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List of Publications by Citations

247 papers	10,897 citations	61 h-index	96 g-index
302 ext. papers	13,062 ext. citations	5.1 avg, IF	6.68 L-index

#	Paper	IF	Citations
247	Quadcopter control in three-dimensional space using a noninvasive motor imagery-based brain-computer interface. *Journal of Neural Engineering*, **2013**, 10, 046003	5	330
246	Estimation of the cortical functional connectivity with the multimodal integration of high-resolution EEG and fMRI data by directed transfer function. *NeuroImage*, **2005**, 24, 118-31	7.9	311
245	Comparison of different cortical connectivity estimators for high-resolution EEG recordings. *Human Brain Mapping*, **2007**, 28, 143-57	5.9	277
244	Brain-computer interfaces using sensorimotor rhythms: current state and future perspectives. *IEEE Transactions on Biomedical Engineering*, **2014**, 61, 1425-35	5	264
243	Electric dipole tracing in the brain by means of the boundary element method and its accuracy. *IEEE Transactions on Biomedical Engineering*, **1987**, 34, 406-14	5	238
242	Graph analysis of epileptogenic networks in human partial epilepsy. *Epilepsia*, **2011**, 52, 84-93	6.4	213
241	Noninvasive Electroencephalogram Based Control of a Robotic Arm for Reach and Grasp Tasks. *Scientific Reports*, **2016**, 6, 38565	4.9	213
240	Electrophysiological imaging of brain activity and connectivity-challenges and opportunities. *IEEE Transactions on Biomedical Engineering*, **2011**, 58, 1918-31	5	194
239	Binocular rivalry requires visual attention. *Neuron*, **2011**, 71, 362-9	13.9	184
238	EEG Source Imaging Enhances the Decoding of Complex Right-Hand Motor Imagery Tasks. *IEEE Transactions on Biomedical Engineering*, **2016**, 63, 4-14	5	176
237	Negative covariation between task-related responses in alpha/beta-band activity and BOLD in human sensorimotor cortex: an EEG and fMRI study of motor imagery and movements. *NeuroImage*, **2010**, 49, 2596-606	7.9	176
236	Continuous three-dimensional control of a virtual helicopter using a motor imagery based brain-computer interface. *PLoS ONE*, **2011**, 6, e26322	3.7	169
235	The standardized EEG electrode array of the IFCN. *Clinical Neurophysiology*, **2017**, 128, 2070-2077	4.3	168
234	A wavelet-based time-frequency analysis approach for classification of motor imagery for brain-computer interface applications. *Journal of Neural Engineering*, **2005**, 2, 65-72	5	164
233	Estimation of in vivo human brain-to-skull conductivity ratio from simultaneous extra- and intra-cranial electrical potential recordings. *Clinical Neurophysiology*, **2005**, 116, 456-65	4.3	159
232	Motor imagery classification by means of source analysis for brain-computer interface applications. *Journal of Neural Engineering*, **2004**, 1, 135-41	5	157
231	Magnetoacoustic tomography with magnetic induction (MAT-MI). *Physics in Medicine and Biology*, **2005**, 50, 5175-87	3.8	153

230	eConnectome: A MATLAB toolbox for mapping and imaging of brain functional connectivity. *Journal of Neuroscience Methods*, **2011**, 195, 261-9	3	152
229	EEG control of a virtual helicopter in 3-dimensional space using intelligent control strategies. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2010**, 18, 581-9	4.8	150
228	Ictal source analysis: localization and imaging of causal interactions in humans. *NeuroImage*, **2007**, 34, 575-86	7.9	150
227	Classifying EEG-based motor imagery tasks by means of time-frequency synthesized spatial patterns. *Clinical Neurophysiology*, **2004**, 115, 2744-53	4.3	147
226	Defecting or not defecting: how to "read" human behavior during cooperative games by EEG measurements. *PLoS ONE*, **2010**, 5, e14187	3.7	125
225	Noninvasive neuroimaging enhances continuous neural tracking for robotic device control. *Science Robotics*, **2019**, 4,	18.6	121
224	Noninvasive Brain-Computer Interfaces Based on Sensorimotor Rhythms. *Proceedings of the IEEE*, **2015**, 103, 907-925	14.3	119
223	Neocortical seizure foci localization by means of a directed transfer function method. *Epilepsia*, **2010**, 51, 564-72	6.4	110
222	Neuromodulation for brain disorders: challenges and opportunities. *IEEE Transactions on Biomedical Engineering*, **2013**, 60, 610-24	5	107
