

Anirban Dutta

List of Publications by Year in descending order

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Version: 2024-02-01

99
papers

1,662
citations

361296

20
h-index

360920

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127
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127
docs citations

127
times ranked

1889
citing authors

#	ARTICLE	IF	CITATIONS
1	Wearable Sensor for Multi-wavelength Near-Infrared Spectroscopy of Skin Hemodynamics Along with Underlying Muscle Electromyography. <i>Biosystems and Biorobotics</i> , 2022, , 413-418.	0.2	1
2	Portable Neuroimaging-Guided Noninvasive Brain Stimulation of the Cortico-Cerebello-Thalamo-Cortical Loopâ€™Hypothesis and Theory in Cannabis Use Disorder. <i>Brain Sciences</i> , 2022, 12, 445.	1.1	4
3	Perception action cycle-related brain networks differentiate experts and novices: a combined EEG, fNIRS study during a complex surgical motor task. , 2022, , .		1
4	Resting-State NIRSâ€™EEG in Unresponsive Patients with Acute Brain Injury: A Proof-of-Concept Study. <i>Neurocritical Care</i> , 2021, 34, 31-44.	1.2	28
5	Interhemispheric Functional Connectivity in the Primary Motor Cortex Distinguishes Between Training on a Physical and a Virtual Surgical Simulator. <i>Lecture Notes in Computer Science</i> , 2021, , 636-644.	1.0	2
6	Investigating the feasibility of cerebellar transcranial direct current stimulation to facilitate post-stroke overground gait performance in chronic stroke: a partial least-squares regression approach. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2021, 18, 18.	2.4	20
7	Decreasing the Surgical Errors by Neurostimulation of Primary Motor Cortex and the Associated Brain Activation via Neuroimaging. <i>Frontiers in Neuroscience</i> , 2021, 15, 651192.	1.4	15
8	Functional brain connectivity related to surgical skill dexterity in physical and virtual simulation environments. <i>Neurophotonics</i> , 2021, 8, 015008.	1.7	12
9	Feasibility of combining functional near-infrared spectroscopy with electroencephalography to identify chronic stroke responders to cerebellar transcranial direct current stimulationâ€™a computational modeling and portable neuroimaging methodological study. <i>Cerebellum</i> , 2021, 20, 853-871.	1.4	22
10	Neuroimaging Guided Transcranial Electrical Stimulation in Enhancing Surgical Skill Acquisition. Comment on Hung et al. The Efficacy of Transcranial Direct Current Stimulation in Enhancing Surgical Skill Acquisition: A Preliminary Meta-Analysis of Randomized Controlled Trials. <i>Brain Sci.</i> 2021, 11, 707. <i>Brain Sciences</i> , 2021, 11, 1078.	1.1	8
11	Simultaneous functional near-infrared spectroscopy (fNIRS) and electroencephalogram (EEG) to elucidate neurovascular modulation by transcranial electrical stimulation (tES). <i>Brain Stimulation</i> , 2021, 14, 1093-1094.	0.7	5
12	Portable neuroimaging and computational modeling approach to elucidate potential cognitive confounds in non-invasive stimulation of the motor cerebellum. <i>Brain Stimulation</i> , 2021, 14, 1133-1134.	0.7	2
13	Feasibility of Cerebellar Transcranial Direct Current Stimulation to Facilitate Goal-Directed Weight Shifting in Chronic Post-Stroke Hemiplegics. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2021, 29, 2203-2210.	2.7	3
14	Grey-box modeling and hypothesis testing of functional near-infrared spectroscopy-based cerebrovascular reactivity to anodal high-definition tDCS in healthy humans. <i>PLoS Computational Biology</i> , 2021, 17, e1009386.	1.5	10
15	A deep learning model for a priori estimation of spatiotemporal regions for neuroimaging guided non-invasive brain stimulation. <i>Brain Stimulation</i> , 2021, 14, 1689.	0.7	2
16	Portable neuroimaging and biped multi-task battery to study the effects of non-invasive cerebellar stimulation: a case series on hemiplegic patients with and without basal ganglia lesion. <i>Brain Stimulation</i> , 2021, 14, 1646.	0.7	0
17	Functional near-infrared spectroscopy (fNIRS) of posterolateral cerebellum and prefrontal cortex for fNIRS-driven cerebellar tES â€™a case report. <i>Brain Stimulation</i> , 2021, 14, 1692.	0.7	3
18	Physiological neurovascular modeling of cerebrovascular effects of transcranial electrical current stimulation. <i>Brain Stimulation</i> , 2021, 14, 1597-1598.	0.7	2

