Neural Engineering, 2020, 17, 056027.	1.8	16
180	Decoding spoken English from intracortical electrode arrays in dorsal precentral gyrus. Journal of Neural Engineering, 2020, 17, 066007.	1.8	52
181	Brain2Char: a deep architecture for decoding text from brain recordings. Journal of Neural Engineering, 2020, 17, 066015.	1.8	37
182	Motor imagery recognition with automatic EEG channel selection and deep learning. Journal of Neural Engineering, 2020, , .	1.8	23
183	The Argo: a high channel count recording system for neural recording in vivo. Journal of Neural Engineering, 2021, 18, 015002.	1.8	46

#	Article	IF	Citations
198	The current state of electrocorticography-based brainâ€“computer interfaces. Neurosurgical Focus, 2020, 49, E2.	1.0	60
199	Multimodal treatment for spinal cord injury: a sword of neuroregeneration upon neuromodulation. Neural Regeneration Research, 2020, 15, 1437.	1.6	79
200	Neural ensemble dynamics in dorsal motor cortex during speech in people with paralysis. ELife, 2019, 8, .	2.8	64
201	Emerging accessibility solutions for physical and mobility impairments. , 2021, 6, .		2
202	Decoding four hand gestures with a single bipolar pair of electrocorticography electrodes. Journal of Neural Engineering, 2021, 18, .	1.8	0
206	Conclusion: The Brain at Risk. , 2019, , 269-292.		0
216	Cyber-Physical Systems as an Enabler of Circular Economy to Achieve Sustainable Development Goals: A Comprehensive Review. International Journal of Precision Engineering and Manufacturing - Green Technology, 2022, 9, 955-975.	2.7	26
217	Intelligent robust controller based on cognitive computing technologies. Pt. 1: cognitive Control models with THE BRAIN emotional learning. Sistemnyj Analiz V Nauke I Obrazovanii, 2020, , 90-134.	0.0	0
219	Electropalatography Contact Patterns in the Production of Malay Consonants among Paralysed Patients. IFAC-PapersOnLine, 2020, 53, 15958-15963.	0.5	0
220	Robust neural decoding by kernel regression with Siamese representation learning. Journal of Neural Engineering, 2021, 18, 056062.	1.8	6
221	Skilled independent control of individual motor units via a non-invasive neuromuscularâ€“machine interface. Journal of Neural Engineering, 2021, 18, 066019.	1.8	28
222	Implantable brain machine interfaces: first-in-human studies, technology challenges and trends. Current Opinion in Biotechnology, 2021, 72, 102-111.	3.3	59
224	Estimating the dimensionality of the manifold underlying multi-electrode neural recordings. PLoS Computational Biology, 2021, 17, e1008591.	1.5	32
225	Evolving Flexible Sensors, Wearable and Implantable Technologies Towards BodyNET for Advanced Healthcare and Reinforced Life Quality. IEEE Open Journal of Circuits and Systems, 2021, 2, 702-720.	1.4	34
226	Recent advances and current trends in brainâ€computer interface research and their applications. International Journal of Developmental Neuroscience, 2022, 82, 107-123.	0.7	23
227	Exploring Cognition with Brainâ€“Machine Interfaces. Annual Review of Psychology, 2022, 73, 131-158.	9.9	12
228	Adaptive Wireless Power Transfer and Backscatter Communication for Perpetual Operation of Wireless Brainâ€“Computer Interfaces. Proceedings of the IEEE, 2022, 110, 89-106.	16.4	5
229	Fast and accurate decoding of finger movements from ECoG through Riemannian features and modern machine learning techniques. Journal of Neural Engineering, 2022, 19, 016037.	1.8	10