221	Estimation of time-varying connectivity patterns through the use of an adaptive directed transfer function. *IEEE Transactions on Biomedical Engineering*, **2008**, 55, 2557-64	5	103
220	Brain□Computer Interface **2005**, 85-121		102
219	Estimation of in vivo brain-to-skull conductivity ratio in humans. *Applied Physics Letters*, **2006**, 89, 223903-2239033	3.4	101
218	Estimating cortical potentials from scalp EEGs in a realistically shaped inhomogeneous head model by means of the boundary element method. *IEEE Transactions on Biomedical Engineering*, **1999**, 46, 1264-8	5	98
217	Classification of motor imagery tasks for brain-computer interface applications by means of two equivalent dipoles analysis. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2005**, 13, 166-71	4.8	97
216	Noninvasive imaging of cardiac transmembrane potentials within three-dimensional myocardium by means of a realistic geometry anisotropic heart model. *IEEE Transactions on Biomedical Engineering*, **2003**, 50, 1190-202	5	95
215	Investigating Cooperative Behavior in Ecological Settings: An EEG Hyperscanning Study. *PLoS ONE*, **2016**, 11, e0154236	3.7	93
214	Cortical imaging of event-related (de)synchronization during online control of brain-computer interface using minimum-norm estimates in frequency domain. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2008**, 16, 425-31	4.8	90
213	Relationship between speed and EEG activity during imagined and executed hand movements. *Journal of Neural Engineering*, **2010**, 7, 26001	5	89

212	Multimodal functional neuroimaging: integrating functional MRI and EEG/MEG. *IEEE Reviews in Biomedical Engineering*, **2008**, 1, 23-40	6.4	88
211	Electrophysiological Source Imaging: A Noninvasive Window to Brain Dynamics. *Annual Review of Biomedical Engineering*, **2018**, 20, 171-196	12	87
210	Electrophysiological Brain Connectivity: Theory and Implementation. *IEEE Transactions on Biomedical Engineering*, **2019**,	5	86
209	Sparse source imaging in electroencephalography with accurate field modeling. *Human Brain Mapping*, **2008**, 29, 1053-67	5.9	84
208	fMRI-EEG integrated cortical source imaging by use of time-variant spatial constraints. *NeuroImage*, **2008**, 39, 1198-214	7.9	83
207	Estimation of the effective and functional human cortical connectivity with structural equation modeling and directed transfer function applied to high-resolution EEG. *Magnetic Resonance Imaging*, **2004**, 22, 1457-70	3.3	83
206	Boundary element method-based cortical potential imaging of somatosensory evoked potentials using subjectsSmagnetic resonance images. *NeuroImage*, **2002**, 16, 564-76	7.9	82
205	Imaging electrical impedance from acoustic measurements by means of magnetoacoustic tomography with magnetic induction (MAT-MI). *IEEE Transactions on Biomedical Engineering*, **2007**, 54, 323-30	5	80
204	Localization of the site of origin of cardiac activation by means of a heart-model-based electrocardiographic imaging approach. *IEEE Transactions on Biomedical Engineering*, **2001**, 48, 660-9	5	79
203	Brain-computer interface control in a virtual reality environment and applications for the internet of things. *IEEE Access*, **2018**, 6, 10840-10849	3.5	76
202	High-resolution EEG: a new realistic geometry spline Laplacian estimation technique. *Clinical Neurophysiology*, **2001**, 112, 845-52	4.3	76
201	Seizure source imaging by means of FINE spatio-temporal dipole localization and directed transfer function in partial epilepsy patients. *Clinical Neurophysiology*, **2012**, 123, 1275-83	4.3	74
200	A new magnetic resonance electrical impedance tomography (MREIT) algorithm: the RSM-MREIT algorithm with applications to estimation of human head conductivity. *Physics in Medicine and Biology*, **2006**, 51, 3067-83	3.8	71
199	Evaluation of cortical current density imaging methods using intracranial electrocorticograms and functional MRI. *NeuroImage*, **2007**, 35, 598-608	7.9	71
198	High-definition transcranial direct current stimulation induces both acute and persistent changes in broadband cortical synchronization: a simultaneous tDCS-EEG study. *IEEE Transactions on Biomedical Engineering*, **2014**, 61, 1967-78	5	70
197	Brain□omputer Interfaces **2013**, 87-151		70
196	Imaging electric properties of biological tissues by RF field mapping in MRI. *IEEE Transactions on Medical Imaging*, **2010**, 29, 474-81	11.7	70
