

Christoph Guger

List of Publications by Year in descending order

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Version: 2024-02-01

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	How many people are able to control a P300-based brain-computer interface (BCI)?. <i>Neuroscience Letters</i> , 2009, 462, 94-98.	2.1	1,226
2	A Virtual Reprise of the Stanley Milgram Obedience Experiments. <i>PLoS ONE</i> , 2006, 1, e39.	2.5	448
3	P300 brain computer interface: current challenges and emerging trends. <i>Frontiers in Neuroengineering</i> , 2012, 5, 14.	4.8	278
4	Walking from thought. <i>Brain Research</i> , 2006, 1071, 145-152.	2.2	208
5	BNCI Horizon 2020: towards a roadmap for the BCI community. <i>Brain-Computer Interfaces</i> , 2015, 2, 1-10.	1.8	169
6	How Many People Could Use an SSVEP BCI?. <i>Frontiers in Neuroscience</i> , 2012, 6, 169.	2.8	154
7	Comparison of Dry and Gel Based Electrodes for P300 Brain-computer Interfaces. <i>Frontiers in Neuroscience</i> , 2012, 6, 60.	2.8	150
8	Analysis of Physiological Responses to a Social Situation in an Immersive Virtual Environment. <i>Presence: Teleoperators and Virtual Environments</i> , 2006, 15, 553-569.	0.6	96
9	Facephenes and rainbows: Causal evidence for functional and anatomical specificity of face and color processing in the human brain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 12285-12290.	7.1	95
10	Asynchronous P300-Based Brain-Computer Interface to Control a Virtual Environment: Initial Tests on End Users. <i>Clinical EEG and Neuroscience</i> , 2011, 42, 219-224.	1.7	90
11	Complete Locked-in and Locked-in Patients: Command Following Assessment and Communication with Vibro-Tactile P300 and Motor Imagery Brain-Computer Interface Tools. <i>Frontiers in Neuroscience</i> , 2017, 11, 251.	2.8	90
12	Walking by Thinking: The Brainwaves Are Crucial, Not the Muscles!. <i>Presence: Teleoperators and Virtual Environments</i> , 2006, 15, 500-514.	0.6	78
13	A Vibrotactile P300-Based Brain-computer Interface for Consciousness Detection and Communication. <i>Clinical EEG and Neuroscience</i> , 2014, 45, 14-21.	1.7	73
14	Combining BCI with Virtual Reality: Towards New Applications and Improved BCI. <i>Biological and Medical Physics Series</i> , 2012, , 197-220.	0.4	69
15	Brain Computer Interface Treatment for Motor Rehabilitation of Upper Extremity of Stroke Patients – A Feasibility Study. <i>Frontiers in Neuroscience</i> , 2020, 14, 591435.	2.8	63
16	Navigating Virtual Reality by Thought: What Is It Like?. <i>Presence: Teleoperators and Virtual Environments</i> , 2007, 16, 100-110.	0.6	59
17	A New Method to Generate Artificial Frames Using the Empirical Mode Decomposition for an EEG-Based Motor Imagery BCI. <i>Frontiers in Neuroscience</i> , 2018, 12, 308.	2.8	51
18	Passive language mapping combining real-time oscillation analysis with cortico-cortical evoked potentials for awake craniotomy. <i>Journal of Neurosurgery</i> , 2016, 125, 1580-1588.	1.6	50

