

Todd P Coleman

List of Publications by Year in descending order

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Version: 2024-02-01

90
papers

6,860
citations

318942

23
h-index

145109

60
g-index

92
all docs

92
docs citations

92
times ranked

11891
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrochemical performance study of Ag/AgCl and Au flexible electrodes for unobtrusive monitoring of human biopotentials. <i>Nano Select</i> , 2022, 3, 1277-1287.	1.9	4
2	An Adhesive-Integrated Stretchable Silver-Silver Chloride Electrode Array for Unobtrusive Monitoring of Gastric Neuromuscular Activity. <i>Advanced Materials Technologies</i> , 2021, 6, 2001229.	3.0	13
3	Miniaturized wireless gastric pacing via inductive power transfer with non-invasive monitoring using cutaneous Electrogastrography. <i>Bioelectronic Medicine</i> , 2021, 7, 12.	1.0	2
4	Statistical uncertainty quantification to augment clinical decision support: a first implementation in sleep medicine. <i>Npj Digital Medicine</i> , 2021, 4, 142.	5.7	5
5	Building a Simple and Versatile Illumination System for Optogenetic Experiments. <i>Journal of Visualized Experiments</i> , 2021, , .	0.2	3
6	Data-driven noise modeling of digital DNA melting analysis enables prediction of sequence discriminating power. <i>Bioinformatics</i> , 2021, 36, 5337-5343.	1.8	8
7	Macrophage calcium reporter mice reveal immune cell communication in vitro and in vivo. <i>Cell Reports Methods</i> , 2021, 1, 100132.	1.4	2
8	Sampling, variational Bayesian inference, and conditioned stochastic differential equations. , 2021, , .		0
9	Passive longitudinal weight and cardiopulmonary monitoring in the home bed. <i>Scientific Reports</i> , 2021, 11, 24376.	1.6	5
10	A Deep Convolutional Neural Network Approach to Classify Normal and Abnormal Gastric Slow Wave Initiation From the High Resolution Electrogastrogram. <i>IEEE Transactions on Biomedical Engineering</i> , 2020, 67, 854-867.	2.5	18
11	Measuring Sample Path Causal Influences With Relative Entropy. <i>IEEE Transactions on Information Theory</i> , 2020, 66, 2777-2798.	1.5	7
12	Robust Methods to Detect Abnormal Initiation in the Gastric Slow Wave from Cutaneous Recordings. , 2020, 2020, 225-231.		3
13	Direct and Indirect Effects—An Information Theoretic Perspective. <i>Entropy</i> , 2020, 22, 854.	1.1	3
14	Interoceptive insular cortex participates in sensory processing of gastrointestinal malaise and associated behaviors. <i>Scientific Reports</i> , 2020, 10, 21642.	1.6	12
15	Smart Electronic Eyedrop Bottle for Unobtrusive Monitoring of Glaucoma Medication Adherence. <i>Sensors</i> , 2020, 20, 2570.	2.1	12
16	Spatial Patterns From High-Resolution Electrogastrography Correlate With Severity of Symptoms in Patients With Functional Dyspepsia and Gastroparesis. <i>Clinical Gastroenterology and Hepatology</i> , 2019, 17, 2668-2677.	2.4	101
17	High-density surface electromyography: A visualization method of laryngeal muscle activity. <i>Laryngoscope</i> , 2019, 129, 2347-2353.	1.1	14
18	A Distributed Framework for the Construction of Transport Maps. <i>Neural Computation</i> , 2019, 31, 613-652.	1.3	5

