Riccardo Barbieri

List of Publications by Citations

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	The time-rescaling theorem and its application to neural spike train data analysis. *Neural Computation*, **2002**, 14, 325-46	2.9	363
177	Dynamic analysis of neural encoding by point process adaptive filtering. *Neural Computation*, **2004**, 16, 971-98	2.9	263
176	Brain correlates of autonomic modulation: combining heart rate variability with fMRI. *NeuroImage*, **2008**, 42, 169-77	7.9	257
175	A point-process model of human heartbeat intervals: new definitions of heart rate and heart rate variability. *American Journal of Physiology - Heart and Circulatory Physiology*, **2005**, 288, H424-35	5.2	186
174	Construction and analysis of non-Poisson stimulus-response models of neural spiking activity. *Journal of Neuroscience Methods*, **2001**, 105, 25-37	3	157
173	Dynamic analyses of information encoding in neural ensembles. *Neural Computation*, **2004**, 16, 277-307	2.9	123
172	Revealing real-time emotional responses: a personalized assessment based on heartbeat dynamics. *Scientific Reports*, **2014**, 4, 4998	4.9	96
171	Heart rate control and mechanical cardiopulmonary coupling to assess central volume: a systems analysis. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2002**, 283, R1210-20	3.2	85
170	Analysis of heartbeat dynamics by point process adaptive filtering. *IEEE Transactions on Biomedical Engineering*, **2006**, 53, 4-12	5	84
169	The somatosensory link in fibromyalgia: functional connectivity of the primary somatosensory cortex is altered by sustained pain and is associated with clinical/autonomic dysfunction. *Arthritis and Rheumatology*, **2015**, 67, 1395-1405	9.5	74
168	A real-time automated point-process method for the detection and correction of erroneous and ectopic heartbeats. *IEEE Transactions on Biomedical Engineering*, **2012**, 59, 2828-37	5	69
167	Construction of point process adaptive filter algorithms for neural systems using sequential Monte Carlo methods. *IEEE Transactions on Biomedical Engineering*, **2007**, 54, 419-28	5	66
166	Modulation of brainstem activity and connectivity by respiratory-gated auricular vagal afferent nerve stimulation in migraine patients. *Pain*, **2017**, 158, 1461-1472	8	60
165	. *IEEE Transactions on Signal Processing*, **2013**, 61, 2914-2926	4.8	57
164	Brain correlates of phasic autonomic response to acupuncture stimulation: an event-related fMRI study. *Human Brain Mapping*, **2013**, 34, 2592-606	5.9	52
163	Changes in cardiovascular function during the sleep onset period in young adults. *Journal of Applied Physiology*, **2005**, 98, 468-76	3.7	50
162	Characterization of depressive States in bipolar patients using wearable textile technology and instantaneous heart rate variability assessment. *IEEE Journal of Biomedical and Health Informatics*, **2015**, 19, 263-74	7.2	48