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19	Cerebral and muscle near-infrared spectroscopy during lower-limb muscle activity – volitional and neuromuscular electrical stimulation. , 2021, 2021, 6577-6580.		2
20	Neuroimaging guided tES to facilitate complex laparoscopic surgical tasks – insights from functional near-infrared spectroscopy. , 2021, 2021, 7437-7440.		5
21	Brain network effects related to physical and virtual surgical training revealed by Granger causality. , 2021, 2021, 1014-1017.		2
22	A proof of concept –phase zero– study of neurodevelopment using brain organoid models with Vis/near-infrared spectroscopy and electrophysiology. Scientific Reports, 2020, 10, 20987.	1.6	5
23	Opioid agonist treatment during SARS-CoV2 & extended lockdown: Adaptations & challenges in the Indian context. Asian Journal of Psychiatry, 2020, 53, 102377.	0.9	3
24	Bioenergy Crisis in Coronavirus Diseases?. Brain Sciences, 2020, 10, 277.	1.1	7
25	Brain–Computer Interface Spellers for Communication: Why We Need to Address Their Security and Authenticity. Brain Sciences, 2020, 10, 139.	1.1	1
26	Deep Cerebellar Transcranial Direct Current Stimulation of the Dentate Nucleus to Facilitate Standing Balance in Chronic Stroke Survivors–A Pilot Study. Brain Sciences, 2020, 10, 94.	1.1	21
27	Public opinion and legislations related to brain death, circulatory death and organ donation. Journal of the Neurological Sciences, 2020, 413, 116800.	0.3	6
28	Lobule-Specific Dosage Considerations for Cerebellar Transcranial Direct Current Stimulation During Healthy Aging: A Computational Modeling Study Using Age-Specific Magnetic Resonance Imaging Templates. Neuromodulation, 2020, 23, 341-365.	0.4	26
29	Low-Tech Innovations to Prevent Neonatal Mortality: Perspectives from Public Health, Neonatology, and Biomedical Engineering. , 2020, , 113-126.		1
30	A computational pipeline to find lobule-specific electric field distribution during non-invasive cerebellar stimulation. , 2019, 2019, 1191-1196.		7
31	Computational Modeling of the Photon Transport, Tissue Heating, and Cytochrome C Oxidase Absorption during Transcranial Near-Infrared Stimulation. Brain Sciences, 2019, 9, 179.	1.1	28
32	Quantification of grip strength with complexity analysis of surface electromyogram for hemiplegic post-stroke patients. NeuroRehabilitation, 2019, 45, 45-56.	0.5	4
33	Virtual reality-based balance training system augmented with operant conditioning paradigm. BioMedical Engineering OnLine, 2019, 18, 90.	1.3	16
34	Transcranial Direct Current Stimulation Integration with Magnetic Resonance Imaging, Magnetic Resonance Spectroscopy, Near Infrared Spectroscopy Imaging, and Electroencephalography. , 2019, , 293-345.		4
35	Cerebellar Lobules Optimal Stimulation (CLOS): A Computational Pipeline to Optimize Cerebellar Lobule-Specific Electric Field Distribution. Frontiers in Neuroscience, 2019, 13, 266.	1.4	38
36	Effects of cerebellar transcranial direct current stimulation on cerebellar-brain inhibition in humans: A systematic evaluation. Brain Stimulation, 2019, 12, 1177-1186.	0.7	49

