Christoph Guger

List of Publications by Year
in descending order

142 papers	5,122 citations	159585 30 h-index	102487 66 g-index
156 all docs	156 docs citations	156 times ranked	4620 citing authors

#	ARTICLE	IF	CITATIONS
1	Brainâ€"Computer Interfaces in Acute and Subacute Disorders of Consciousness. Journal of Clinical Neurophysiology, 2022, 39, 32-39.	1.7	9
2	Workshops of the eighth international brainâ€"computer interface meeting: BCIs: the next frontier. Brain-Computer Interfaces, 2022, 9, 69-101.	1.8	4
3	Editorial: Cognitive and Motor Control Based on Brain-Computer Interfaces for Improving the Health and Well-Being in Older Age. Frontiers in Human Neuroscience, 2022, 16, 881922.	2.0	1
4	Full-bandwidth electrophysiology of seizures and epileptiform activity enabled by flexible graphene microtransistor depth neural probes. Nature Nanotechnology, 2022, 17, 301-309.	31.5	49
5	Optimizing Motor Imagery Parameters for Robotic Arm Control by Brain-Computer Interface. Brain Sciences, 2022, 12, 833.	2.3	3
6	Brain-Computer Interface Research: A State-of-the-Art Summary 9. Springer Briefs in Electrical and Computer Engineering, 2021, , 1-12.	0.5	0
7	Brain-Computer Interface Research: A State-of-the-Art Summary 10. Springer Briefs in Electrical and Computer Engineering, 2021, , 1-11.	0.5	0
8	Cognitive and Affective Brainâ€"Computer Interfaces for Improving Learning Strategies and Enhancing Student Capabilities: A Systematic Literature Review. IEEE Access, 2021, 9, 134122-134147.	4.2	19
9	Online Classification of Cognitive Control Processes Using EEG and fNIRS: A Stroop Experiment. Lecture Notes in Computer Science, 2021, , 582-591.	1.3	0
10	Recent Advances in Brain-Computer Interface Research: A Summary of the 2019 BCI Award and Online BCI Research Activities. Springer Briefs in Electrical and Computer Engineering, 2021, , 143-150.	0.5	0
11	Towards Improved Vibro-Tactile P300 BCIs. Lecture Notes in Computer Science, 2021, , 65-74.	1.3	1
12	Multi-modal Mapping of the Face Selective Ventral Temporal Cortexâ€"A Group Study With Clinical Implications for ECS, ECoG, and fMRI. Frontiers in Human Neuroscience, 2021, 15, 616591.	2.0	8
13	Characterization of optogenetically-induced cortical spreading depression in awake mice using graphene micro-transistor arrays. Journal of Neural Engineering, 2021, 18, 055002.	3.5	13
14	Evaluating a Novel P300-Based Real-Time Image Ranking BCI. Frontiers in Computer Science, 2021, 3, .	2.8	3
15	What External Variables Affect Sensorimotor Rhythm Brain-Computer Interface (SMR-BCI) Performance?. HCA Healthcare Journal of Medicine, 2021, 2, .	0.2	6
16	EEG feature fusion for motor imagery: A new robust framework towards stroke patients rehabilitation. Computers in Biology and Medicine, 2021, 137, 104799.	7.0	32
17	Brain Computer Interface treatment for gait rehabilitation of stroke patients â€" Preliminary results. , 2021, , .		1
18	Effects of Gamification in BCI Functional Rehabilitation. Frontiers in Neuroscience, 2020, 14, 882.	2.8	23

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19	Auditory and Somatosensory P3 Are Complementary for the Assessment of Patients with Disorders of Consciousness. Brain Sciences, 2020, 10, 748.	2.3	13
20	Brain Computer Interface Treatment for Motor Rehabilitation of Upper Extremity of Stroke Patientsâ€"A Feasibility Study. Frontiers in Neuroscience, 2020, 14, 591435.	2.8	63
21	Tailor-Made Surgery Based on Functional Networks for Intractable Epilepsy. Frontiers in Neurology, 2020, 11, 73.	2.4	9