#	Article	IF	Citations
230	A Multimodal Neural-Recording IC With Reconfigurable Analog Front-Ends for Improved Availability and Usability for Recording Channels. IEEE Transactions on Biomedical Circuits and Systems, 2022, 16, 185-199.	2.7	8
231	Brain-Computer Interface: Applications to Speech Decoding and Synthesis to Augment Communication. Neurotherapeutics, 2022, 19, 263-273.	2.1	19
233	Poststroke Cognitive Impairment Research Progress on Application of Brain-Computer Interface. BioMed Research International, 2022, 2022, 1-16.	0.9	4
235	Brainâ€“Computer Interface Speaks Up. Engineering, 2022, 9, 3-5.	3.2	0
236	Investigation on Effect of Speech Imagery EEG Data Augmentation with Actual Speech. , 2022, , .		0
237	Development of an Ergonomic User Interface Design of Calcium Imaging Processing System. Applied Sciences (Switzerland), 2022, 12, 1877.	1.3	1
238	Voluntary control of semantic neural representations by imagery with conflicting visual stimulation. Communications Biology, 2022, 5, 214.	2.0	3
240	Spelling interface using intracortical signals in a completely locked-in patient enabled via auditory neurofeedback training. Nature Communications, 2022, 13, 1236.	5.8	54
241	Multi-person coded brain-computer interface based on steady-state visual evoked potential. , 2021, , .		0
242	Dimensionality Reduction of Local Field Potential Features with Convolution Neural Network in Neural Decoding: A Pilot Study. , 2021, 2021, 1047-1050.		0
243	The brain-reading devices helping paralysed people to move, talk and touch. Nature, 2022, 604, 416-419.	13.7	11
244	Harnessing the Power of Artificial Intelligence in Otolaryngology and the Communication Sciences. JARO - Journal of the Association for Research in Otolaryngology, 2022, 23, 319-349.	0.9	8
249	Current Trens in the Development of Cyber-physical Interfaces Linkning Virtual Reality and Physical System. , 2022, , .		0
250	A Power-Efficient Brain-Machine Interface System With a Sub-mw Feature Extraction and Decoding ASIC Demonstrated in Nonhuman Primates. IEEE Transactions on Biomedical Circuits and Systems, 2022, 16, 395-408.	2.7	6
251	Sex differences in invasive and noninvasive neurotechnologies. , 2022, , 133-160.		0
252	A low-power communication scheme for wireless, 1000 channel brainâ€“machine interfaces. Journal of Neural Engineering, 2022, 19, 036037.	1.8	6
253	Design-development of an at-home modular brainâ€“computer interface (BCI) platform in a case study of cervical spinal cord injury. Journal of NeuroEngineering and Rehabilitation, 2022, 19, .	2.4	5
254	Dynamic Ensemble Bayesian Filter for Robust Control of a Human Brain-Machine Interface. IEEE Transactions on Biomedical Engineering, 2022, 69, 3825-3835.	2.5	8

#	Article	IF	Citations
258	Neural Decoders Using Reinforcement Learning in Brain Machine Interfaces: A Technical Review. Frontiers in Systems Neuroscience, 0, 16, .	1.2	0
259	Minimally Invasive Local-Skull Electrophysiological Modification With Piezoelectric Drill. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2022, 30, 2042-2051.	2.7	4
260	Development and Clinical Application of BMI. Japanese Journal of Neurosurgery, 2022, 31, 558-563.	0.0	0
261	Kernel Temporal Differences for EEG-based Reinforcement Learning Brain Machine Interfaces. , 2022, , .		0
262	Methodological Recommendations for Studies on the Daily Life Implementation of Implantable Communication-Brainâ€“Computer Interfaces for Individuals With Locked-in Syndrome. Neurorehabilitation and Neural Repair, 2022, 36, 666-677.	1.4	4
263	Validation of a non-invasive, real-time, human-in-the-loop model of intracortical brain-computer interfaces. Journal of Neural Engineering, 2022, 19, 056038.	1.8	3
264	6G toward Metaverse: Technologies, Applications, and Challenges. , 2022, , .		10
266	Hardware-Efficient Compression of Neural Multi-Unit Activity. IEEE Access, 2022, 10, 117515-117529.	2.6	2
267	Hardware evaluation of spike detection algorithms towards wireless brain machine interfaces. , 2022, , .		6
268	Generalizable spelling using a speech neuroprosthesis in an individual with severe limb and vocal paralysis. Nature Communications, 2022, 13, .	5.8	40
269	Real-time brain-machine interface in non-human primates achieves high-velocity prosthetic finger movements using a shallow feedforward neural network decoder. Nature Communications, 2022, 13, .	5.8	20
270	Decoder calibration framework for intracortical brain-computer interface system via domain adaptation. Biomedical Signal Processing and Control, 2023, 81, 104453.	3.5	1
271	A Brain-Controlled Mahjong Game withÂArtificial Intelligence Augmentation. Lecture Notes in Computer Science, 2022, , 548-553.	1.0	2
273	Delving into Temporal-Spectral Connections in Spike-LFP Decoding by Transformer Networks. Communications in Computer and Information Science, 2023, , 15-29.	0.4	1
274	Towards clinical application of implantable brainâ€“computer interfaces for people with late-stage ALS: medical and ethical considerations. Journal of Neurology, 2023, 270, 1323-1336.	1.8	11
276	Tracking momentary fluctuations in human attention with a cognitive brain-machine interface. Communications Biology, 2022, 5, .	2.0	4
277	Somatosensory ECoG-based brainâ€“machine interface with electrical stimulation on medial forebrain bundle. Biomedical Engineering Letters, 0, , .	2.1	0
279	Interim Safety Profile From the Feasibility Study of the BrainGate Neural Interface System. Neurology, 2023, 100, .	1.5	11