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37	Exercises to Determine Older Adultsâ€™ Muscle Oxygenation Change Rate by Various Physical Performance Levels. Archives of Physical Medicine and Rehabilitation, 2019, 100, e178-e179.	0.5	1
38	Neurophysiological Correlates of tDCS-Induced Modulation of Cortical Sensorimotor Networks. , 2019, , 147-151.		2
39	Public perception of the vegetative state/unresponsive wakefulness syndrome: a crowdsourced study. PeerJ, 2019, 7, e6575.	0.9	20
40	Effects of anodal transcranial direct current stimulation over lower limb primary motor cortex on motor learning in healthy individuals. European Journal of Neuroscience, 2018, 47, 779-789.	1.2	19
41	Transcranial Direct Current Stimulation of the Leg Motor Area â€œ is it partly somatosensory?. , 2018, 2018, 4764-4767.		6
42	Automatic Independent Component Scalp Map Analysis of Electroencephalogram During Motor Preparation. , 2018, 2018, 4689-4692.		0
43	Effects of Cathode Location and the Size of Anode on Anodal Transcranial Direct Current Stimulation Over the Leg Motor Area in Healthy Humans. Frontiers in Neuroscience, 2018, 12, 443.	1.4	36
44	Systems Analysis of Human Visuo-Myoelectric Control Facilitated by Anodal Transcranial Direct Current Stimulation in Healthy Humans. Frontiers in Neuroscience, 2018, 12, 278.	1.4	8
45	Recovery of functional connectivity of the sensorimotor network after surgery for diffuse low-grade gliomas involving the supplementary motor area. Journal of Neurosurgery, 2017, 126, 1181-1190.	0.9	106
46	A Low-Cost Adaptive Balance Training Platform for Stroke Patients: A Usability Study. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 935-944.	2.7	22
47	Neural interfacing non-invasive brain stimulation with NIRS-EEG joint imaging for closed-loop control of neuroenergetics in ischemic stroke. , 2017, , .		5
48	Optimizing cerebellar transcranial direct current stimulation for visuomotor learning - anterior versus posterior lobe of cerebellum. , 2017, , .		7
49	Virtual Reality-Based Center of Mass-Assisted Personalized Balance Training System. Frontiers in Bioengineering and Biotechnology, 2017, 5, 85.	2.0	13
50	Engagement sensitive visual stimulation. European Journal of Translational Myology, 2016, 26, 6032.	0.8	1
51	Opportunities for Guided Multichannel Non-invasive Transcranial Current Stimulation in Poststroke Rehabilitation. Frontiers in Neurology, 2016, 7, 21.	1.1	38
52	Near-Infrared Spectroscopy â€œ Electroencephalography-Based Brain-State-Dependent Electrotherapy: A Computational Approach Based on Excitationâ€œInhibition Balance Hypothesis. Frontiers in Neurology, 2016, 7, 123.	1.1	14
53	Computational Pipeline for NIRS-EEG Joint Imaging of tDCS-Evoked Cerebral Responsesâ€œAn Application in Ischemic Stroke. Frontiers in Neuroscience, 2016, 10, 261.	1.4	41
54	NIRS-EEG joint imaging during transcranial direct current stimulation: Online parameter estimation with an autoregressive model. Journal of Neuroscience Methods, 2016, 274, 71-80.	1.3	41

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55	A Human-machine-interface Integrating Low-cost Sensors with a Neuromuscular Electrical Stimulation System for Post-stroke Balance Rehabilitation. Journal of Visualized Experiments, 2016, , .	0.2	7
56	SmartEye: Developing a Novel Eye Tracking System for Quantitative Assessment of Oculomotor Abnormalities. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 1051-1059.	2.7	32
57	Corticospinal excitability changes to anodal tDCS elucidated with NIRS-EEG joint-imaging: An ischemic stroke study. , 2015, 2015, 3399-402.		11
58	Engagement-sensitive interactive neuromuscular electrical therapy system for post-stroke balance rehabilitation - a concept study. , 2015, , .		4
59	Bidirectional interactions between neuronal and hemodynamic responses to transcranial direct current stimulation (tDCS): challenges for brain-state dependent tDCS. Frontiers in Systems Neuroscience, 2015, 9, 107.	1.2	30
60	Recurrence quantification analysis of surface electromyogram supports alterations in motor unit recruitment strategies by anodal transcranial direct current stimulation. Restorative Neurology and Neuroscience, 2015, 33, 663-669.	0.4	13
61	Anterior temporal artery tap to identify systemic interference using short-separation NIRS measurements: A NIRS/EEG-tDCS study. , 2015, 2015, 1239-42.		2
62	Development of Point of Care Testing Device for Neurovascular Coupling From Simultaneous Recording of EEG and NIRS During Anodal Transcranial Direct Current Stimulation. IEEE Journal of Translational Engineering in Health and Medicine, 2015, 3, 1-12.	2.2	30
63	EEG-NIRS Based Assessment of Neurovascular Coupling During Anodal Transcranial Direct Current Stimulation - a Stroke Case Series. Journal of Medical Systems, 2015, 39, 205.	2.2	66
64	Development of a brain computer interface for delivery of non-invasive brain stimulation during visuomotor task performance - a method study. , 2015, , .		5
65	Near infra-red spectroscopy combined with transcranial direct current stimulation in FPGA-based hardware for point of care testing of cerebral vascular status - A stroke study. , 2015, , .		1
66	Post-stroke Engagement-sensitive Balance Rehabilitation Under An Adaptive Multi-level Electrotherapy: Clinical Hypothesis and Computational Framework. Neuroscience and Biomedical Engineering, 2015, 2, 68-80.	0.4	1
67	Post-stroke balance rehabilitation under multi-level electrotherapy: a conceptual review. Frontiers in Neuroscience, 2014, 8, 403.	1.4	11
68	A Low-Cost Biofeedback System for Electromyogram-Triggered Functional Electrical Stimulation Therapy: An Indo-German Feasibility Study. ISRN Stroke, 2014, 2014, 1-13.	0.8	3
69	Delineating the effects of anodal transcranial direct current stimulation on myoelectric control based on slow cortical potentials. , 2014, 2014, 3094-7.		6
70	Facilitating myoelectric-control with transcranial direct current stimulation: a preliminary study in healthy humans. Journal of NeuroEngineering and Rehabilitation, 2014, 11, 13.	2.4	45
71	Point-of-care-testing of standing posture with Wii balance board and microsoft kinect during transcranial direct current stimulation: A feasibility study. NeuroRehabilitation, 2014, 34, 789-798.	0.5	35
72	Low-cost visual postural feedback with Wii balance board and Microsoft Kinect - a feasibility study. , 2013, , .		6