161	Inhomogeneous point-process entropy: an instantaneous measure of complexity in discrete systems. *Physical Review E*, **2014**, 89, 052803	2.4	45
160	The influence of respiration on brainstem and cardiovagal response to auricular vagus nerve stimulation: A multimodal ultrahigh-field (7T) fMRI study. *Brain Stimulation*, **2019**, 12, 911-921	5.1	44
159	The central autonomic network at rest: Uncovering functional MRI correlates of time-varying autonomic outflow. *NeuroImage*, **2019**, 197, 383-390	7.9	43
158	Statistical inference for assessing functional connectivity of neuronal ensembles with sparse spiking data. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2011**, 19, 121-35	4.8	42
157	Assessment of autonomic control and respiratory sinus arrhythmia using point process models of human heart beat dynamics. *IEEE Transactions on Biomedical Engineering*, **2009**, 56, 1791-802	5	42
156	Estimation of instantaneous complex dynamics through Lyapunov exponents: a study on heartbeat dynamics. *PLoS ONE*, **2014**, 9, e105622	3.7	40
155	Dynamic assessment of baroreflex control of heart rate during induction of propofol anesthesia using a point process method. *Annals of Biomedical Engineering*, **2011**, 39, 260-76	4.7	40
154	Likelihood Methods for Neural Spike Train Data Analysis. *Chapman & Hall/CRC Mathematical and Computational Biology Series*, **2003**,		40
153	Characterizing nonlinear heartbeat dynamics within a point process framework. *IEEE Transactions on Biomedical Engineering*, **2010**, 57, 1335-47	5	39
152	Enhanced vagal withdrawal during mild orthostatic stress in adolescents with chronic fatigue **2008**, 13, 67-73		35
151	An analysis of hippocampal spatio-temporal representations using a Bayesian algorithm for neural spike train decoding. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2005**, 13, 131-6	4.8	35
150	Point-process nonlinear autonomic assessment of depressive states in bipolar patients. *Methods of Information in Medicine*, **2014**, 53, 296-302	1.5	34
149	Brain Circuitry Supporting Multi-Organ Autonomic Outflow in Response to Nausea. *Cerebral Cortex*, **2016**, 26, 485-97	5.1	34
148	Multivariate time-variant identification of cardiovascular variability signals: a beat-to-beat spectral parameter estimation in vasovagal syncope. *IEEE Transactions on Biomedical Engineering*, **1997**, 44, 978-89	5	33
147	Blood pressure variability and closed-loop baroreflex assessment in adolescent chronic fatigue syndrome during supine rest and orthostatic stress. *European Journal of Applied Physiology*, **2011**, 111, 497-507	3.4	32
146	Psychophysiological signals associated with affective states. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 3563-6	0.9	32
145	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. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2016**, 374,	3	32
144	Complexity Variability Assessment of Nonlinear Time-Varying Cardiovascular Control. *Scientific Reports*, **2017**, 7, 42779	4.9	29

143	Measures of sympathetic and parasympathetic autonomic outflow from heartbeat dynamics. *Journal of Applied Physiology*, **2018**, 125, 19-39	3.7	29
142	EEG Analysis During Active and Assisted Repetitive Movements: Evidence for Differences in Neural Engagement. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2017**, 25, 761-771	4.8	29
141	Assessing Autonomic Function from Electrodermal Activity and Heart Rate Variability During Cold-Pressor Test and Emotional Challenge. *Scientific Reports*, **2020**, 10, 5406	4.9	27
140	A nonlinear heartbeat dynamics model approach for personalized emotion recognition. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2013**, 2013, 2579-82	0.9	27
139	Characterization of affective states by pupillary dynamics and autonomic correlates. *Frontiers in Neuroengineering*, **2013**, 6, 9		27
138	Discrete- and continuous-time probabilistic models and algorithms for inferring neuronal UP and DOWN states. *Neural Computation*, **2009**, 21, 1797-862	2.9	27
137	Neuroimaging brainstem circuitry supporting cardiovagal response to pain: a combined heart rate variability/ultrahigh-field (7 T) functional magnetic resonance imaging study. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2016**, 374,	3	27
136	Characterization of fear conditioning and fear extinction by analysis of electrodermal activity. *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	0.9	26
135	Likelihood methods for point processes with refractoriness. *Neural Computation*, **2014**, 26, 237-63	2.9	26
134	Uncovering brain-heart information through advanced signal and image processing. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2016**, 374,	3	26
133	Multivariate Granger causality unveils directed parietal to prefrontal cortex connectivity during task-free MRI. *Scientific Reports*, **2018**, 8, 5571	4.9	25
132	Continuous Quantification of Baroreflex and Respiratory Control of Heart Rate by Use of Bivariate Autoregressive Techniques. *Annals of Noninvasive Electrocardiology*, **1996**, 1, 264-277	1.5	24
131	Motion sickness increases functional connectivity between visual motion and nausea-associated brain regions. *Autonomic Neuroscience: Basic and Clinical*, **2017**, 202, 108-113	2.4	23
130	Uncovering complex central autonomic networks at rest: a functional magnetic resonance imaging study on complex cardiovascular oscillations. *Journal of the Royal Society Interface*, **2020**, 17, 20190878	4.1	23
129	Predicting Bradycardia in Preterm Infants Using Point Process Analysis of Heart Rate. *IEEE Transactions on Biomedical Engineering*, **2017**, 64, 2300-2308	5	23
128	EEG-based index for engagement level monitoring during sustained attention. *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	0.9	23
127	Assessment of spontaneous cardiovascular oscillations in Parkinson's disease. *Biomedical Signal Processing and Control*, **2016**, 26, 80-89	4.9	22
126	Static and dynamic autonomic response with increasing nausea perception. *Aviation, Space, and Environmental Medicine*, **2011**, 82, 424-33		22