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19	Reaching and Grasping a Glass of Water by Locked-In ALS Patients through a BCI-Controlled Humanoid Robot. <i>Frontiers in Human Neuroscience</i> , 2017, 11, 68.	2.0	50
20	Full-bandwidth electrophysiology of seizures and epileptiform activity enabled by flexible graphene microtransistor depth neural probes. <i>Nature Nanotechnology</i> , 2022, 17, 301-309.	31.5	49
21	EEG Biomarkers Related With the Functional State of Stroke Patients. <i>Frontiers in Neuroscience</i> , 2020, 14, 582.	2.8	48
22	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
23	Virtual Smart Home Controlled by Thoughts. , 2009, , .		43
24	High Classification Accuracy of a Motor Imagery Based Brain-Computer Interface for Stroke Rehabilitation Training. <i>Frontiers in Robotics and AI</i> , 2018, 5, 130.	3.2	43
25	Accuracy of a P300 Speller for People with Motor Impairments: A Comparison. <i>Clinical EEG and Neuroscience</i> , 2011, 42, 214-218.	1.7	42
26	A quantitative method for evaluating cortical responses to electrical stimulation. <i>Journal of Neuroscience Methods</i> , 2019, 311, 67-75.	2.5	41
27	A Hybrid Brain-Computer Interface for Smart Home Control. <i>Lecture Notes in Computer Science</i> , 2011, , 417-426.	1.3	41
28	A Multifunctional Brain-Computer Interface Intended for Home Use: An Evaluation with Healthy Participants and Potential End Users with Dry and Gel-Based Electrodes. <i>Frontiers in Neuroscience</i> , 2017, 11, 286.	2.8	38
29	Brain-Computer Interfaces With Multi-Sensory Feedback for Stroke Rehabilitation: A Case Study. <i>Artificial Organs</i> , 2017, 41, E178-E184.	1.9	37
30	Real-Time Position Reconstruction with Hippocampal Place Cells. <i>Frontiers in Neuroscience</i> , 2011, 5, 85.	2.8	35
31	Using brain-computer interface to steer a humanoid robot. , 2011, , .		35
32	Workshops of the Fifth International Brain-Computer Interface Meeting: Defining the Future. <i>Brain-Computer Interfaces</i> , 2014, 1, 27-49.	1.8	35
33	How Many People Can Use a BCI System?. , 2015, , 33-66.		35
34	Assessing Command-Following and Communication With Vibro-Tactile P300 Brain-Computer Interface Tools in Patients With Unresponsive Wakefulness Syndrome. <i>Frontiers in Neuroscience</i> , 2018, 12, 423.	2.8	35
35	EEG feature fusion for motor imagery: A new robust framework towards stroke patients rehabilitation. <i>Computers in Biology and Medicine</i> , 2021, 137, 104799.	7.0	32
36	Brain-computer interfaces for goal orientated control of a virtual smart home environment. , 2009, , .		30

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37	Cortiq-based Real-Time Functional Mapping for Epilepsy Surgery. <i>Journal of Clinical Neurophysiology</i> , 2015, 32, e12-e22.	1.7	29
38	Rapid and Minimum Invasive Functional Brain Mapping by Real-Time Visualization of High Gamma Activity During Awake Craniotomy. <i>World Neurosurgery</i> , 2014, 82, 912.e1-912.e10.	1.3	28
39	Understanding and Realizing Presence in the Presencia Project. <i>IEEE Computer Graphics and Applications</i> , 2007, 27, 90-93.	1.2	27
40	Preserved somatosensory discrimination predicts consciousness recovery in unresponsive wakefulness syndrome. <i>Clinical Neurophysiology</i> , 2018, 129, 1130-1136.	1.5	27
41	An electrocorticographic BCI using code-based VEP for control in video applications: a single-subject study. <i>Frontiers in Systems Neuroscience</i> , 2014, 8, 139.	2.5	25
42	A Human-Humanoid Interaction Through the Use of BCI for Locked-In ALS Patients Using Neuro-Biological Feedback Fusion. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2018, 26, 487-497.	4.9	25
43	Workshops of the Sixth International Brain-Computer Interface Meeting: brain-computer interfaces past, present, and future. <i>Brain-Computer Interfaces</i> , 2017, 4, 3-36.	1.8	24
44	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. <i>Frontiers in Neuroscience</i> , 2020, 14, 578.	2.8	24
45	Effects of P300-Based BCI Use on Reported Presence in a Virtual Environment. <i>Presence: Teleoperators and Virtual Environments</i> , 2010, 19, 1-11.	0.6	23
46	Effects of Gamification in BCI Functional Rehabilitation. <i>Frontiers in Neuroscience</i> , 2020, 14, 882.	2.8	23
47	Toward BCI Wizard - best BCI approach for each user. , 2010, 2010, 4201-4.		21
48	Passive functional mapping of receptive language areas using electrocorticographic signals. <i>Clinical Neurophysiology</i> , 2018, 129, 2517-2524.	1.5	21
49	Time-Variant Linear Discriminant Analysis Improves Hand Gesture and Finger Movement Decoding for Invasive Brain-Computer Interfaces. <i>Frontiers in Neuroscience</i> , 2019, 13, 901.	2.8	21
50	Goal-Oriented Control with Brain-Computer Interface. <i>Lecture Notes in Computer Science</i> , 2009, , 732-740.	1.3	20
51	BCI Performance and Brain Metabolism Profile in Severely Brain-Injured Patients Without Response to Command at Bedside. <i>Frontiers in Neuroscience</i> , 2018, 12, 370.	2.8	20
52	Cognitive and Affective Brain-Computer Interfaces for Improving Learning Strategies and Enhancing Student Capabilities: A Systematic Literature Review. <i>IEEE Access</i> , 2021, 9, 134122-134147.	4.2	19
53	Sharing and Analyzing Data from Presence Experiments. <i>Presence: Teleoperators and Virtual Environments</i> , 2006, 15, 599-610.	0.6	18
54	EEG, ECG and oxygen concentration changes from sea level to a simulated altitude of 4000m and back to sea level. <i>Neuroscience Letters</i> , 2008, 442, 123-127.	2.1	16

