

Riccardo Barbieri

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

178
papers

3,816
citations

32
h-index

57
g-index

201
ext. papers

4,726
ext. citations

2.8
avg. IF

5.45
L-index

#	Paper	IF	Citations
178	A 'Multiomic' Approach of Saliva Metabolomics, Microbiota, and Serum Biomarkers to Assess the Need of Hospitalization in Coronavirus Disease 2019. <i>2022</i> , 1, 194-209		1
177	Functional assessment of bidirectional cortical and peripheral neural control on heartbeat dynamics: A brain-heart study on thermal stress.. <i>NeuroImage</i> , 2022 , 251, 119023	7.9	3
176	Analysis of physiological and non-contact signals to evaluate the emotional component in consumer preferences.. <i>PLoS ONE</i> , 2022 , 17, e0267429	3.7	
175	Advanced Signal Processing Algorithms for Cardiorespiratory Monitoring in the Neonatal Intensive Care Unit 2021 , 187-208		
174	Functional brain-heart interplay extends to the multifractal domain. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021 , 379, 20200260	3	3
173	A novel artificial intelligence based intensive care unit monitoring system: using physiological waveforms to identify sepsis. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021 , 379, 20200252	3	2
172	Preliminary Evaluation of a Novel Language Independent Speech-in-Noise Test for Adult Hearing Screening. <i>IFMBE Proceedings</i> , 2021 , 976-983	0.2	3
171	A polysomnography study examining the association between sleep and postoperative delirium in older hospitalized cardiac surgical patients. <i>Journal of Sleep Research</i> , 2021 , 30, e13322	5.8	3
170	Quantifying multidimensional control mechanisms of cardiovascular dynamics during multiple concurrent stressors. <i>Medical and Biological Engineering and Computing</i> , 2021 , 59, 775-785	3.1	
169	Integral pulse frequency modulation model driven by sympathovagal dynamics: Synthetic vs. real heart rate variability. <i>Biomedical Signal Processing and Control</i> , 2021 , 68, 102736	4.9	4
168	Elementary integrate-and-fire process underlies pulse amplitudes in Electrodermal activity. <i>PLoS Computational Biology</i> , 2021 , 17, e1009099	5	0
167	Time-Resolved Brain-to-Heart Probabilistic Information Transfer Estimation Using Inhomogeneous Point-Process Models. <i>IEEE Transactions on Biomedical Engineering</i> , 2021 , 68, 3366-3374	5	4
166	Development and Evaluation of a Novel Method for Adult Hearing Screening: Towards a Dedicated Smartphone App. <i>Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering</i> , 2021 , 3-19	0.2	2
165	Artificial intelligence-based prediction of transfusion in the intensive care unit in patients with gastrointestinal bleeding. <i>BMJ Health and Care Informatics</i> , 2021 , 28,	2.6	4
164	Evaluation of a Novel Speech-in-Noise Test for Hearing Screening: Classification Performance and Transducers' Characteristics. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2021 , 25, 4300-4307	7.2	1
163	Quantitative assessment of the relationship between behavioral and autonomic dynamics during propofol-induced unconsciousness. <i>PLoS ONE</i> , 2021 , 16, e0254053	3.7	1
162	A Model-Based Framework for Assessing the Physiologic Structure of Electrodermal Activity. <i>IEEE Transactions on Biomedical Engineering</i> , 2021 , 68, 2833-2845	5	2