125	Mortality Prediction in Severe Congestive Heart Failure Patients with Multifractal Point-Process Modeling of Heartbeat Dynamics. *IEEE Transactions on Biomedical Engineering*, **2018**, 65, 2345-2354	5	21
124	Patient-Specific Classification of ICU Sedation Levels From Heart Rate Variability. *Critical Care Medicine*, **2017**, 45, e683-e690	1.4	20
123	Measuring instantaneous frequency of local field potential oscillations using the Kalman smoother. *Journal of Neuroscience Methods*, **2009**, 184, 365-74	3	20
122	A multivariate time-frequency method to characterize the influence of respiration over heart period and arterial pressure. *Eurasip Journal on Advances in Signal Processing*, **2012**, 2012,	1.9	19
121	Instantaneous nonlinear assessment of complex cardiovascular dynamics by Laguerre-Volterra point process models. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2013**, 2013, 6131-4	0.9	19
120	Characterizing the dynamic frequency structure of fast oscillations in the rodent hippocampus. *Frontiers in Integrative Neuroscience*, **2009**, 3, 11	3.2	19
119	Instantaneous estimation of high-order nonlinear heartbeat dynamics by Lyapunov exponents. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 13-6	0.9	18
118	Stimulus frequency modulates brainstem response to respiratory-gated transcutaneous auricular vagus nerve stimulation. *Brain Stimulation*, **2020**, 13, 970-978	5.1	17
117	Nonlinear digital signal processing in mental health: characterization of major depression using instantaneous entropy measures of heartbeat dynamics. *Frontiers in Physiology*, **2015**, 6, 74	4.6	17
116	Lateralization of directional brain-heart information transfer during visual emotional elicitation. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2019**, 317, R25-R38	3.2	14
115	Using Laguerre expansion within point-process models of heartbeat dynamics: a comparative study. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 29-32	0.9	13
114	A multivariate time-variant AR method for the analysis of heart rate and arterial blood pressure. *Medical Engineering and Physics*, **1997**, 19, 109-24	2.4	13
113	Assessment of cardio-respiratory interactions in preterm infants by bivariate autoregressive modeling and surrogate data analysis. *Early Human Development*, **2011**, 87, 477-87	2.2	11
112	A Study of Probabilistic Models for Characterizing Human Heart Beat Dynamics in Autonomic Blockade Control. *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, **2008**, 481-484	1.6	11
111	EEG indices correlate with sustained attention performance in patients affected by diffuse axonal injury. *Medical and Biological Engineering and Computing*, **2018**, 56, 991-1001	3.1	11
110	Point process modeling of interbreath interval: a new approach for the assessment of instability of breathing in neonates. *IEEE Transactions on Biomedical Engineering*, **2013**, 60, 2858-66	5	10
109	Application of dynamic point process models to cardiovascular control. *BioSystems*, **2008**, 93, 120-5	1.9	10
108	A Point Process Characterization Of Electrodermal Activity. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2018**, 2018, 37-40	0.9	10