22	A Systematic Review Establishing the Current State-of-the-Art, the Limitations, and the DESIRED Checklist in Studies of Direct Neural Interfacing With Robotic Gait Devices in Stroke Rehabilitation. Frontiers in Neuroscience, 2020, 14, 578.	2.8	24
23	EEG Biomarkers Related With the Functional State of Stroke Patients. Frontiers in Neuroscience, 2020, 14, 582.	2.8	48
24	Effects of a Vibro-Tactile P300 Based Brain-Computer Interface on the Coma Recovery Scale-Revised in Patients With Disorders of Consciousness. Frontiers in Neuroscience, 2020, 14, 294.	2.8	15
25	Highlights and Interviews with Winners. Springer Briefs in Electrical and Computer Engineering, 2020, , 107-121.	0.5	4
26	Online Classification of Motor Imagery Using EEG and fNIRS: A Hybrid Approach with Real Time Human-Computer Interaction. Communications in Computer and Information Science, 2020, , 231-238.	0.5	6
27	Editorial: Breakthrough BCI Applications in Medicine. Frontiers in Neuroscience, 2020, 14, 598247.	2.8	6
28	Communication for patients with disorders of consciousness with a vibro-tactile P300 brain-computer interface. , 2020, , .		0
29	Preliminary Results of a Brain-Computer Interface System based on Functional Electrical Stimulation and Avatar Feedback for Lower Extremity Rehabilitation of Chronic Stroke Patients. , 2020, , .		1
30	Effects of Repeating a Tactile Brain-Computer Interface on Patients with Disorder of Consciousness: A Hint of Recovery?*. , 2019, , .		5
31	Brain-Computer Interface Research: A State-of-the-Art Summary 7. Springer Briefs in Electrical and Computer Engineering, 2019, , 1-9.	0.5	7
32	Recent Advances in Brain-Computer Interface Researchâ€"A Summary of the 2017 BCI Award and BCI Research Trends. Springer Briefs in Electrical and Computer Engineering, 2019, , 115-127.	0.5	0
33	EEG-Trockenelektroden und ihre Anwendungen bei BCI-Systemen. Neurophysiologie-Labor, 2019, 41, 148-155.	0.0	1
34	EEG Parameter During Motor Imagery for Assessing the Functional State of Stroke Patients. Archives of Physical Medicine and Rehabilitation, 2019, 100, e66-e67.	0.9	0
35	Time-Variant Linear Discriminant Analysis Improves Hand Gesture and Finger Movement Decoding for Invasive Brain-Computer Interfaces. Frontiers in Neuroscience, 2019, 13, 901.	2.8	21
36	Laterality Coefficient: An EEG parameter related with the functional improvement in stroke patients. , 2019, , .		3

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37	The BR4IN.IO Hackathons. , 2019, , 447-473.		6
38	Multispectrum Indocyanine Green Videography for Visualizing Brain Vascular Pathology. World Neurosurgery, 2019, 132, e545-e553.	1.3	3
39	Performance Investigation of Brain-Computer Interfaces that Combine EEG and fNIRS for Motor Imagery Tasks. , 2019, , .		7
40	Workshops of the seventh international brain-computer interface meeting: not getting lost in translation. Brain-Computer Interfaces, 2019, 6, 71-101.	1.8	8
41	A quantitative method for evaluating cortical responses to electrical stimulation. Journal of Neuroscience Methods, 2019, 311, 67-75.	2.5	41
42	Feasibility of Brain-Computer Interface Triggered Functional Electrical Stimulation and Avatar for Motor Improvement in Chronic Stroke Patients. Biosystems and Biorobotics, 2019, , 1097-1100.	0.3	0
43	Disconnection of the pathological connectome for multifocal epilepsy surgery. Journal of Neurosurgery, 2018, 129, 1182-1194.	1.6	11