195	Effect of EEG electrode number on epileptic source localization in pediatric patients. *Clinical Neurophysiology*, **2015**, 126, 472-80	4.3	69

194	Gradient-based electrical properties tomography (gEPT): A robust method for mapping electrical properties of biological tissues in vivo using magnetic resonance imaging. *Magnetic Resonance in Medicine*, **2015**, 74, 634-46	4.4	67
193	Dynamic imaging of ictal oscillations using non-invasive high-resolution EEG. *NeuroImage*, **2011**, 56, 1908-17	7.9	65
192	A self-coherence enhancement algorithm and its application to enhancing three-dimensional source estimation from EEGs. *Annals of Biomedical Engineering*, **2001**, 29, 1019-27	4.7	65
191	Identification of epileptogenic foci from causal analysis of ECoG interictal spike activity. *Clinical Neurophysiology*, **2009**, 120, 1449-56	4.3	64
190	Classification of motor imagery by means of cortical current density estimation and Von Neumann entropy. *Journal of Neural Engineering*, **2007**, 4, 17-25	5	64
189	Noninvasive reconstruction of three-dimensional ventricular activation sequence from the inverse solution of distributed equivalent current density. *IEEE Transactions on Medical Imaging*, **2006**, 25, 1307-18	11.7	63
188	An alternative subspace approach to EEG dipole source localization. *Physics in Medicine and Biology*, **2004**, 49, 327-43	3.8	63
187	Linear and nonlinear relationships between visual stimuli, EEG and BOLD fMRI signals. *NeuroImage*, **2010**, 50, 1054-66	7.9	61
186	Noninvasive three-dimensional electrocardiographic imaging of ventricular activation sequence. *American Journal of Physiology - Heart and Circulatory Physiology*, **2005**, 289, H2724-32	5.2	61
185	Magnetic-resonance-based electrical properties tomography: a review. *IEEE Reviews in Biomedical Engineering*, **2014**, 7, 87-96	6.4	59
184	A computer simulation study of cortical imaging from scalp potentials. *IEEE Transactions on Biomedical Engineering*, **1998**, 45, 724-35	5	59
183	A cortical potential imaging study from simultaneous extra- and intracranial electrical recordings by means of the finite element method. *NeuroImage*, **2006**, 31, 1513-24	7.9	59
182	Estimation of the cortical connectivity by high-resolution EEG and structural equation modeling: simulations and application to finger tapping data. *IEEE Transactions on Biomedical Engineering*, **2005**, 52, 757-68	5	59
181	Complex B1 mapping and electrical properties imaging of the human brain using a 16-channel transceiver coil at 7T. *Magnetic Resonance in Medicine*, **2013**, 69, 1285-96	4.4	58
180	Three-dimensional brain current source reconstruction from intra-cranial ECoG recordings. *NeuroImage*, **2008**, 42, 683-95	7.9	56
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177	Interictal spike analysis of high-density EEG in patients with partial epilepsy. *Clinical Neurophysiology*, **2011**, 122, 1098-105	4.3	52

176	Grand challenges in mapping the human brain: NSF workshop report. *IEEE Transactions on Biomedical Engineering*, **2013**, 60, 2983-92	5	51
175	An enhanced time-frequency-spatial approach for motor imagery classification. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2006**, 14, 250-4	4.8	49
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173	Noninvasive three-dimensional activation time imaging of ventricular excitation by means of a heart-excitation model. *Physics in Medicine and Biology*, **2002**, 47, 4063-78	3.8	48
172	Magnetoacoustic imaging of human liver tumor with magnetic induction. *Applied Physics Letters*, **2011**, 98, 23703	3.4	46
171	Characterization of functional brain activity and connectivity using EEG and fMRI in patients with sickle cell disease. *NeuroImage: Clinical*, **2017**, 14, 1-17	5.3	45
170	High-resolution spatio-temporal functional neuroimaging of brain activity. *Critical Reviews in Biomedical Engineering*, **2002**, 30, 283-306	1.1	45
169	Imaging brain source extent from EEG/MEG by means of an iteratively reweighted edge sparsity minimization (IRES) strategy. *NeuroImage*, **2016**, 142, 27-42	7.9	45
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166	An equivalent current source model and laplacian weighted minimum norm current estimates of brain electrical activity. *IEEE Transactions on Biomedical Engineering*, **2002**, 49, 277-88	5	43