107	Instantaneous Transfer Entropy for the Study of Cardiovascular and Cardiorespiratory Nonstationary Dynamics. *IEEE Transactions on Biomedical Engineering*, **2018**, 65, 1077-1085	5	9
106	Point process time-frequency analysis of dynamic respiratory patterns during meditation practice. *Medical and Biological Engineering and Computing*, **2012**, 50, 261-75	3.1	9
105	An Automated Speech-in-Noise Test for Remote Testing: Development and Preliminary Evaluation. *American Journal of Audiology*, **2020**, 29, 564-576	1.8	9
104	A Systematic Method for Preprocessing and Analyzing Electrodermal Activity. *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	0.9	9
103	Central modulation of parasympathetic outflow is impaired in de novo Parkinson's disease patients. *PLoS ONE*, **2019**, 14, e0210324	3.7	8
102	Respiratory-gated Auricular Vagal Afferent Nerve Stimulation (RAVANS) effects on autonomic outflow in hypertension. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2017**, 2017, 3130-3133	0.9	8
101	Instantaneous monitoring of heart beat dynamics during anesthesia and sedation. *Journal of Computational Surgery*, **2014**, 1,		8
100	Automatic quantitative evaluation of emotions in E-learning applications. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2006**, 2006, 1359-62		8
99	State Space Modeling of Neural Spike Train and Behavioral Data **2010**, 175-218		8
98	A differential autoregressive modeling approach within a point process framework for non-stationary heartbeat intervals analysis. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 3567-70	0.9	7
97	Characterizing nonlinear heartbeat dynamics within a point process framework. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2008**, 2008, 2781-4	0.9	7
96	Correction of erroneous and ectopic beats using a point process adaptive algorithm. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2006**, 2006, 3373-6		7
95	Nonlinear analysis of pupillary dynamics. *Biomedizinische Technik*, **2016**, 61, 95-106	1.3	6
94	Impact of sex and depressed mood on the central regulation of cardiac autonomic function. *Neuropsychopharmacology*, **2020**, 45, 1280-1288	8.7	6
93	Closed-Loop Cardiovascular Interactions and the Baroreflex Cardiac Arm: Modulations Over the 24 h and the Effect of Hypertension. *Frontiers in Physiology*, **2019**, 10, 477	4.6	6
92	e-Health solutions for better care: Characterization of health apps to extract meaningful information and support users' choices **2017**,		6
91	Estimating a dynamic state to relate neural spiking activity to behavioral signals during cognitive tasks. *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	0.9	6
90	Bivariate point process modeling and joint non-stationary analysis of pulse transit time and heart period. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 2831-4	0.9	6

89	Instantaneous frequency and amplitude modulation of EEG in the hippocampus reveals state dependent temporal structure. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2008**, 2008, 1711-5	0.9	6
88	Relationship between cardiac vagal activity and mood congruent memory bias in major depression. *Journal of Affective Disorders*, **2016**, 190, 19-25	6.6	5
87	A unified point process probabilistic framework to assess heartbeat dynamics and autonomic cardiovascular control. *Frontiers in Physiology*, **2012**, 3, 4	4.6	5
86	Reconstruction and analysis of the pupil dilation signal: Application to a psychophysiological affective protocol. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2013**, 2013, 5-8	0.9	5
85	Point process time-frequency analysis of respiratory sinus arrhythmia under altered respiration dynamics. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 1622-5	0.9	5
84	Linear and nonlinear quantification of respiratory sinus arrhythmia during propofol general anesthesia. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2009**, 2009, 5336-9	0.9	5
83	Construction and analysis of non-Gaussian spatial models of neural spiking activity. *Neurocomputing* , **2002**, 44-46, 309-314	5.4	5
82	Acute Effects of Respiratory-Gated Auricular Vagal Afferent Nerve Stimulation in the Modulation of Blood Pressure in Hypertensive Patients		5
81	Development and preliminary evaluation of a novel adaptive staircase procedure for automated speech-in-noise testing. *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	0.9	5
80	Combining sudomotor nerve impulse estimation with fMRI to investigate the central sympathetic response to nausea. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 1683-6	0.9	4
79	Instantaneous transfer entropy for the study of cardio-respiratory dynamics. *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	0.9	4
78	Uncovering statistical features of bradycardia severity in premature infants using a point process model. *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	0.9	4
77	Instantaneous monitoring of sleep fragmentation by point process heart rate variability and respiratory dynamics. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2011**, 2011, 7735-8	0.9	4
76	A regularized point process generalized linear model for assessing the functional connectivity in the cat motor cortex. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2009**, 2009, 5001-4	0.9	4
75	Assessment of Baroreflex Control of Heart Rate During General Anesthesia Using a Point Process Method. *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing* , **2009**, 2009, 333-336	1.6	4
74	Autonomic heart rate control at rest and during unloading of the right ventricle in repaired tetralogy of Fallot in adolescents. *American Journal of Cardiology*, **2008**, 102, 1085-9	3	4
73	Quantifying Functional Links between Brain and Heartbeat Dynamics in the Multifractal Domain: a Preliminary Analysis. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2020**, 2020, 561-564	0.9	4
72	Integral pulse frequency modulation model driven by sympathovagal dynamics: Synthetic vs. real heart rate variability. *Biomedical Signal Processing and Control*, **2021**, 68, 102736	4.9	4