161	Respiratory-gated auricular vagal afferent nerve stimulation (RAVANS) modulates brain response to stress in major depression. <i>Journal of Psychiatric Research</i> , 2021 , 142, 188-197	5.2	1
160	Unsupervised Machine Learning Methods for Artifact Removal in Electrodermal Activity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2021 , 2021, 399-402	0.9	0
159	Improved tracking of sevoflurane anesthetic states with drug-specific machine learning models. <i>Journal of Neural Engineering</i> , 2020 , 17, 046020	5	1
158	Uncovering complex central autonomic networks at rest: a functional magnetic resonance imaging study on complex cardiovascular oscillations. <i>Journal of the Royal Society Interface</i> , 2020 , 17, 20190878	4.1	23
157	Assessing Autonomic Function from Electrodermal Activity and Heart Rate Variability During Cold-Pressor Test and Emotional Challenge. <i>Scientific Reports</i> , 2020 , 10, 5406	4.9	27
156	Impact of sex and depressed mood on the central regulation of cardiac autonomic function. <i>Neuropsychopharmacology</i> , 2020 , 45, 1280-1288	8.7	6
155	Stimulus frequency modulates brainstem response to respiratory-gated transcutaneous auricular vagus nerve stimulation. <i>Brain Stimulation</i> , 2020 , 13, 970-978	5.1	17
154	Characterization of Eye Gaze and Pupil Diameter Measurements from Remote and Mobile Eye-Tracking Devices. <i>IFMBE Proceedings</i> , 2020 , 201-208	0.2	0
153	An Automated Speech-in-Noise Test for Remote Testing: Development and Preliminary Evaluation. <i>American Journal of Audiology</i> , 2020 , 29, 564-576	1.8	9
152	Point process temporal structure characterizes electrodermal activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 26422-26428	11.5	3
151	The role of waveform monitoring in Sepsis identification within the first hour of Intensive Care Unit stay 2020 ,		2
150	Intrinsic Complexity of Sympathetic and Parasympathetic Dynamics from HRV series: a Preliminary Study on Postural Changes. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> ,	0.9	
149	Quantifying Functional Links between Brain and Heartbeat Dynamics in the Multifractal Domain: a Preliminary Analysis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2020 ,	0.9	4
148	A Point Process Framework for the Characterization of Fetal Sleep States. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2020 , 2020, 612-615	0.9	
147	Prediction of Septic Shock Onset in ICU by Instantaneous Monitoring of Vital Signs. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2020 , 2020, 2768-2771	0.9	2
146	Analyzing Transitions in Anesthesia by Multimodal Characterization of Autonomic State 2020 ,		1
145	Instantaneous Brain-to-Heart Functional Assessment using Inhomogeneous Point-process Models: a Proof of Concept Study 2020 ,		1
144	Detecting Loss and Regain of Consciousness during Propofol Anesthesia using Multimodal Indices of Autonomic State. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2020 ,	0.9	2

143	Frequency dependent functional brain reorganization in anesthesia is specific to drug concentration. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2020, 2020, 2921-2924</i>	0.9	
142	Analysis of physiological and non-contact signals for the assessment of emotional components in consumer preference 2020 ,		1
141	Modulatory Effects of Respiratory-Gated Auricular Vagal Nerve Stimulation on Cardiovascular Activity in Hypertension. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2020, 2020, 2581-2584</i>	0.9	3
140	An Inhomogeneous Point-process Model For the Assessment of the Brain-to-Heart Functional Interplay: a Pilot Study. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2020, 2020, 557-560</i>	0.9	2
139	Central modulation of parasympathetic outflow is impaired in de novo Parkinson's disease patients. <i>PLoS ONE, 2019, 14, e0210324</i>	3.7	8
138	Lateralization of directional brain-heart information transfer during visual emotional elicitation. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2019, 317, R25-R38</i>	3.2	14
137	The central autonomic network at rest: Uncovering functional MRI correlates of time-varying autonomic outflow. <i>NeuroImage, 2019, 197, 383-390</i>	7.9	43
136	Closed-Loop Cardiovascular Interactions and the Baroreflex Cardiac Arm: Modulations Over the 24 h and the Effect of Hypertension. <i>Frontiers in Physiology, 2019, 10, 477</i>	4.6	6
135	The influence of respiration on brainstem and cardiovagal response to auricular vagus nerve stimulation: A multimodal ultrahigh-field (7T) fMRI study. <i>Brain Stimulation, 2019, 12, 911-921</i>	5.1	44
134	A Point Process Framework for the Characterization of Sleep States in Early Infancy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2019, 2019, 3645-3648</i>	0.9	2
133	Development and preliminary evaluation of a novel adaptive staircase procedure for automated speech-in-noise testing. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2019, 2019, 6991-6994</i>	0.9	5
132	Automatic Detection of General Anesthetic-States using ECG-Derived Autonomic Nervous System Features. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2019, 2019, 2019-2022</i>	0.9	2
131	A Systematic Method for Preprocessing and Analyzing Electrodermal Activity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2019, 2019, 6902-6905</i>	0.9	9
130	Mortality Prediction in Severe Congestive Heart Failure Patients with Multifractal Point-Process Modeling of Heartbeat Dynamics. <i>IEEE Transactions on Biomedical Engineering, 2018, 65, 2345-2354</i>	5	21
129	Measures of sympathetic and parasympathetic autonomic outflow from heartbeat dynamics. <i>Journal of Applied Physiology, 2018, 125, 19-39</i>	3.7	29
128	Multivariate Granger causality unveils directed parietal to prefrontal cortex connectivity during task-free MRI. <i>Scientific Reports, 2018, 8, 5571</i>	4.9	25
127	Analysis of Instantaneous Linear, Nonlinear and Complex Cardiovascular Dynamics from Videophotoplethysmography. <i>Methods of Information in Medicine, 2018, 57, 135-140</i>	1.5	2
126	Instantaneous Transfer Entropy for the Study of Cardiovascular and Cardiorespiratory Nonstationary Dynamics. <i>IEEE Transactions on Biomedical Engineering, 2018, 65, 1077-1085</i>	5	9