44	Preserved somatosensory discrimination predicts consciousness recovery in unresponsive wakefulness syndrome. Clinical Neurophysiology, 2018, 129, 1130-1136.	1.5	27
45	A Human–Humanoid Interaction Through the Use of BCI for Locked-In ALS Patients Using Neuro-Biological Feedback Fusion. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 487-497.	4.9	25
46	Improving Auditory Paradigms for Consciousness Detection by Brain-Computer Interfaces Technique. , 2018, , .		0
47	Online Detection of Real-World Faces in ECoG Signals. , 2018, , .		0
48	Motor Rehabilitation for Hemiparetic Stroke Patients Using a Brain-Computer Interface Method. , 2018, , .		10
49	High Classification Accuracy of a Motor Imagery Based Brain-Computer Interface for Stroke Rehabilitation Training. Frontiers in Robotics and AI, 2018, 5, 130.	3.2	43
50	Passive functional mapping of receptive language areas using electrocorticographic signals. Clinical Neurophysiology, 2018, 129, 2517-2524.	1.5	21
51	A Brain-Computer Interface For Motor Rehabilitation Of Chronic Stroke Patients. Archives of Physical Medicine and Rehabilitation, 2018, 99, e36.	0.9	0
52	Assessment and Communication with Vibro-Tactile P300 And Motor Imagery Bcis in DOC and (C)LIS Patients. Archives of Physical Medicine and Rehabilitation, 2018, 99, e36.	0.9	0
53	How Can Completely Locked-in Persons Communicate With a Brain–Computer Interface?. Frontiers for Young Minds, 2018, 6, .	0.8	1
54	Brain-computer interfaces for stroke rehabilitation: summary of the 2016 BCI Meeting in Asilomar. Brain-Computer Interfaces, 2018, 5, 41-57.	1.8	6

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55	A New Method to Generate Artificial Frames Using the Empirical Mode Decomposition for an EEG-Based Motor Imagery BCI. Frontiers in Neuroscience, 2018, 12, 308.	2.8	51
56	BCI Performance and Brain Metabolism Profile in Severely Brain-Injured Patients Without Response to Command at Bedside. Frontiers in Neuroscience, 2018, 12, 370.	2.8	20
57	Assessing Command-Following and Communication With Vibro-Tactile P300 Brain-Computer Interface Tools in Patients With Unresponsive Wakefulness Syndrome. Frontiers in Neuroscience, 2018, 12, 423.	2.8	35
58	Performance Differences Using a Vibro-Tactile P300 BCI in LIS-Patients Diagnosed With Stroke and ALS. Frontiers in Neuroscience, 2018, 12, 514.	2.8	12
59	Electrocorticogram based brain–computer interfaces. , 2018, , 197-227.		3
60	Brain–Computer Interfaces for Motor Rehabilitation, Assessment of Consciousness, and Communication. , 2018, , 89-100.		0
61	Workshops of the Sixth International Brain–Computer Interface Meeting: brain–computer interfaces past, present, and future. Brain-Computer Interfaces, 2017, 4, 3-36.	1.8	24
62	Facephenes and rainbows: Causal evidence for functional and anatomical specificity of face and color processing in the human brain. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12285-12290.	7.1	95
63	A Brain-Computer Interface for Motor Rehabilitation With Functional Electrical Stimulation and Virtual Reality. Archives of Physical Medicine and Rehabilitation, 2017, 98, e24.	0.9	9
64	Unresponsive Wakefulness Syndrome Patient Communicating With Brain-Computer Interface. Archives of Physical Medicine and Rehabilitation, 2017, 98, e126-e127.	0.9	0
65	O202 Combining the strengths of passive functional mapping and electrical cortical stimulation. Clinical Neurophysiology, 2017, 128, e243.	1.5	2
66	Trends in BCI Research I: Brain-Computer Interfaces for Assessment of Patients with Locked-in Syndrome or Disorders of Consciousness. Springer Briefs in Electrical and Computer Engineering, 2017, , 105-125.	0.5	6
