# Eberhard E Fetz

List of Publications by Year
in descending order



| 73 | 6,243 | 87888 38 | 88630 70 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 85 | 85 | 85 | 5922 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Harnessing neuroplasticity for clinical applications. Brain, 2011, 134, 1591-1609. | 7.6 | 907 |
| 2 | Direct control of paralysed muscles by cortical neurons. Nature, 2008, 456, 639-642. | 27.8 | 545 |
| 3 | Cortical activity during motor execution, motor imagery, and imagery-based online feedback. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4430-4435. | 7.1 | 474 |
| 4 | Long-term motor cortex plasticity induced by an electronic neural implant. Nature, 2006, 444, 56-60. | 27.8 | 413 |
| 5 | Sensory input to primate spinal cord is presynaptically inhibited during voluntary movement. Nature Neuroscience, 2003, 6, 1309-1316. | 14.8 | 258 |
| 6 | Primate spinal interneurons show pre-movement instructed delay activity. Nature, 1999, 401, 590-594. | 27.8 | 212 |
| 7 | Volitional control of neural activity: implications for brain-computer interfaces. Journal of Physiology, 2007, 579, 571-579. | 2.9 | 212 |
| 8 | Gating of Sensory Input at Spinal and Cortical Levels during Preparation and Execution of Voluntary Movement. Journal of Neuroscience, 2012, 32, 890-902. | 3.6 | 172 |
| 9 | Compact Movable Microwire Array for Long-Term Chronic Unit Recording in Cerebral Cortex of Primates. Journal of Neurophysiology, 2007, 98, 3109-3118. | 1.8 | 159 |
| 10 | Chapter 11 Neural mechanisms underlying corticospinal and rubrospinal control of limb movements. Progress in Brain Research, 1991, 87, 213-252. | 1.4 | 152 |
| 11 | Spike-Timing-Dependent Plasticity in Primate Corticospinal Connections Induced during Free Behavior. Neuron, 2013, 80, 1301-1309. | 8.1 | 132 |
| 12 | Distributed cortical adaptation during learning of a brain-computer interface task. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10818-10823. | 7.1 | 132 |
| 13 | Afferent Encoding of Central Oscillations in the Monkey Arm. Journal of Neurophysiology, 2006, 95, 3904-3910. | 1.8 | 126 |
| 14 | Synaptic Interactions between Primate Precentral Cortex Neurons Revealed by Spike-Triggered Averaging of Intracellular Membrane PotentialsIn Vivo. Journal of Neuroscience, 1996, 16, 7757-7767. | 3.6 | 124 |
| 15 | An autonomous implantable computer for neural recording and stimulation in unrestrained primates. Journal of Neuroscience Methods, 2005, 148, 71-77. | 2.5 | 112 |
| 16 | Activity of Spinal Interneurons and Their Effects on Forearm Muscles During Voluntary Wrist Movements in the Monkey. Journal of Neurophysiology, 1998, 80, 2475-2494. | 1.8 | 104 |
| 17 | Firing patterns of epileptic and normal neurons in the chronic alumina focus in undrugged monkeys during different behavioral states. Brain Research, 1975, 98, 1-20. | 2.2 | 103 |
| 18 | Restoration of upper limb movement via artificial corticospinal and musculospinal connections in a monkey with spinal cord injury. Frontiers in Neural Circuits, 2013, 7, 57. | 2.8 | 99 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Forelimb Movements and Muscle Responses Evoked by Microstimulation of Cervical Spinal Cord in Sedated Monkeys. Journal of Neurophysiology, 2007, 97, 110-120. | 1.8 | 96 |
| 20 | The Neurochip-2: An Autonomous Head-Fixed Computer for Recording and Stimulating in Freely Behaving Monkeys. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2011, 19, 427-435. | 4.9 | 96 |
| 21 | Help, hope, and hype: Ethical dimensions ofneuroprosthetics. Science, 2017, 356, 1338-1339. | 12.6 | 83 |
| 22 | Encoding of motor parameters by corticomotoneuronal (CM) and rubromotoneuronal (RM) cells producing postspike facilitation of forelimb muscles in the behaving monkey. Behavioural Brain Research, 1988, 28, 181-191. | 2.2 | 82 |
| 23 | Phase-Locked Stimulation during Cortical Beta Oscillations Produces Bidirectional Synaptic Plasticity in Awake Monkeys. Current Biology, 2018, 28, 2515-2526.e4. | 3.9 | 75 |
| 24 | Correlations Between the Same Motor Cortex Cells and Arm Muscles During a Trained Task, Free Behavior, and Natural Sleep in the Macaque Monkey. Journal of Neurophysiology, 2007, 97, 360-374. | 1.8 | 71 |
| 25 | Operant conditioning of isolated activity in specific muscles and precentral cells. Brain Research, 1972, 40, 19-23. | 2.2 | 70 |
| 26 | Effects of synchrony between primate corticomotoneuronal cells on post-spike facilitation of muscles and motor units. Neuroscience Letters, 1989, 96, 76-81. | 2.1 | 69 |
| 27 | Effects of Input Synchrony on the Firing Rate of a Three-Conductance Cortical Neuron Model. Neural Computation, 1994, 6, 1111-1126. | 2.2 | 66 |
| 28 | Closed-loop neuroscience and neuroengineering. Frontiers in Neural Circuits, 2014, 8, 115. | 2.8 | 66 |
| 29 | Dynamic Modulation of Local Population Activity by Rhythm Phase in Human Occipital Cortex During a Visual Search Task. Frontiers in Human Neuroscience, 2010, 4, 197. | 2.0 | 65 |
| 30 | Characteristic Membrane Potential Trajectories in Primate Sensorimotor Cortex Neurons Recorded In Vivo. Journal of Neurophysiology, 2005, 94, 2713-2725. | 1.8 | 62 |
| 31 | Volitional control of single cortical neurons in a brainâ€“machine interface. Journal of Neural Engineering, 2011, 8, 025017. | 3.5 | 62 |
| 32 | Response Patterns and Force Relations of Monkey Spinal Interneurons During Active Wrist Movement. Journal of Neurophysiology, 1998, 80, 2495-2513. | 1.8 | 60 |
| 33 | Intracortical connectivity revealed by spike-triggered averaging in slice preparations of cat visual cortex. Brain Research, 1988, 442, 359-362. | 2.2 | 58 |
| 34 | Real-time control of a robotic arm by neuronal ensembles. Nature Neuroscience, 1999, 2, 583-584. | 14.8 | 58 |
| 35 | Sequential activation of premotor, primary somatosensory and primary motor areas in humans during cued finger movements. Clinical Neurophysiology, 2015, 126, 2150-2161. | 1.5 | 54 |
| 36 | Relationships between spike-free local field potentials and spike timing in human temporal cortex. Journal of Neurophysiology, 2012, 107, 1808-1821. | 1.8 | 48 |