125	Feature-continuous motion judgements: Assessing different random dot motion displays. <i>Journal of Vision</i> , 2018 , 18, 668	0.4	1
124	Assessment of Instantaneous Heartbeat Dynamics in amnesic Mild Cognitive Impairment. <i>IFMBE Proceedings</i> , 2018 , 366-369	0.2	
123	EEG indices correlate with sustained attention performance in patients affected by diffuse axonal injury. <i>Medical and Biological Engineering and Computing</i> , 2018 , 56, 991-1001	3.1	11
122	ECG-Derived Sympathetic and Parasympathetic Nervous System Dynamics: A Congestive Heart Failure Study 2018 ,		2
121	ECG-Derived Sympathetic and Parasympathetic Activity in the Healthy: an Early Lower-Body Negative Pressure Study Using Adaptive Kalman Prediction. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2018 , 2018, 5628-5631	0.9	2
120	A Point Process Characterization Of Electrodermal Activity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2018 , 2018, 37-40	0.9	10
119	A Stimulus-Response Processing Framework for Pupil Dynamics Assessment during Iso-Luminant Stimuli. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2018 , 2018, 400-403	0.9	1
118	Corrections to EEG Analysis During Active and Assisted Repetitive Movements: Evidence for Differences in Neural Engagement <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2018 , 26, 1311-1311	4.8	
117	Motion sickness increases functional connectivity between visual motion and nausea-associated brain regions. <i>Autonomic Neuroscience: Basic and Clinical</i> , 2017 , 202, 108-113	2.4	23
116	Complexity Variability Assessment of Nonlinear Time-Varying Cardiovascular Control. <i>Scientific Reports</i> , 2017 , 7, 42779	4.9	29
115	Patient-Specific Classification of ICU Sedation Levels From Heart Rate Variability. <i>Critical Care Medicine</i> , 2017 , 45, e683-e690	1.4	20
114	Modulation of brainstem activity and connectivity by respiratory-gated auricular vagal afferent nerve stimulation in migraine patients. <i>Pain</i> , 2017 , 158, 1461-1472	8	60
113	Causal brain-heart information transfer during visual emotional elicitation in healthy subjects: Preliminary evaluations and future perspectives. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2017 , 2017, 1559-1562	0.9	3
112	Introduction to Complex Cardiovascular Physiology 2017 , 3-42		1
111	Applications of Heartbeat Complexity Analysis to Depression and Bipolar Disorder 2017 , 345-374		
110	Time-Varying Cardiovascular Complexity with Focus on Entropy and Lyapunov Exponents 2017 , 233-256		
109	EEG Analysis During Active and Assisted Repetitive Movements: Evidence for Differences in Neural Engagement. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2017 , 25, 761-771	4.8	29
108	Predicting Bradycardia in Preterm Infants Using Point Process Analysis of Heart Rate. <i>IEEE Transactions on Biomedical Engineering</i> , 2017 , 64, 2300-2308	5	23