67	O174 Preliminary results of testing the recoveriX system on stroke patients. Clinical Neurophysiology, 2017, 128, e234-e235.	1.5	0
68	Assessment and Communication for People with Disorders of Consciousness. Journal of Visualized Experiments, 2017, , .	0.3	11
69	Invariance and variability in interaction error-related potentials and their consequences for classification. Journal of Neural Engineering, 2017, 14, 066015.	3.5	13
70	Brain–Computer Interfaces With Multi–Sensory Feedback for Stroke Rehabilitation: A Case Study. Artificial Organs, 2017, 41, E178-E184.	1.9	37
71	Validation of a Brain-Computer Interface (BCI) System Designed for Patients with Disorders of Consciousness (DOC): Regular and Sham Testing with Healthy Participants. Lecture Notes in Computer Science, 2017, , 253-265.	1.3	6
72	How Many EEG Channels Are Optimal for a Motor Imagery Based BCI for Stroke Rehabilitation?. Biosystems and Biorobotics, 2017, , 1109-1113.	0.3	3

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73	Clinical Impact and Implication of Real-Time Oscillation Analysis for Language Mapping. World Neurosurgery, 2017, 97, 123-131.	1.3	16
74	MindBEAGLE â€" A new system for the assessment and communication with patients with disorders of consciousness and complete locked-in syndrom. , 2017, , .		8
75	Reaching and Grasping a Glass of Water by Locked-In ALS Patients through a BCI-Controlled Humanoid Robot. Frontiers in Human Neuroscience, 2017, 11, 68.	2.0	50
76	Complete Locked-in and Locked-in Patients: Command Following Assessment and Communication with Vibro-Tactile P300 and Motor Imagery Brain-Computer Interface Tools. Frontiers in Neuroscience, 2017, 11, 251.	2.8	90
77	A Multifunctional Brain-Computer Interface Intended for Home Use: An Evaluation with Healthy Participants and Potential End Users with Dry and Gel-Based Electrodes. Frontiers in Neuroscience, 2017, 11, 286.	2.8	38
78	Recent Advances in Brain-Computer Interface Researchâ€"A Summary of the BCI Award 2016 and BCI Research Trends. Springer Briefs in Electrical and Computer Engineering, 2017, , 127-134.	0.5	2
79	Hemiparetic Stroke Rehabilitation Using Avatar and Electrical Stimulation Based on Non-invasive Brain Computer Interface. International Journal of Physical Medicine & Rehabilitation, 2017, 05, .	0.5	9
80	Cognitive Processing in Non-Communicative Patients: What Can Event-Related Potentials Tell Us?. Frontiers in Human Neuroscience, 2016, 10, 569.	2.0	16
81	A comparison of face speller approaches for P300 BCIs. , 2016, , .		12
82	Passive language mapping combining real-time oscillation analysis with cortico-cortical evoked potentials for awake craniotomy. Journal of Neurosurgery, 2016, 125, 1580-1588.	1.6	50
83	BCIs for DOC Patients: Assessment, Communication, and New Directions. Lecture Notes in Computer Science, 2016, , 62-71.	1.3	1
84	CortiQ-based Real-Time Functional Mapping for Epilepsy Surgery. Journal of Clinical Neurophysiology, 2015, 32, e12-e22.	1.7	29
85	BNCI Horizon 2020: towards a roadmap for the BCI community. Brain-Computer Interfaces, 2015, 2, 1-10.	1.8	169
86	How Many People Can Use a BCI System?. , 2015, , 33-66.		35
87	How many people can control a motor imagery based BCI using common spatial patterns?. , 2015, , .		13
88	Interaction of BCI with the underlying neurological conditions in patients: pros and cons. Frontiers in Neuroengineering, 2014, 7, 42.	4.8	11