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|---|---|---|---|
| 37 | Synaptic interactions mediating synchrony and oscillations in primate sensorimotor cortex. Journal of Physiology (Paris), 2000, 94, 323-331. | 2.1 | 46 |
| 38 | Myo-Cortical Crossed Feedback Reorganizes Primate Motor Cortex Output. Journal of Neuroscience, 2013, 33, 5261-5274. | 3.6 | 46 |
| 39 | Paired Stimulation for Spike-Timing-Dependent Plasticity in Primate Sensorimotor Cortex. Journal of Neuroscience, 2017, 37, 1935-1949. | 3.6 | 39 |
| 40 | Responses of primate locus coeruleus and subcoeruleus neurons to stimulation at reinforcing brain sites and to natural reinforcers. Brain Research, 1976, 109, 497-514. | 2.2 | 38 |
| 41 | Functions of mammalian spinal interneurons during movement. Current Opinion in Neurobiology, 2000, 10, 699-707. | 4.2 | 36 |
| 42 | Volitional Control of Cortical Oscillations and Synchrony. Neuron, 2013, 77, 216-218. | 8.1 | 35 |
| 43 | Restoring motor function with bidirectional neural interfaces. Progress in Brain Research, 2015, 218, 241-252. | 1.4 | 32 |
| 44 | Cortical mechanisms controlling limb movement. Current Opinion in Neurobiology, 1993, 3, 932-939. | 4.2 | 24 |
| 45 | Task-Dependent Modulation of Primary Afferent Depolarization in Cervical Spinal Cord of Monkeys Performing an Instructed Delay Task. Journal of Neurophysiology, 2009, 102, 85-99. | 1.8 | 23 |
| 46 | Learned control of inter-hemispheric connectivity: Effects on bimanual motor performance. Human Brain Mapping, 2017, 38, 4353-4369. | 3.6 | 20 |
| 47 | Chapter 17 Distributed processing in the motor system: spinal cord perspective. Progress in Brain Research, 2001, 130, 267-278. | 1.4 | 17 |
| 48 | Simultaneous epidural functional near-infrared spectroscopy and cortical electrophysiology as a tool for studying local neurovascular coupling in primates. NeuroImage, 2015, 120, 394-399. | 4.2 | 17 |
| 49 | Exploiting Electrocorticographic Spectral Characteristics for Optimized Signal Chain Design: A 1.08 W Analog Front End With Reduced ADC Resolution Requirements<formula formulatype="inline"> <tex Notation="TeX"/> </formula>. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 1171-1180. | 4.0 | 17 |
| 50 | Operant conditioning of neural activity in freely behaving monkeys with intracranial reinforcement. Journal of Neurophysiology, 2017, 117, 1112-1125. | 1.8 | 15 |
| 51 | Unit responses recorded from cervical spinal cord of awake monkey. Brain Research, 1973, 53, 445-450. | 2.2 | 14 |
| 52 | Volitional muscle activity paired with transcranial magnetic stimulation increases corticospinal excitability. Frontiers in Neuroscience, 2014, 8, 442. | 2.8 | 14 |
| 53 | Simultaneous and independent control of a brain-computer interface and contralateral limb movement. Brain-Computer Interfaces, 2015, 2, 174-185. | 1.8 | 14 |
| 54 | Open-Source, Low Cost, Free-Behavior Monitoring, and Reward System for Neuroscience Research in Non-human Primates. Frontiers in Neuroscience, 2017, 11, 265. | 2.8 | 11 |