165	Seizure prediction in patients with focal hippocampal epilepsy. *Clinical Neurophysiology*, **2017**, 128, 1299-1307	4.3	41
164	Determining electrical properties based on B(1) fields measured in an MR scanner using a multi-channel transmit/receive coil: a general approach. *Physics in Medicine and Biology*, **2013**, 58, 4395-408	3.8	41
163	Spatial resolution of EEG cortical source imaging revealed by localization of retinotopic organization in human primary visual cortex. *Journal of Neuroscience Methods*, **2007**, 161, 142-54	3	41
162	An efficient rhythmic component expression and weighting synthesis strategy for classifying motor imagery EEG in a brain-computer interface. *Journal of Neural Engineering*, **2004**, 1, 1-7	5	41
161	Estimation of electrical conductivity distribution within the human head from magnetic flux density measurement. *Physics in Medicine and Biology*, **2005**, 50, 2675-87	3.8	41
160	Noninvasive three-dimensional cardiac activation imaging from body surface potential maps: a computational and experimental study on a rabbit model. *IEEE Transactions on Medical Imaging*, **2008**, 27, 1622-30	11.7	39
159	Spectral and spatial changes of brain rhythmic activity in response to the sustained thermal pain stimulation. *Human Brain Mapping*, **2016**, 37, 2976-91	5.9	39

158	Localization of Origins of Premature Ventricular Contraction by Means of Convolutional Neural Network From 12-Lead ECG. *IEEE Transactions on Biomedical Engineering*, **2018**, 65, 1662-1671	5	38
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156	Differential electrophysiological coupling for positive and negative BOLD responses during unilateral hand movements. *Journal of Neuroscience*, **2011**, 31, 9585-93	6.6	38
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154	Noninvasive reconstruction of the three-dimensional ventricular activation sequence during pacing and ventricular tachycardia in the canine heart. *American Journal of Physiology - Heart and Circulatory Physiology*, **2012**, 302, H244-52	5.2	37
153	Electrophysiological Source Imaging of Brain Networks Perturbed by Low-Intensity Transcranial Focused Ultrasound. *IEEE Transactions on Biomedical Engineering*, **2016**, 63, 1787-1794	5	35
152	Electrical Properties Tomography Based on $B_{{1}}$ Maps in MRI: Principles, Applications, and Challenges. *IEEE Transactions on Biomedical Engineering*, **2017**, 64, 2515-2530	5	34
151	Motor imagery task classification for brain computer interface applications using spatiotemporal principle component analysis. *Neurological Research*, **2004**, 26, 282-7	2.7	34
150	High-resolution EEG: on the cortical equivalent dipole layer imaging. *Clinical Neurophysiology*, **2002**, 113, 227-35	4.3	34
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148	Quantifying and Characterizing Tonic Thermal Pain Across Subjects From EEG Data Using Random Forest Models. *IEEE Transactions on Biomedical Engineering*, **2017**, 64, 2988-2996	5	33
147	Goal selection versus process control in a brain-computer interface based on sensorimotor rhythms. *Journal of Neural Engineering*, **2009**, 6, 016005	5	33
146	EEG source imaging: correlating source locations and extents with electrocorticography and surgical resections in epilepsy patients. *Journal of Clinical Neurophysiology*, **2007**, 24, 130-6	2.2	33
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144	Noninvasive imaging of the high frequency brain activity in focal epilepsy patients. *IEEE Transactions on Biomedical Engineering*, **2014**, 61, 1660-7	5	32
143	A novel channel selection method for optimal classification in different motor imagery BCI paradigms. *BioMedical Engineering OnLine*, **2015**, 14, 93	4.1	32
142	Grand challenges in interfacing engineering with life sciences and medicine. *IEEE Transactions on Biomedical Engineering*, **2013**, 60, 589-98	5	32
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140	Magnetoacoustic tomography with magnetic induction for high-resolution bioimepedance imaging through vector source reconstruction under the static field of MRI magnet. *Medical Physics*, **2014**, 41, 022902	4.4	31
139	Magnetoacoustic tomography with magnetic induction: bioimepedance reconstruction through vector source imaging. *IEEE Transactions on Medical Imaging*, **2013**, 32, 619-27	11.7	31