71	Time-Resolved Brain-to-Heart Probabilistic Information Transfer Estimation Using Inhomogeneous Point-Process Models. *IEEE Transactions on Biomedical Engineering*, **2021**, 68, 3366-3374	5	4
70	Artificial intelligence-based prediction of transfusion in the intensive care unit in patients with gastrointestinal bleeding. *BMJ Health and Care Informatics*, **2021**, 28,	2.6	4
69	Causal brain-heart information transfer during visual emotional elicitation in healthy subjects: Preliminary evaluations and future perspectives. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2017**, 2017, 1559-1562	0.9	3
68	Assessment of instantaneous cardiovascular dynamics from video plethysmography. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2017**, 2017, 1776-1779	0.9	3
67	Instantaneous Assessment of Hedonic Olfactory Perception Using Heartbeat Nonlinear Dynamics: a Preliminary Study **2017**,		3
66	**2015**,		3
65	Monitoring heartbeat nonlinear dynamics during general anesthesia by using the instantaneous dominant Lyapunov exponent. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 3124-7	0.9	3
64	Functional brain-heart interplay extends to the multifractal domain. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2021**, 379, 20200260	3	3
63	Preliminary Evaluation of a Novel Language Independent Speech-in-Noise Test for Adult Hearing Screening. *IFMBE Proceedings*, **2021**, 976-983	0.2	3
62	Point process temporal structure characterizes electrodermal activity. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 26422-26428	11.5	3
61	Modulatory Effects of Respiratory-Gated Auricular Vagal Nerve Stimulation on Cardiovagal Activity in Hypertension. *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	0.9	3
60	A polysomnography study examining the association between sleep and postoperative delirium in older hospitalized cardiac surgical patients. *Journal of Sleep Research*, **2021**, 30, e13322	5.8	3
59	Improving heart rate estimation in preterm infants with bivariate point process analysis of heart rate and respiration. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2016**, 2016, 920-923	0.9	3
58	Functional assessment of bidirectional cortical and peripheral neural control on heartbeat dynamics: A brain-heart study on thermal stress.. *NeuroImage*, **2022**, 251, 119023	7.9	3
57	Analysis of Instantaneous Linear, Nonlinear and Complex Cardiovascular Dynamics from Videophotoplethysmography. *Methods of Information in Medicine*, **2018**, 57, 135-140	1.5	2
56	Maximal-radius multiscale entropy of cardiovascular variability: a promising biomarker of pathological mood states in bipolar disorders. *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	0.9	2
55	Assessing instantaneous QT variability dynamics within a point-process nonlinear framework **2014**,		2
54	Instantaneous assessment of autonomic cardiovascular control during general anesthesia. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2011**, 2011, 8444-7	0.9	2

53	A point process approach for analyzing gait variability dynamics. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2011**, 2011, 1648-51	0.9	2
52	Diagnostic methods for statistical models of place cell spiking activity. *Neurocomputing*, **2001**, 38-40, 1087-1093	5.4	2
51	A time-dependent analysis of spatial information encoding in the rat hippocampus. *Neurocomputing* , **2000**, 32-33, 629-635	5.4	2
50	Investigating Phasic Activity of Time-Varying High-Order Spectra: A Heartbeat Dynamics Study During Cold-Pressure Test		2
49	A novel artificial intelligence based intensive care unit monitoring system: using physiological waveforms to identify sepsis. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2021**, 379, 20200252	3	2
48	The role of waveform monitoring in Sepsis identification within the first hour of Intensive Care Unit stay **2020**,		2
47	Prediction of Septic Shock Onset in ICU by Instantaneous Monitoring of Vital Signs. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2020**, 2020, 2768-2771	0.9	2
46	Detecting Loss and Regain of Consciousness during Propofol Anesthesia using Multimodal Indices of Autonomic State. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2020**,	0.9	2
45	An Inhomogeneous Point-process Model for the Assessment of the Brain-to-Heart Functional Interplay: a Pilot Study. *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	0.9	2
44	A Point Process Framework for the Characterization of Sleep States in Early Infancy. *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	0.9	2
43	Automatic Detection of General Anesthetic-States using ECG-Derived Autonomic Nervous System Features. *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	0.9	2
42	Development and Evaluation of a Novel Method for Adult Hearing Screening: Towards a Dedicated Smartphone App. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*, **2021**, 3-19	0.2	2
41	ECG-Derived Sympathetic and Parasympathetic Nervous System Dynamics: A Congestive Heart Failure Study **2018**,		2
40	ECG-Derived Sympathetic and Parasympathetic Activity in the Healthy: an Early Lower-Body Negative Pressure Study Using Adaptive Kalman Prediction. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2019**, 2019, 5628-5631	0.9	2
39	A Model-Based Framework for Assessing the Physiologic Structure of Electrodermal Activity. *IEEE Transactions on Biomedical Engineering*, **2021**, 68, 2833-2845	5	2
38	Improved tracking of sevoflurane anesthetic states with drug-specific machine learning models. *Journal of Neural Engineering*, **2020**, 17, 046020	5	1
37	Reconstructing multivariate causal structure between functional brain networks through a Laguerre-Volterra based Granger causality approach. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2016**, 2016, 5477-5480	0.9	1
36	Introduction to Complex Cardiovascular Physiology **2017**, 3-42		1