89	An electrocorticographic BCI using code-based VEP for control in video applications: a single-subject study. Frontiers in Systems Neuroscience, 2014, 8, 139.	2.5	25
90	A tactile Brain-Computer Interface for severely disabled patients. , 2014, , .		15

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91	Workshops of the Fifth International Brain-Computer Interface Meeting: Defining the Future. Brain-Computer Interfaces, 2014, 1, 27-49.	1.8	35
92	Rapid and Minimum Invasive Functional Brain Mapping by Real-Time Visualization of High Gamma Activity During Awake Craniotomy. World Neurosurgery, 2014, 82, 912.e1-912.e10.	1.3	28
93	Comparison of SSVEP BCI and Eye Tracking for Controlling a Humanoid Robot in a Social Environment. Presence: Teleoperators and Virtual Environments, 2014, 23, 242-252.	0.6	47
94	A Vibrotactile P300-Based Brainâ€"Computer Interface for Consciousness Detection and Communication. Clinical EEG and Neuroscience, 2014, 45, 14-21.	1.7	73
95	Novel Techniques of Real-time Blood Flow and Functional Mapping: Technical Note. Neurologia Medico-Chirurgica, 2014, 54, 775-785.	2.2	12
96	Special Section: Robots, Virtual Reality, and Brainâ€"Computer Interfaces in Telepresence Guest Editorsâ€™ Introduction. Presence: Teleoperators and Virtual Environments, 2014, 23, iv-vi.	0.6	0
97	Multi-modal Computer Interaction for Communication and Control Using EEG, EMG, EOG and Motion Sensors. Lecture Notes in Computer Science, 2013, , 633-641.	1.3	2
98	Augmented control of an avatar using an SSVEP based BCI. , 2012, , .		14
99	A hybrid Brain-Computer Interface for improving the usability of a smart home control. , 2012, , .		9
100	A dry electrode concept for SMR, P300 and SSVEP based BCIs. , 2012, , .		5
101	Poor performance in SSVEP BCIs: Are worse subjects just slower?. , 2012, 2012, 3833-6.		8
102	BCI Hardware and Software. , 2012, , 165-188.		8
103	Decrease of Asymmetric Dimethylarginine Predicts Acute Mountain Sickness. Journal of Travel Medicine, 2012, 19, 338-343.	3.0	12
104	Usability of video-overlaying SSVEP based BCIs. , 2012, , .		4
105	Can Dry EEG Sensors Improve the Usability of SMR, P300 and SSVEP Based BCIs?. Biological and Medical Physics Series, 2012, , 281-300.	0.4	3
106	Comparing the Accuracy of a P300 Speller for People with Major Physical Disability. Lecture Notes in Computer Science, 2012, , 180-183.	1.3	0
107	Combining BCI with Virtual Reality: Towards New Applications and Improved BCI. Biological and Medical Physics Series, 2012, , 197-220.	0.4	69
108	P300 brain computer interface: current challenges and emerging trends. Frontiers in Neuroengineering, 2012, 5, 14.	4.8	278

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109	Comparison of Dry and Gel Based Electrodes for P300 Brain–Computer Interfaces. Frontiers in Neuroscience, 2012, 6, 60.	2.8	150
110	How Many People Could Use an SSVEP BCI?. Frontiers in Neuroscience, 2012, 6, 169.	2.8	154
111	Beaming into the Rat World: Enabling Real-Time Interaction between Rat and Human Each at Their Own Scale. PLoS ONE, 2012, 7, e48331.	2.5	13
112	Brain Computer Interface. , 2011, , 1003-1017.		2
113	Smart homes to improve the quality of life for all. , 2011, 2011, 1777-80.		12
114	Social Environments, Mixed Communication and Goal-Oriented Control Application Using a Brain-Computer Interface. Lecture Notes in Computer Science, 2011, , 545-554.	1.3	6
115	Hardware/Software Components and Applications of BCIs. , 2011, , .		8