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55	Cognitive Processing in Non-Communicative Patients: What Can Event-Related Potentials Tell Us?. <i>Frontiers in Human Neuroscience</i> , 2016, 10, 569.	2.0	16
56	Clinical Impact and Implication of Real-Time Oscillation Analysis for Language Mapping. <i>World Neurosurgery</i> , 2017, 97, 123-131.	1.3	16
57	A tactile Brain-Computer Interface for severely disabled patients. , 2014, , .		15
58	Effects of a Vibro-Tactile P300 Based Brain-Computer Interface on the Coma Recovery Scale-Revised in Patients With Disorders of Consciousness. <i>Frontiers in Neuroscience</i> , 2020, 14, 294.	2.8	15
59	Augmented control of an avatar using an SSVEP based BCI. , 2012, , .		14
60	Effects of a fast cable car ascent to an altitude of 2700 meters on EEG and ECG. <i>Neuroscience Letters</i> , 2005, 377, 53-58.	2.1	13
61	How many people can control a motor imagery based BCI using common spatial patterns?. , 2015, , .		13
62	Invariance and variability in interaction error-related potentials and their consequences for classification. <i>Journal of Neural Engineering</i> , 2017, 14, 066015.	3.5	13
63	Auditory and Somatosensory P3 Are Complementary for the Assessment of Patients with Disorders of Consciousness. <i>Brain Sciences</i> , 2020, 10, 748.	2.3	13
64	Characterization of optogenetically-induced cortical spreading depression in awake mice using graphene micro-transistor arrays. <i>Journal of Neural Engineering</i> , 2021, 18, 055002.	3.5	13
65	Beaming into the Rat World: Enabling Real-Time Interaction between Rat and Human Each at Their Own Scale. <i>PLoS ONE</i> , 2012, 7, e48331.	2.5	13
66	Smart homes to improve the quality of life for all. , 2011, 2011, 1777-80.		12
67	Decrease of Asymmetric Dimethylarginine Predicts Acute Mountain Sickness. <i>Journal of Travel Medicine</i> , 2012, 19, 338-343.	3.0	12
68	Novel Techniques of Real-time Blood Flow and Functional Mapping: Technical Note. <i>Neurologia Medico-Chirurgica</i> , 2014, 54, 775-785.	2.2	12
69	A comparison of face speller approaches for P300 BCIs. , 2016, , .		12
70	Performance Differences Using a Vibro-Tactile P300 BCI in LIS-Patients Diagnosed With Stroke and ALS. <i>Frontiers in Neuroscience</i> , 2018, 12, 514.	2.8	12
71	Interaction of BCI with the underlying neurological conditions in patients: pros and cons. <i>Frontiers in Neuroengineering</i> , 2014, 7, 42.	4.8	11
72	Assessment and Communication for People with Disorders of Consciousness. <i>Journal of Visualized Experiments</i> , 2017, , .	0.3	11