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19	On the Bias of Directed Information Estimators. , 2019, , .		2
20	Bayesian inverse methods for spatiotemporal characterization of gastric electrical activity from cutaneous multi-electrode recordings. PLoS ONE, 2019, 14, e0220315.	1.1	16
21	A flexible likelihood approach for predicting neural spiking activity from oscillatory phase. Journal of Neuroscience Methods, 2019, 311, 307-317.	1.3	4
22	Emerging Technologies for Molecular Diagnosis of Sepsis. Clinical Microbiology Reviews, 2018, 31, .	5.7	210
23	A High-Resolution Digital DNA Melting Platform for Robust Sequence Profiling and Enhanced Genotype Discrimination. SLAS Technology, 2018, 23, 580-591.	1.0	9
24	Biosynthesis of Orthogonal Molecules Using Ferredoxin and Ferredoxin-NADP ⁺ Reductase Systems Enables Genetically Encoded PhyB Optogenetics. ACS Synthetic Biology, 2018, 7, 706-717.	1.9	35
25	Artifact Rejection Methodology Enables Continuous, Noninvasive Measurement of Gastric Myoelectric Activity in Ambulatory Subjects. Scientific Reports, 2018, 8, 5019.	1.6	69
26	A State Space and Density Estimation Framework for Sleep Staging in Obstructive Sleep Apnea. IEEE Transactions on Biomedical Engineering, 2018, 65, 1201-1212.	2.5	38
27	Epidermal Electrode Technology for Detecting Ultrasonic Perturbation of Sensory Brain Activity. IEEE Transactions on Biomedical Engineering, 2018, 65, 1272-1280.	2.5	9
28	In-Home Sleep Recordings in Military Veterans With Posttraumatic Stress Disorder Reveal Less REM and Deep Sleep <1 Hz. Frontiers in Human Neuroscience, 2018, 12, 196.	1.0	17
29	A Modularized Efficient Framework for Non-Markov Time Series Estimation. IEEE Transactions on Signal Processing, 2018, 66, 3140-3154.	3.2	7
30	The activity of discrete sets of neurons in the posterior insula correlates with the behavioral expression and extinction of conditioned fear. Journal of Neurophysiology, 2018, 120, 1906-1913.	0.9	9
31	High-Resolution Electrogastrogram: A Novel, Noninvasive Method for Determining Gastric Slow-Wave Direction and Speed. IEEE Transactions on Biomedical Engineering, 2017, 64, 807-815.	2.5	79
32	The Use of Cardiac Orienting Responses as an Early and Scalable Biomarker of Alcohol-Related Neurodevelopmental Impairment. Alcoholism: Clinical and Experimental Research, 2017, 41, 128-138.	1.4	19
33	Scalable Manufacturing of Solderable and Stretchable Physiologic Sensing Systems. Advanced Materials, 2017, 29, 1701312.	11.1	49
34	Dynamical systems, ergodicity, and posterior matching. , 2017, , .		0
35	An Information and Control Framework for Optimizing User-Compliant Human-Computer Interfaces. Proceedings of the IEEE, 2017, 105, 273-285.	16.4	8
36	Visualization of Whole-Night Sleep EEG From 2-Channel Mobile Recording Device Reveals Distinct Deep Sleep Stages with Differential Electrodermal Activity. Frontiers in Human Neuroscience, 2016, 10, 605.	1.0	33

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37	Efficient low-rank spectrotemporal decomposition using ADMM. , 2016, , .		2
38	Stretchable and flexible adhesive-integrated antenna for biomedical applications. , 2016, , .		6
39	Learning Minimal Latent Directed Information Polytrees. Neural Computation, 2016, 28, 1723-1768.	1.3	19
40	Diffeomorphism learning via relative entropy constrained optimal transport. , 2016, , .		0
41	Adaptive flexible antennas for wireless biomedical applications. , 2016, , .		9
42	Scalable Microfabrication Procedures for Adhesive-Integrated Flexible and Stretchable Electronic Sensors. Sensors, 2015, 15, 23459-23476.	2.1	38
43	Bayesian LASSO in a distributed architecture. , 2015, , .		0
44	Efficient total probability prediction via convex optimization and optimal transport. , 2015, , .		0
45	An Optimizer's Approach to Stochastic Control Problems With Nonclassical Information Structures. IEEE Transactions on Automatic Control, 2015, 60, 937-949.	3.6	30
46	Directed Information Graphs. IEEE Transactions on Information Theory, 2015, 61, 6887-6909.	1.5	93
47	Large-scale spatiotemporal spike patterning consistent with wave propagation in motor cortex. Nature Communications, 2015, 6, 7169.	5.8	85
48	Fractal design concepts for stretchable electronics. Nature Communications, 2014, 5, 3266.	5.8	821
49	Dynamic and Succinct Statistical Analysis of Neuroscience Data. Proceedings of the IEEE, 2014, 102, 683-698.	16.4	14
50	EEG Gamma Band Oscillations Differentiate the Planning of Spatially Directed Movements of the Arm Versus Eye: Multivariate Empirical Mode Decomposition Analysis. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 1083-1096.	2.7	26
51	Efficient Methods to Compute Optimal Tree Approximations of Directed Information Graphs. IEEE Transactions on Signal Processing, 2013, 61, 3173-3182.	3.2	24
52	A Timing Channel Spyware for the CSMA/CA Protocol. IEEE Transactions on Information Forensics and Security, 2013, 8, 477-487.	4.5	28
53	Grand Challenges in Mapping the Human Brain: NSF Workshop Report. IEEE Transactions on Biomedical Engineering, 2013, 60, 2983-2992.	2.5	62
54	Bit-Wise Unequal Error Protection for Variable-Length Block Codes With Feedback. IEEE Transactions on Information Theory, 2013, 59, 1475-1504.	1.5	5