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73	State-space analysis of Hodgkin-Huxley axonal neural mass model during subthreshold high frequency alternating current stimulation. , 2013, , .		2
74	A phenomological model for capturing cerebrovascular reactivity to anodal transcranial direct current stimulation. , 2013, , .		5
75	Using electromagnetic reciprocity and magnetic resonance current density imaging to fit multi-electrode montage for non-invasive brain stimulation. , 2013, , .		8
76	soleSCAN - mobile phone based monitoring of foot sole for callus formation and the shoe insole for pressure “hot spots”. , 2013, , .		4
77	Neural mass model analysis of online modulation of electroencephalogram with transcranial direct current stimulation. , 2013, , .		16
78	A Low-Cost Point-of-Care Testing System for Psychomotor Symptoms of Depression Affecting Standing Balance: A Preliminary Study in India. Depression Research and Treatment, 2013, 2013, 1-8.	0.7	13
79	Translational Methods for Non-Invasive Electrical Stimulation to Facilitate Gait Rehabilitation Following Stroke - The Future Directions. Neuroscience and Biomedical Engineering, 2013, 1, 22-33.	0.4	7
80	Feasibility of Functional Electrical Stimulation-Assisted Neurorehabilitation following Stroke in India: A Case Series. Case Reports in Neurological Medicine, 2012, 2012, 1-7.	0.3	10
81	Nonlinear analysis of electromyogram following gait training with myoelectrically triggered neuromuscular electrical stimulation in stroke survivors. Eurasip Journal on Advances in Signal Processing, 2012, 2012, .	1.0	7
82	Effect of Transcranial Direct Current Stimulation on Cortico-Muscular Coherence and Standing Postural Steadiness. , 2012, , .		8
83	Evaluation of an Instrumented Sleeve for Myoelectrically-Triggered Functional Electrical Therapy: Indo-German Stroke Study. , 2012, , .		1
84	Effects of Cathode Placement on Anodal Transcranial DC Stimulation of Leg Motor Area: A Simulation Study. , 2012, , .		2
85	Walking after partial paralysis assisted with EMG-triggered or switch-triggered functional electrical stimulation — Two case studies. , 2011, 2011, 5975383.		4
86	Sensor-fault tolerant control of a powered lower limb prosthesis by mixing mode-specific adaptive Kalman filters. , 2011, 2011, 3696-9.		10
87	An objective method for selecting command sources for myoelectrically triggered lower-limb neuroprostheses. Journal of Rehabilitation Research and Development, 2011, 48, 935.	1.6	8
88	Two-photon calcium imaging from head-fixed Drosophila during optomotor walking behavior. Nature Methods, 2010, 7, 535-540.	9.0	315
89	OpenFES: Development of an Open-Source EMG-Triggered Functional Electrical Stimulation Controller for Physical Therapy. Journal of Medical Devices, Transactions of the ASME, 2010, 4, .	0.4	0
90	Development of an implanted intramuscular EMG-triggered FES system for ambulation after incomplete spinal cord injury. , 2009, 2009, 6793-7.		5

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91	Stochastic resonance-enhanced laser-based particle detector. , 2009, 2009, 785-7.		0
92	Gait Initiation With Electromyographically Triggered Electrical Stimulation in People With Partial Paralysis. Journal of Biomechanical Engineering, 2009, 131, 081002.	0.6	36
93	Ambulation After Incomplete Spinal Cord Injury With EMG-Triggered Functional Electrical Stimulation. IEEE Transactions on Biomedical Engineering, 2008, 55, 791-794.	2.5	43
94	Electromyogram-Triggered Functional Electrical Stimulation-Assisted Walking After Partial Paralysis. Journal of Medical Devices, Transactions of the ASME, 2008, 2, .	0.4	1
95	Ambulation after Incomplete Spinal Cord Injury with Electromyogram-triggered Functional Electrical Stimulation. , 2006, 2006, 5408-11.		1
96	Electrophotographic Layered Manufacturing. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2004, 126, 571-576.	1.3	8
97	Electrophotographic printing of part and binder powders. Rapid Prototyping Journal, 2004, 10, 7-13.	1.6	44
98	Layered Manufacturing by Electrophotographic Printing. , 2003, , 205.		0
99	Investigation of an electrophotography based rapid prototyping technology. Rapid Prototyping Journal, 2003, 9, 95-103.	1.6	21