107	Assessment of instantaneous cardiovascular dynamics from video plethysmography. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2017 , 2017, 1776-1779	0.9	3
106	Validation of instantaneous bispectral high-frequency power of heartbeat dynamics as a marker of cardiac vagal activity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2017 , 2017, 3117-3120	0.9	1
105	Respiratory-gated Auricular Vagal Afferent Nerve Stimulation (RAVANS) effects on autonomic outflow in hypertension. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2017 , 2017, 3130-3133	0.9	8
104	e-Health solutions for better care: Characterization of health apps to extract meaningful information and support users' choices 2017 ,		6
103	Instantaneous Assessment of Hedonic Olfactory Perception Using Heartbeat Nonlinear Dynamics: a Preliminary Study 2017 ,		3
102	Nonlinear analysis of pupillary dynamics. <i>Biomedizinische Technik</i> , 2016 , 61, 95-106	1.3	6
101	Reconstructing multivariate causal structure between functional brain networks through a Laguerre-Volterra based Granger causality approach. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2016 , 2016, 5477-5480	0.9	1
100	Assessment of spontaneous cardiovascular oscillations in Parkinson's disease. <i>Biomedical Signal Processing and Control</i> , 2016 , 26, 80-89	4.9	22
99	Relationship between cardiac vagal activity and mood congruent memory bias in major depression. <i>Journal of Affective Disorders</i> , 2016 , 190, 19-25	6.6	5
98	Brain Circuitry Supporting Multi-Organ Autonomic Outflow in Response to Nausea. <i>Cerebral Cortex</i> , 2016 , 26, 485-97	5.1	34
97	Improving heart rate estimation in preterm infants with bivariate point process analysis of heart rate and respiration. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2016 , 2016, 820-823	0.9	3
96	Disentanglement of sympathetic and parasympathetic activity by instantaneous analysis of human heartbeat dynamics. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2016 , 2016, 824-827	0.9	
95	Globally conditioned Granger causality in brain-brain and brain-heart interactions: a combined heart rate variability/ultra-high-field (7 T) functional magnetic resonance imaging study. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374,	3	32
94	Neuroimaging brainstem circuitry supporting cardiovagal response to pain: a combined heart rate variability/ultra-high-field (7 T) functional magnetic resonance imaging study. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374,	3	27
93	Uncovering brain-heart information through advanced signal and image processing. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374,	3	26
92	The somatosensory link in fibromyalgia: functional connectivity of the primary somatosensory cortex is altered by sustained pain and is associated with clinical/autonomic dysfunction. <i>Arthritis and Rheumatology</i> , 2015 , 67, 1395-1405	9.5	74
91	Nonlinear digital signal processing in mental health: characterization of major depression using instantaneous entropy measures of heartbeat dynamics. <i>Frontiers in Physiology</i> , 2015 , 6, 74	4.6	17
90	Combining sudomotor nerve impulse estimation with fMRI to investigate the central sympathetic response to nausea. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 1683-6	0.9	4