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73	Disconnection of the pathological connectome for multifocal epilepsy surgery. <i>Journal of Neurosurgery</i> , 2018, 129, 1182-1194.	1.6	11
74	Motor Rehabilitation for Hemiparetic Stroke Patients Using a Brain-Computer Interface Method. , 2018, , .		10
75	A hybrid Brain-Computer Interface for improving the usability of a smart home control. , 2012, , .		9
76	A Brain-Computer Interface for Motor Rehabilitation With Functional Electrical Stimulation and Virtual Reality. <i>Archives of Physical Medicine and Rehabilitation</i> , 2017, 98, e24.	0.9	9
77	Tailor-Made Surgery Based on Functional Networks for Intractable Epilepsy. <i>Frontiers in Neurology</i> , 2020, 11, 73.	2.4	9
78	Brain-Computer Interfaces in Acute and Subacute Disorders of Consciousness. <i>Journal of Clinical Neurophysiology</i> , 2022, 39, 32-39.	1.7	9
79	Hemiparetic Stroke Rehabilitation Using Avatar and Electrical Stimulation Based on Non-invasive Brain Computer Interface. <i>International Journal of Physical Medicine & Rehabilitation</i> , 2017, 05, .	0.5	9
80	Hardware/Software Components and Applications of BCIs. , 2011, , .		8
81	Poor performance in SSVEP BCIs: Are worse subjects just slower?. , 2012, 2012, 3833-6.		8
82	BCI Hardware and Software. , 2012, , 165-188.		8
83	MindBEAGLE – A new system for the assessment and communication with patients with disorders of consciousness and complete locked-in syndrom. , 2017, , .		8
84	Workshops of the seventh international brain-computer interface meeting: not getting lost in translation. <i>Brain-Computer Interfaces</i> , 2019, 6, 71-101.	1.8	8
85	Multi-modal Mapping of the Face Selective Ventral Temporal Cortex – A Group Study With Clinical Implications for ECS, ECoG, and fMRI. <i>Frontiers in Human Neuroscience</i> , 2021, 15, 616591.	2.0	8
86	Effects of cable car ascent to 2700 meters on mean EEG frequency and event-related desynchronization. <i>Wiener Medizinische Wochenschrift</i> , 2005, 155, 143-148.	1.1	7
87	Brain-Computer Interface Research: A State-of-the-Art Summary 7. <i>Springer Briefs in Electrical and Computer Engineering</i> , 2019, , 1-9.	0.5	7
88	Performance Investigation of Brain-Computer Interfaces that Combine EEG and fNIRS for Motor Imagery Tasks. , 2019, , .		7
89	Goal orientated Brain-Computer interfaces for Control: a virtual smart home application study. <i>BMC Neuroscience</i> , 2010, 11, .	1.9	6
90	Social Environments, Mixed Communication and Goal-Oriented Control Application Using a Brain-Computer Interface. <i>Lecture Notes in Computer Science</i> , 2011, , 545-554.	1.3	6

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91	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
92	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
93	Brain-computer interfaces for stroke rehabilitation: summary of the 2016 BCI Meeting in Asilomar. Brain-Computer Interfaces, 2018, 5, 41-57.	1.8	6
94	The BR4IN.IO Hackathons. , 2019, , 447-473.		6
95	What External Variables Affect Sensorimotor Rhythm Brain-Computer Interface (SMR-BCI) Performance?. HCA Healthcare Journal of Medicine, 2021, 2, .	0.2	6
96	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
97	Editorial: Breakthrough BCI Applications in Medicine. Frontiers in Neuroscience, 2020, 14, 598247.	2.8	6
98	A dry electrode concept for SMR, P300 and SSVEP based BCIs. , 2012, , .		5
99	Effects of Repeating a Tactile Brain-Computer Interface on Patients with Disorder of Consciousness: A Hint of Recovery?*. , 2019, , .		5
100	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
101	Usability of video-overlaying SSVEP based BCIs. , 2012, , .		4
102	Highlights and Interviews with Winners. Springer Briefs in Electrical and Computer Engineering, 2020, , 107-121.	0.5	4
103	Workshops of the eighth international brain-computer interface meeting: BCIs: the next frontier. Brain-Computer Interfaces, 2022, 9, 69-101.	1.8	4
104	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
105	How Many EEG Channels Are Optimal for a Motor Imagery Based BCI for Stroke Rehabilitation?. Biosystems and Biorobotics, 2017, , 1109-1113.	0.3	3
106	Electrocorticogram based brain-computer interfaces. , 2018, , 197-227.		3
107	Laterality Coefficient: An EEG parameter related with the functional improvement in stroke patients. , 2019, , .		3
108	Multispectrum Indocyanine Green Videography for Visualizing Brain Vascular Pathology. World Neurosurgery, 2019, 132, e545-e553.	1.3	3