138	Mapping the bilateral visual integration by EEG and fMRI. *NeuroImage*, **2009**, 46, 989-97	7.9	30
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135	The impact of mind-body awareness training on the early learning of a brain-computer interface. *Technology*, **2014**, 2, 254-260	3	29
134	Estimation of global ventricular activation sequences by noninvasive three-dimensional electrical imaging: validation studies in a Swine model during pacing. *Journal of Cardiovascular Electrophysiology*, **2008**, 19, 535-40	2.7	27
133	Noninvasive electromagnetic source imaging of spatiotemporally distributed epileptogenic brain sources. *Nature Communications*, **2020**, 11, 1946	17.4	27
132	On the Neuromodulatory Pathways of the Brain by Means of Transcranial Focused Ultrasound. *Current Opinion in Biomedical Engineering*, **2018**, 8, 61-69	4.4	27
131	Thalamocortical relationship in epileptic patients with generalized spike and wave discharges--A multimodal neuroimaging study. *NeuroImage: Clinical*, **2015**, 9, 117-27	5.3	26
130	Magneto acoustic tomography with short pulsed magnetic field for in-vivo imaging of magnetic iron oxide nanoparticles. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2016**, 12, 689-699	6	26
129	Spectral and spatial shifts of post-ictal slow waves in temporal lobe seizures. *Brain*, **2012**, 135, 3134-43	11.2	25
128	Spatio-temporal EEG source localization using a three-dimensional subspace FINE approach in a realistic geometry inhomogeneous head model. *IEEE Transactions on Biomedical Engineering*, **2006**, 53, 1732-9	5	24
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126	Comparison of RF body coils for MRI at 3 T: a simulation study using parallel transmission on various anatomical targets. *NMR in Biomedicine*, **2015**, 28, 1332-44	4.4	23
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112	In vivo imaging of electrical properties of an animal tumor model with an 8-channel transceiver array at 7 T using electrical properties tomography. *Magnetic Resonance in Medicine*, **2017**, 78, 2157-2169	4.4	18
111	Lateralization and localization of epilepsy related hemodynamic foci using presurgical fMRI. *Clinical Neurophysiology*, **2015**, 126, 27-38	4.3	18
110	Goal selection versus process control while learning to use a brain-computer interface. *Journal of Neural Engineering*, **2011**, 8, 036012	5	18
109	Sensorimotor Rhythm BCI with Simultaneous High Definition-Transcranial Direct Current Stimulation Alters Task Performance. *Brain Stimulation*, **2016**, 9, 834-841	5.1	17
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98	Multiple Oscillatory Push-Pull Antagonisms Constrain Seizure Propagation. *Annals of Neurology*, **2019**, 86, 683-694	9.4	13
97	Imaging cardiac activation sequence during ventricular tachycardia in a canine model of nonischemic heart failure. *American Journal of Physiology - Heart and Circulatory Physiology*, **2015**, 308, H108-14	5.2	13
96	Equivalent moving dipole localization of cardiac ectopic activity in a swine model during pacing. *IEEE Transactions on Information Technology in Biomedicine*, **2010**, 14, 1318-26		13
95	An adaptive directed transfer function approach for detecting dynamic causal interactions. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2007**, 2007, 4949-52		13
94	Noninvasive Imaging of High-Frequency Drivers and Reconstruction of Global Dominant Frequency Maps in Patients With Paroxysmal and Persistent Atrial Fibrillation. *IEEE Transactions on Biomedical Engineering*, **2016**, 63, 1333-1340	5	13
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81	Mapping electrical properties heterogeneity of tumor using boundary informed electrical properties tomography (BIEPT) at 7T. *Magnetic Resonance in Medicine*, **2019**, 81, 393-409	4.4	10
80	Training in the practice of noninvasive brain stimulation: Recommendations from an IFCN committee. *Clinical Neurophysiology*, **2021**, 132, 819-837	4.3	10
79	Three-Dimensional Noninvasive Imaging of Ventricular Arrhythmias in Patients With Premature Ventricular Contractions. *IEEE Transactions on Biomedical Engineering*, **2018**, 65, 1495-1503	5	9
78	Noninvasive control of a robotic arm in multiple dimensions using scalp electroencephalogram **2013**,		9
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