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55	Efficient Bayesian inference methods via convex optimization and optimal transport. , 2013, , .		15
56	Robust directed tree approximations for networks of stochastic processes. , 2013, , .		3
57	Learning minimal latent directed information trees. , 2012, , .		4
58	Characterizing the Efficacy of the NRL Network Pump in Mitigating Covert Timing Channels. IEEE Transactions on Information Forensics and Security, 2012, 7, 64-75.	4.5	14
59	An optimizer's approach to stochastic control problems with nonclassical information structures. , 2012, , .		5
60	Circadian Rhythm of Redox State Regulates Excitability in Suprachiasmatic Nucleus Neurons. Science, 2012, 337, 839-842.	6.0	188
61	A Stochastic Control Approach to Optimally Designing Hierarchical Flash Sets in P300 Communication Prostheses. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2012, 20, 102-112.	2.7	11
62	Generalizing the Posterior Matching Scheme to higher dimensions via optimal transportation. , 2011, , .		15
63	Epidermal Electronics. Science, 2011, 333, 838-843.	6.0	3,944
64	A Message-Passing Approach to Combating Desynchronization Attacks. IEEE Transactions on Information Forensics and Security, 2011, 6, 894-905.	4.5	10
65	Estimating the directed information to infer causal relationships in ensemble neural spike train recordings. Journal of Computational Neuroscience, 2011, 30, 17-44.	0.6	245
66	Assessing time-varying causality network of ensemble neural spiking activity. BMC Neuroscience, 2011, 12, .	0.8	1
67	A generalized prediction framework for granger causality. , 2011, , .		3
68	Equivalence between minimal generative model graphs and directed information graphs. , 2011, , .		18
69	Information transfer between neurons in the motor cortex triggered by visual cues. , 2011, 2011, 7278-81.		3
70	A minimal approach to causal inference on topologies with bounded indegree. , 2011, , .		3
71	Special session on information theory and neuroscience at ISIT 2011. , 2011, , .		0
72	A Mixed-Filter Algorithm for Dynamically Tracking Learning from Multiple Behavioral and Neurophysiological Measures. , 2011, , 3-28.		20

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73	A dynamical point process model of auditory nerve spiking in response to complex sounds. Journal of Computational Neuroscience, 2010, 29, 193-201.	0.6	6
74	Introduction to the Special Issue on Information Theory in Molecular Biology and Neuroscience. IEEE Transactions on Information Theory, 2010, 56, 649-652.	1.5	65
75	A Feedback Information-Theoretic Approach to the Design of Brain-Computer Interfaces. International Journal of Human-Computer Interaction, 2010, 27, 5-23.	3.3	29
76	On reversible Markov chains and maximization of directed information. , 2010, , .		8
77	A Computationally Efficient Method for Nonparametric Modeling of Neural Spiking Activity with Point Processes. Neural Computation, 2010, 22, 2002-2030.	1.3	28
78	An analytic spatial filter and a hidden Markov model for enhanced information transfer rate in EEG-based brain computer interfaces. , 2010, , .		7
79	Approximating discrete probability distributions with causal dependence trees. , 2010, , .		4
80	Bit-wise unequal error protection for variable length blockcodes with feedback. , 2010, , .		4
81	The parabigeminal nucleus as a recursive estimator. , 2009, , .		0
82	Covert timing channels codes for communication over interactive traffic. , 2009, , .		18
83	A stochastic control viewpoint on ‘Posterior Matching’-style feedback communication schemes. , 2009, , .		19
84	Joint Source-Channel Coding for Transmitting Correlated Sources Over Broadcast Networks. IEEE Transactions on Information Theory, 2009, 55, 3864-3868.	1.5	8
85	A Low-Complexity Universal Scheme for Rate-Constrained Distributed Regression Using a Wireless Sensor Network. IEEE Transactions on Signal Processing, 2009, 57, 1731-1744.	3.2	1
86	Using stochastic control with data compression perspectives to enhance P300 Neural Communication Prostheses. , 2008, , .		2
87	Querying the user properly for high-performance brain-machine interfaces: Recursive estimation, control, and feedback information-theoretic perspectives. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	5
88	Policies for neural prosthetic control: Initial experiments with a text interface. , 2008, , .		3
89	Low-Complexity Approaches to Slepian-Wolf Near-Lossless Distributed Data Compression. IEEE Transactions on Information Theory, 2006, 52, 3546-3561.	1.5	43
90	A Distributed Scheme for Achieving Energy-Delay Tradeoffs With Multiple Service Classes Over a Dynamically Varying Network. IEEE Journal on Selected Areas in Communications, 2004, 22, 929-941.	9.7	15