116	Real-Time Position Reconstruction with Hippocampal Place Cells. Frontiers in Neuroscience, 2011, 5, 85.	2.8	35
117	Using brain-computer interface to steer a humanoid robot. , 2011, , .		35
118	Accuracy of a P300 Speller for People with Motor Impairments: A Comparison. Clinical EEG and Neuroscience, 2011, 42, 214-218.	1.7	42
119	Asynchronous P300-Based Brain-Computer Interface to Control a Virtual Environment: Initial Tests on End Users. Clinical EEG and Neuroscience, 2011, 42, 219-224.	1.7	90
120	A Hybrid Brain-Computer Interface for Smart Home Control. Lecture Notes in Computer Science, 2011, , 417-426.	1.3	41
121	Goal orientated Brain-Computer interfaces for Control: a virtual smart home application study. BMC Neuroscience, 2010, 11, .	1.9	6
122	Effects of P300-Based BCI Use on Reported Presence in a Virtual Environment. Presence: Teleoperators and Virtual Environments, 2010, 19, 1-11.	0.6	23
123	Toward BCI Wizard - best BCI approach for each user. , 2010, 2010, 4201-4.		21
124	Brain-computer interfaces for goal orientated control of a virtual smart home environment. , 2009, , .		30
125	How many people are able to control a P300-based brain–computer interface (BCI)?. Neuroscience Letters, 2009, 462, 94-98.	2.1	1,226
126	Virtual Smart Home Controlled by Thoughts. , 2009, , .		43

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127	Goal-Oriented Control with Brain-Computer Interface. Lecture Notes in Computer Science, 2009, , 732-740.	1.3	20
128	EEG, ECG and oxygen concentration changes from sea level to a simulated altitude of 4000m and back to sea level. Neuroscience Letters, 2008, 442, 123-127.	2.1	16
129	Navigating Virtual Reality by Thought: What Is It Like?. Presence: Teleoperators and Virtual Environments, 2007, 16, 100-110.	0.6	59
130	Understanding and Realizing Presence in the Presenccia Project. IEEE Computer Graphics and Applications, 2007, 27, 90-93.	1.2	27
131	Walking from thought. Brain Research, 2006, 1071, 145-152.	2.2	208
132	Sharing and Analyzing Data from Presence Experiments. Presence: Teleoperators and Virtual Environments, 2006, 15, 599-610.	0.6	18
133	Analysis of Physiological Responses to a Social Situation in an Immersive Virtual Environment. Presence: Teleoperators and Virtual Environments, 2006, 15, 553-569.	0.6	96
134	Walking by Thinking: The Brainwaves Are Crucial, Not the Muscles!. Presence: Teleoperators and Virtual Environments, 2006, 15, 500-514.	0.6	78
135	A Virtual Reprise of the Stanley Milgram Obedience Experiments. PLoS ONE, 2006, 1, e39.	2.5	448
136	Effects of cable car ascent to 2700 meters on mean EEG frequency and event-related desynchronization. Wiener Medizinische Wochenschrift, 2005, 155, 143-148.	1.1	7
137	Effects of a fast cable car ascent to an altitude of 2700 meters on EEG and ECG. Neuroscience Letters, 2005, 377, 53-58.	2.1	13
138	How Can We Train The Brain To Help Stroke Patients?. Frontiers for Young Minds, 0, 9, .	0.8	0
139	Brain-Computer Interfaces for Assessment and Communication in Disorders of Consciousness. Advances in Bioinformatics and Biomedical Engineering Book Series, 0, , 181-214.	0.4	5
140	Command following assessment and communication with vibro-tactile P300 and motor imagery BCIs in patients with disorders of consciousness and locked-in syndrome.. Frontiers in Human Neuroscience, 0, 12, .	2.0	0
141	How Can We Trick the Brain Into Seeing Rainbows and Faces?. Frontiers for Young Minds, 0, 7, .	0.8	0
142	Posibilidades del uso de tramas artificiales de imagen motora para un BCI basado en EEG. , 0, , .		0