89	Globally conditioned causality in estimating directed brain-heart interactions through joint MRI and RR series analysis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2015, 2015, 3795-8</i>	0.9	
88	Instantaneous transfer entropy for the study of cardio-respiratory dynamics. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2015, 2015, 7885-8</i>	0.9	4
87	2015,		3
86	Characterization of fear conditioning and fear extinction by analysis of electrodermal activity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2015, 2015, 7814-8</i>	0.9	26
85	2015,		1
84	Uncovering statistical features of bradycardia severity in premature infants using a point process model. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2015, 2015, 5855-8</i>	0.9	4
83	Estimating a dynamic state to relate neural spiking activity to behavioral signals during cognitive tasks. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2015, 2015, 7808-13</i>	0.9	6
82	EEG-based index for engagement level monitoring during sustained attention. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2015, 2015, 1512-5</i>	0.9	23
81	Characterization of depressive States in bipolar patients using wearable textile technology and instantaneous heart rate variability assessment. <i>IEEE Journal of Biomedical and Health Informatics, 2015, 19, 263-74</i>	7.2	48
80	Revealing real-time emotional responses: a personalized assessment based on heartbeat dynamics. <i>Scientific Reports, 2014, 4, 4998</i>	4.9	96
79	Inhomogeneous point-process entropy: an instantaneous measure of complexity in discrete systems. <i>Physical Review E, 2014, 89, 052803</i>	2.4	45
78	Point-process nonlinear autonomic assessment of depressive states in bipolar patients. <i>Methods of Information in Medicine, 2014, 53, 296-302</i>	1.5	34
77	Tracking instantaneous entropy in heartbeat dynamics through inhomogeneous point-process nonlinear models. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2014, 2014, 6249-72</i>	0.9	
76	Maximal-radius multiscale entropy of cardiovascular variability: a promising biomarker of pathological mood states in bipolar disorders. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2014, 2014, 6663-6</i>	0.9	2
75	Assessing instantaneous QT variability dynamics within a point-process nonlinear framework 2014,		2
74	Assessment of gait nonlinear dynamics by inhomogeneous point-process models. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2014, 2014, 6973-6</i>	0.9	1
73	Likelihood methods for point processes with refractoriness. <i>Neural Computation, 2014, 26, 237-63</i>	2.9	26
72	Modeling heart beat dynamics and fMRI signals during carotid stimulation by neck suction. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2014, 2014, 6647-50</i>	0.9	

71	Estimation of instantaneous complex dynamics through Lyapunov exponents: a study on heartbeat dynamics. <i>PLoS ONE</i> , 2014 , 9, e105622	3.7	40
70	Instantaneous monitoring of heart beat dynamics during anesthesia and sedation. <i>Journal of Computational Surgery</i> , 2014 , 1,		8
69	Brain correlates of phasic autonomic response to acupuncture stimulation: an event-related fMRI study. <i>Human Brain Mapping</i> , 2013 , 34, 2592-606	5.9	52
68	. <i>IEEE Transactions on Signal Processing</i> , 2013 , 61, 2914-2926	4.8	57
67	Reconstruction and analysis of the pupil dilation signal: Application to a psychophysiological affective protocol. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 5-8	0.9	5
66	Instantaneous nonlinear assessment of complex cardiovascular dynamics by Laguerre-Volterra point process models. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 4131-4	0.9	19
65	A nonlinear heartbeat dynamics model approach for personalized emotion recognition. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 2579-82	0.9	27
64	Point process modeling of interbreath interval: a new approach for the assessment of instability of breathing in neonates. <i>IEEE Transactions on Biomedical Engineering</i> , 2013 , 60, 2858-66	5	10
63	Characterization of affective states by pupillary dynamics and autonomic correlates. <i>Frontiers in Neuroengineering</i> , 2013 , 6, 9		27
62	Monitoring heartbeat nonlinear dynamics during general anesthesia by using the instantaneous dominant Lyapunov exponent. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 3131-7	0.9	3
61	Instantaneous estimation of high-order nonlinear heartbeat dynamics by Lyapunov exponents. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2012 , 2012, 13-6	0.9	18
60	A real-time automated point-process method for the detection and correction of erroneous and ectopic heartbeats. <i>IEEE Transactions on Biomedical Engineering</i> , 2012 , 59, 2828-37	5	69
59	A multivariate time-frequency method to characterize the influence of respiration over heart period and arterial pressure. <i>Eurasip Journal on Advances in Signal Processing</i> , 2012 , 2012,	1.9	19
58	A unified point process probabilistic framework to assess heartbeat dynamics and autonomic cardiovascular control. <i>Frontiers in Physiology</i> , 2012 , 3, 4	4.6	5
57	Point process time-frequency analysis of dynamic respiratory patterns during meditation practice. <i>Medical and Biological Engineering and Computing</i> , 2012 , 50, 261-75	3.1	9
56	Using Laguerre expansion within point-process models of heartbeat dynamics: a comparative study. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2012 , 2012, 29-32	0.9	13
55	Bivariate point process modeling and joint non-stationary analysis of pulse transit time and heart period. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2012 , 2012, 2831-4	0.9	6
54	Instantaneous assessment of autonomic cardiovascular control during general anesthesia. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 8444-7	0.9	2