#	Article	IF	Citations
280	Heterogeneous domain adaptation for intracortical signal classification using domain consensus. Biomedical Signal Processing and Control, 2023, 82, 104540.	3.5	1
281	Performance Evaluation of Head-Mounted Display based Brain-Computer Interface for Virtual Robotic Arm Operation. , 2022, , .		0
282	A Scorewriter Application using Electrooculography-based Human-Computer Interface. , 2022, , .		0
283	Decoding spatial locations from primate lateral prefrontal cortex neural activity during virtual navigation. Journal of Neural Engineering, 2023, 20, 016054.	1.8	3
286	Machine learning classifiers for electrode selection in the design of closed-loop neuromodulation devices for episodic memory improvement. Cerebral Cortex, 0, , .	1.6	0
287	Artificial Intelligence in Higher Education. Advances in Computer and Electrical Engineering Book Series, 2023, , 295-315.	0.2	4
288	Brain Co-processors: Using AI to Restore and Augment Brain Function. , 2023, , 1225-1260.		1
290	Revisiting embodiment for brainâ€“computer interfaces. Human-Computer Interaction, 0, , 1-27.	3.1	0
291	Post-explant profiling of subcellular-scale carbon fiber intracortical electrodes and surrounding neurons enables modeling of recorded electrophysiology. Journal of Neural Engineering, 2023, 20, 026019.	1.8	4
292	Neural Plasticity in Sensorimotor Brainâ€“Machine Interfaces. Annual Review of Biomedical Engineering, 2023, 25, 51-76.	5.7	2
293	Neuronal representation of bimanual arm motor imagery in the motor cortex of a tetraplegia human, a pilot study. Frontiers in Neuroscience, 0, 17, .	1.4	4
294	Krishna Shenoy (1968â€“2023). Neuron, 2023, 111, 764-766.	3.8	0
295	A Framework for Brain-Computer Interfaces Closed-Loop Communication Systems. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2023, , 79-91.	0.2	0
296	Explainable Deep Learning for Brain-Computer Interfaces through Layerwise Relevance Propagation. , 2023, , .		1
297	BrainGate: An Intracortical Brain-Computer Interface for the Restoration of Communication and Functional Independence for People with Paralysis. , 2023, , .		0
299	Biosignal-based co-adaptive user-machine interfaces for motor control. Current Opinion in Biomedical Engineering, 2023, 27, 100462.	1.8	3
300	Integrated Memristor Network for Physiological Signal Processing. Advanced Electronic Materials, 2023, 9, .	2.6	6
301	Firing-rate-modulated spike detection and neural decoding co-design. Journal of Neural Engineering, 2023, 20, 036003.	1.8	1

#	Article	IF	Citations
302	Does Repeatedly Typing the Same Phrase Provide a Good Estimate of Expert Text Entry Performance?. , 2023, , .		1
303	Restoring continuous finger function with temporarily paralyzed nonhuman primates using brainâ€“machine interfaces. Journal of Neural Engineering, 2023, 20, 036006.	1.8	0
306	Brain Co-processors: Ethical and Social Implications. Advances in Neuroethics, 2023, , 169-185.	0.1	0
307	Synthesizing Speech by Decoding Intracortical Neural Activity from Dorsal Motor Cortex. , 2023, , .		6
308	A brain-computer typing interface using finger movements. , 2023, , .		1
309	Months-long High-performance Fixed LSTM Decoder for Cursor Control in Human Intracortical Brain-computer Interfaces. , 2023, , .		2
313	SCALO: An Accelerator-Rich Distributed System for Scalable Brain-Computer Interfacing. , 2023, , .		1
326	Parla! A proposal for a Brain-Computer Interface assistive communication software protocol to translate thought to speech for deaf, hard of hearing or individuals with severe paralysis by using brain waves signal datasets obtained from a brain implant. , 2023, , .		0
330	How Does Artificial Intelligence Contribute to iEEG Research?. Studies in Neuroscience, Psychology and Behavioral Economics, 2023, , 761-802.	0.1	2
331	Behaviour Prediction Based on Neural Synchronization. Lecture Notes in Electrical Engineering, 2023, , 101-106.	0.3	0
348	A High-bandwidth Wireless Wearable Armband Based on Surface Electromyography. , 2023, , .		0
352	Multimodal recognition of speech and electrocorticogram. , 2023, , .		0
354	Applications of Brain Computer Interface in Present Healthcare Setting. Artificial Intelligence, 0, , .	2.0	0
355	Highly Generalizable Spelling Using a Silent-Speech BCI in a Person with Severe Anarthria. Springer Briefs in Electrical and Computer Engineering, 2024, , 21-28.	0.3	0
359	The Concept ofÂHippocampal Activity Restoration Using Artificial Intelligence Technologies. Communications in Computer and Information Science, 2024, , 240-252.	0.4	0