35	Validation of instantaneous bispectral high-frequency power of heartbeat dynamics as a marker of cardiac vagal activity. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2017**, 2017, 3765-3768	0.9	1
34	**2015**,		1
33	Assessment of gait nonlinear dynamics by inhomogeneous point-process models. *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	0.9	1
32	Point-process analysis of neural spiking activity of muscle spindles recorded from thin-film longitudinal intrafascicular electrodes. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference* **2011**, 2011, 6311-4	0.9	1
31	A point process model of respiratory dynamics in early physiological development. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2011**, 2011, 3804-7	0.9	1
30	A unified point process framework for assessing heartbeat dynamics and cardiovascular control **2009**,		1
29	A 'Multiomic' Approach of Saliva Metabolomics, Microbiota, and Serum Biomarkers to Assess the Need of Hospitalization in Coronavirus Disease 2019. **2022**, 1, 194-209		1
28	Point Process Temporal Structure Characterizes Electrodermal Activity		1
27	Feature-continuous motion judgements: Assessing different random dot motion displays. *Journal of Vision*, **2018**, 18, 668	0.4	1
26	A Model-Based Approach for Pulse Selection from Electrodermal Activity		1
25	Analyzing Transitions in Anesthesia by Multimodal Characterization of Autonomic State **2020**,		1
24	Instantaneous Brain-to-Heart Functional Assessment using Inhomogeneous Point-process Models: a Proof of Concept Study **2020**,		1
23	Analysis of physiological and non-contact signals for the assessment of emotional components in consumer preference **2020**,		1
22	Evaluation of a Novel Speech-in-Noise Test for Hearing Screening: Classification Performance and Transducers' Characteristics. *IEEE Journal of Biomedical and Health Informatics*, **2021**, 25, 4300-4307	7.2	1
21	A Stimulus-Response Processing Framework for Pupil Dynamics Assessment during Iso-Luminant Stimuli. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2018**, 2018, 400-403	0.9	1
20	Quantitative assessment of the relationship between behavioral and autonomic dynamics during propofol-induced unconsciousness. *PLoS ONE*, **2021**, 16, e0254053	3.7	1
19	Respiratory-gated auricular vagal afferent nerve stimulation (RAVANS) modulates brain response to stress in major depression. *Journal of Psychiatric Research*, **2021**, 142, 188-197	5.2	1
18	Characterization of Eye Gaze and Pupil Diameter Measurements from Remote and Mobile Eye-Tracking Devices. *IFMBE Proceedings*, **2020**, 201-208	0.2	0

17	Elementary integrate-and-fire process underlies pulse amplitudes in Electrodermal activity. *PLoS Computational Biology*, **2021**, 17, e1009099	5	0
16	Unsupervised Machine Learning Methods for Artifact Removal in Electrodermal Activity. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2021**, 2021, 399-402	0.9	0
15	Applications of Heartbeat Complexity Analysis to Depression and Bipolar Disorder **2017**, 345-374		
14	Time-Varying Cardiovascular Complexity with Focus on Entropy and Lyapunov Exponents **2017**, 233-256		
13	Globally conditioned causality in estimating directed brain-heart interactions through joint MRI and RR series analysis. *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	0.9	
12	Tracking instantaneous entropy in heartbeat dynamics through inhomogeneous point-process nonlinear models. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2014**, 2014, 1360-73	0.9	
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