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|---|---|---|---|
| 55 | Neurochip3: An Autonomous Multichannel Bidirectional Brain-Computer Interface for Closed-Loop Activity-Dependent Stimulation. Frontiers in Neuroscience, 2021, 15, 718465. | 2.8 | 10 |
| 56 | An Integrate-and-Fire Spiking Neural Network Model Simulating Artificially Induced Cortical Plasticity. ENeuro, 2021, 8, ENEURO.0333-20.2021. | 1.9 | 9 |
| 57 | Cycle-Triggered Cortical Stimulation during Slow Wave Sleep Facilitates Learning a BMI Task: A Case Report in a Non-Human Primate. Frontiers in Behavioral Neuroscience, 2017, 11, 59. | 2.0 | 8 |
| 58 | Functional Properties of Primate Spinal Interneurones During Voluntary Hand Movements. Advances in Experimental Medicine and Biology, 2002, 508, 265-271. | 1.6 | 8 |
| 59 | Correlation-based model of artificially induced plasticity in motor cortex by a bidirectional brain-computer interface. PLoS Computational Biology, 2017, 13, e1005343. | 3.2 | 8 |
| 60 | A spectrum-equalizing analog front end for low-power electrocorticography recording. , 2014, , . | | 7 |
| 61 | Reconfiguring Motor Circuits for a Joint Manual and BCI Task. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 248-257. | 4.9 | 7 |
| 62 | Cortical Responses to Vagus Nerve Stimulation Are Modulated by Brain State in Nonhuman Primates. Cerebral Cortex, 2021, 31, 5289-5307. | 2.9 | 7 |
| 63 | Integration and Differentiation in Dynamic Recurrent Neural Networks. Neural Computation, 1994, 6, 405-419. | 2.2 | 6 |
| 64 | Inferring Cortical Connectivity From ECoG Signals Using Graph Signal Processing. IEEE Access, 2019, 7, 109349-109362. | 4.2 | 6 |
| 65 | Cortico-Cortical Interactions during Acquisition and Use of a Neuroprosthetic Skill. PLoS Computational Biology, 2016, 12, e1004931. | 3.2 | 6 |
| 66 | An electronic activity integrator for operant conditioning of patterns of neural and muscular activity. Electroencephalography and Clinical Neurophysiology, 1975, 38, 87-89. | 0.3 | 5 |
| 67 | Brain State-Dependence of Electrically Evoked Potentials Monitored With Head-Mounted Electronics. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2012, 20, 756-761. | 4.9 | 5 |
| 68 | Artistic explorations of the brain. Frontiers in Human Neuroscience, 2012, 6, 9. | 2.0 | 5 |
| 69 | Movement-dependent electrical stimulation for volitional strengthening of cortical connections in behaving monkeys. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, . | 7.1 | 4 |
| 70 | Motor Cortex Plasticity Driven by Artificial Feedback from an Autonomous, Closed-Loop Neural Implant. Neurosurgery, 2009, 65, 420-421. | 1.1 | 3 |
| 71 | An interspecies comparative study of invasive electrophysiological functional connectivity. Brain and Behavior, 2017, 7, e00863. | 2.2 | 3 |
| 72 | The Motor Cortex. Hiroshi Asanuma. Quarterly Review of Biology, 1990, 65, 527-528. | 0.1 | 0 |

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|---|---|---|---|
| 73 | Cortical Stimulation Paired With Volitional Unimanual Movement Affects Interhemispheric Communication. Frontiers in Neuroscience, 2021, 15, 782188. | 2.8 | 0 |