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109	Evaluating a Novel P300-Based Real-Time Image Ranking BCI. <i>Frontiers in Computer Science</i> , 2021, 3, .	2.8	3
110	Optimizing Motor Imagery Parameters for Robotic Arm Control by Brain-Computer Interface. <i>Brain Sciences</i> , 2022, 12, 833.	2.3	3
111	Brain Computer Interface. , 2011, , 1003-1017.		2
112	O202 Combining the strengths of passive functional mapping and electrical cortical stimulation. <i>Clinical Neurophysiology</i> , 2017, 128, e243.	1.5	2
113	Recent Advances in Brain-Computer Interface Researchâ€”A Summary of the BCI Award 2016 and BCI Research Trends. <i>Springer Briefs in Electrical and Computer Engineering</i> , 2017, , 127-134.	0.5	2
114	Multi-modal Computer Interaction for Communication and Control Using EEG, EMG, EOG and Motion Sensors. <i>Lecture Notes in Computer Science</i> , 2013, , 633-641.	1.3	2
115	How Can Completely Locked-in Persons Communicate With a Brainâ€”Computer Interface?. <i>Frontiers for Young Minds</i> , 2018, 6, .	0.8	1
116	EEG-Trockenelektroden und ihre Anwendungen bei BCI-Systemen. <i>Neurophysiologie-Labor</i> , 2019, 41, 148-155.	0.0	1
117	Towards Improved Vibro-Tactile P300 BCIs. <i>Lecture Notes in Computer Science</i> , 2021, , 65-74.	1.3	1
118	BCIs for DOC Patients: Assessment, Communication, and New Directions. <i>Lecture Notes in Computer Science</i> , 2016, , 62-71.	1.3	1
119	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
120	Brain Computer Interface treatment for gait rehabilitation of stroke patients â€” Preliminary results. , 2021, , .		1
121	Editorial: Cognitive and Motor Control Based on Brain-Computer Interfaces for Improving the Health and Well-Being in Older Age. <i>Frontiers in Human Neuroscience</i> , 2022, 16, 881922.	2.0	1
122	Comparing the Accuracy of a P300 Speller for People with Major Physical Disability. <i>Lecture Notes in Computer Science</i> , 2012, , 180-183.	1.3	0
123	Special Section: Robots, Virtual Reality, and Brainâ€”Computer Interfaces in Telepresence Guest Editorsâ€™ Introduction. <i>Presence: Teleoperators and Virtual Environments</i> , 2014, 23, iv-vi.	0.6	0
124	Unresponsive Wakefulness Syndrome Patient Communicating With Brain-Computer Interface. <i>Archives of Physical Medicine and Rehabilitation</i> , 2017, 98, e126-e127.	0.9	0
125	O174 Preliminary results of testing the recoveriX system on stroke patients. <i>Clinical Neurophysiology</i> , 2017, 128, e234-e235.	1.5	0
126	Improving Auditory Paradigms for Consciousness Detection by Brain-Computer Interfaces Technique. , 2018, , .		0

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127	Online Detection of Real-World Faces in ECoG Signals. , 2018, , .		0
128	A Brain-Computer Interface For Motor Rehabilitation Of Chronic Stroke Patients. Archives of Physical Medicine and Rehabilitation, 2018, 99, e36.	0.9	0
129	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
130	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
131	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
132	Brain-Computer Interface Research: A State-of-the-Art Summary 9. Springer Briefs in Electrical and Computer Engineering, 2021, , 1-12.	0.5	0
133	Brain-Computer Interface Research: A State-of-the-Art Summary 10. Springer Briefs in Electrical and Computer Engineering, 2021, , 1-11.	0.5	0
134	Online Classification of Cognitive Control Processes Using EEG and fNIRS: A Stroop Experiment. Lecture Notes in Computer Science, 2021, , 582-591.	1.3	0
135	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
136	How Can We Train The Brain To Help Stroke Patients?. Frontiers for Young Minds, 0, 9, .	0.8	0
137	Brainâ€™Computer Interfaces for Motor Rehabilitation, Assessment of Consciousness, and Communication. , 2018, , 89-100.		0
138	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
139	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
140	How Can We Trick the Brain Into Seeing Rainbows and Faces?. Frontiers for Young Minds, 0, 7, .	0.8	0
141	Posibilidades del uso de tramas artificiales de imagen motora para un BCI basado en EEG. , 0, , .		0
142	Communication for patients with disorders of consciousness with a vibro-tactile P300 brain-computer interface. , 2020, , .		0