53	Static and dynamic autonomic response with increasing nausea perception. <i>Aviation, Space, and Environmental Medicine</i> , 2011 , 82, 424-33		22
52	Statistical inference for assessing functional connectivity of neuronal ensembles with sparse spiking data. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2011 , 19, 121-35	4.8	42
51	Assessment of cardio-respiratory interactions in preterm infants by bivariate autoregressive modeling and surrogate data analysis. <i>Early Human Development</i> , 2011 , 87, 477-87	2.2	11
50	Blood pressure variability and closed-loop baroreflex assessment in adolescent chronic fatigue syndrome during supine rest and orthostatic stress. <i>European Journal of Applied Physiology</i> , 2011 , 111, 497-507	3.4	32
49	Dynamic assessment of baroreflex control of heart rate during induction of propofol anesthesia using a point process method. <i>Annals of Biomedical Engineering</i> , 2011 , 39, 260-76	4.7	40
48	Instantaneous monitoring of sleep fragmentation by point process heart rate variability and respiratory dynamics. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 2311-4	0.9	4
47	Point-process analysis of neural spiking activity of muscle spindles recorded from thin-film longitudinal intrafascicular electrodes. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 2311-4	0.9	1
46	A point process approach for analyzing gait variability dynamics. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 1648-51	0.9	2
45	A point process model of respiratory dynamics in early physiological development. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 3804-7	0.9	1
44	Psychophysiological signals associated with affective states. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2010 , 2010, 3563-6	0.9	32
43	A differential autoregressive modeling approach within a point process framework for non-stationary heartbeat intervals analysis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2010 , 2010, 3567-70	0.9	7
42	Point process time-frequency analysis of respiratory sinus arrhythmia under altered respiration dynamics. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2010 , 2010, 1622-5	0.9	5
41	Characterizing nonlinear heartbeat dynamics within a point process framework. <i>IEEE Transactions on Biomedical Engineering</i> , 2010 , 57, 1335-47	5	39
40	State Space Modeling of Neural Spike Train and Behavioral Data 2010 , 175-218		8
39	Characterizing the dynamic frequency structure of fast oscillations in the rodent hippocampus. <i>Frontiers in Integrative Neuroscience</i> , 2009 , 3, 11	3.2	19
38	Discrete- and continuous-time probabilistic models and algorithms for inferring neuronal UP and DOWN states. <i>Neural Computation</i> , 2009 , 21, 1797-862	2.9	27
37	A regularized point process generalized linear model for assessing the functional connectivity in the cat motor cortex. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2009 , 2009, 5006-9	0.9	4
36	Assessment of autonomic control and respiratory sinus arrhythmia using point process models of human heart beat dynamics. <i>IEEE Transactions on Biomedical Engineering</i> , 2009 , 56, 1791-802	5	42

35	Measuring instantaneous frequency of local field potential oscillations using the Kalman smoother. <i>Journal of Neuroscience Methods</i> , 2009 , 184, 365-74	3	20
34	Linear and nonlinear quantification of respiratory sinus arrhythmia during propofol general anesthesia. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2009 , 2009, 5336-9	0.9	5
33	A unified point process framework for assessing heartbeat dynamics and cardiovascular control 2009 ,		1
32	Assessment of Baroreflex Control of Heart Rate During General Anesthesia Using a Point Process Method. <i>Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing</i> , 2009 , 2009, 333-336	1.6	4
31	Autonomic heart rate control at rest and during unloading of the right ventricle in repaired tetralogy of Fallot in adolescents. <i>American Journal of Cardiology</i> , 2008 , 102, 1085-9	3	4
30	Instantaneous frequency and amplitude modulation of EEG in the hippocampus reveals state dependent temporal structure. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2008 , 2008, 4711-5	0.9	6
29	Brain correlates of autonomic modulation: combining heart rate variability with fMRI. <i>NeuroImage</i> , 2008 , 42, 169-77	7.9	257
28	A Study of Probabilistic Models for Characterizing Human Heart Beat Dynamics in Autonomic Blockade Control. <i>Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing</i> , 2008 , 481-484	1.6	11
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