

Mika P Tarvainen

List of Publications by Year in descending order

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133
papers

6,594
citations

147566

31
h-index

69108

77
g-index

136
all docs

136
docs citations

136
times ranked

7738
citing authors

#	ARTICLE	IF	CITATIONS
1	Kubios HRV â€“ Heart rate variability analysis software. Computer Methods and Programs in Biomedicine, 2014, 113, 210-220.	2.6	1,878
2	An advanced detrending method with application to HRV analysis. IEEE Transactions on Biomedical Engineering, 2002, 49, 172-175.	2.5	898
3	Software for advanced HRV analysis. Computer Methods and Programs in Biomedicine, 2004, 76, 73-81.	2.6	593
4	Where to put your best foot forward: Psycho-physiological responses to walking in natural and urban environments. Journal of Environmental Psychology, 2016, 45, 22-29.	2.3	252
5	A robust algorithm for heart rate variability time series artefact correction using novel beat classification. Journal of Medical Engineering and Technology, 2019, 43, 173-181.	0.8	149
6	Heart rate variability and occupational stressâ€”systematic review. Industrial Health, 2018, 56, 500-511.	0.4	130
7	The effects of views of nature on autonomic control. European Journal of Applied Physiology, 2012, 112, 3379-3386.	1.2	123
8	Cue reactivity and its relation to craving and relapse in alcohol dependence: a combined laboratory and field study. Psychopharmacology, 2015, 232, 3685-3696.	1.5	106
9	Estimation of Nonstationary EEG With Kalman Smoother Approach: An Application to Event-Related Synchronization (ERS). IEEE Transactions on Biomedical Engineering, 2004, 51, 516-524.	2.5	105
10	Novel parameters of surface EMG in patients with Parkinsonâ€™s disease and healthy young and old controls. Journal of Electromyography and Kinesiology, 2009, 19, e206-e213.	0.7	103
11	Perceived Mental Stress and Reactions in Heart Rate Variabilityâ€”A Pilot Study Among Employees of an Electronics Company. International Journal of Occupational Safety and Ergonomics, 2008, 14, 275-283.	1.1	91
12	Cognitive, behavioral, and autonomic correlates of mind wandering and perseverative cognition in major depression. Frontiers in Neuroscience, 2014, 8, 433.	1.4	90
13	Kubios HRV â€” A Software for Advanced Heart Rate Variability Analysis. IFMBE Proceedings, 2009, , 1022-1025.	0.2	88
14	Heart rate variability in acute psychosis. Psychophysiology, 2003, 40, 716-726.	1.2	85
15	Surface EMG and acceleration signals in Parkinsonâ€™s disease: feature extraction and cluster analysis. Medical and Biological Engineering and Computing, 2008, 46, 849-858.	1.6	78
16	Single-Trial Dynamical Estimation of Event-Related Potentials: A Kalman Filter-Based Approach. IEEE Transactions on Biomedical Engineering, 2005, 52, 1397-1406.	2.5	77
17	The relationships among heart rate variability, executive functions, and clinical variables in patients with panic disorder. International Journal of Psychophysiology, 2012, 86, 269-275.	0.5	76
18	The Relationship Between Spectral Changes in Heart Rate Variability and Fatigue. Journal of Psychophysiology, 2009, 23, 143-151.	0.3	75

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19	Time-varying analysis of heart rate variability signals with a Kalman smoother algorithm. <i>Physiological Measurement</i> , 2006, 27, 225-239.	1.2	72
20	Processing intrusion detection alert aggregates with time series modeling. <i>Information Fusion</i> , 2009, 10, 312-324.	11.7	69
21	Normal values for heart rate variability parameters in children 6-8 years of age: the PANIC Study. <i>Clinical Physiology and Functional Imaging</i> , 2014, 34, 290-296.	0.5	67
22	Cardiac Autonomic Dysfunction in Type 2 Diabetes – Effect of Hyperglycemia and Disease Duration. <i>Frontiers in Endocrinology</i> , 2014, 5, 130.	1.5	56
23	Cognitive rigidity is mirrored by autonomic inflexibility in daily life perseverative cognition. <i>Biological Psychology</i> , 2015, 107, 24-30.	1.1	56
24	Linear and nonlinear tremor acceleration characteristics in patients with Parkinson's disease. <i>Physiological Measurement</i> , 2012, 33, 395-412.	1.2	54
25	Analysis of surface EMG signal morphology in Parkinson's disease. <i>Physiological Measurement</i> , 2007, 28, 1507-1521.	1.2	52
26	Heart rate variability during acute psychosocial stress: A randomized cross-over trial of verbal and non-verbal laboratory stressors. <i>International Journal of Psychophysiology</i> , 2018, 127, 17-25.	0.5	47
27	Analysis of EMG and Acceleration Signals for Quantifying the Effects of Deep Brain Stimulation in Parkinson's Disease. <i>IEEE Transactions on Biomedical Engineering</i> , 2011, 58, 2545-2553.	2.5	43
28	Non-Linear EMG Parameters for Differential and Early Diagnostics of Parkinson's Disease. <i>Frontiers in Neurology</i> , 2013, 4, 135.	1.1	41
29	How to Calculate Renyi Entropy from Heart Rate Variability, and Why it Matters for Detecting Cardiac Autonomic Neuropathy. <i>Frontiers in Bioengineering and Biotechnology</i> , 2014, 2, 34.	2.0	38
30	Analysis of galvanic skin responses with principal components and clustering techniques. <i>IEEE Transactions on Biomedical Engineering</i> , 2001, 48, 1071-1079.	2.5	35
31	A Lunchtime Walk in Nature Enhances Restoration of Autonomic Control during Night-Time Sleep: Results from a Preliminary Study. <i>International Journal of Environmental Research and Public Health</i> , 2016, 13, 280.	1.2	35
32	Dynamic time-varying analysis of heart rate and blood pressure variability in cats exposed to short-term chronic intermittent hypoxia. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2008, 295, R28-R37.	0.9	33
33	Effects of nutritive and non-nutritive sucking on infant heart rate variability during the first 6 months of life. , 2007, 30, 546-556.		31
34	A Comparison of Nonlinear Measures for the Detection of Cardiac Autonomic Neuropathy from Heart Rate Variability. <i>Entropy</i> , 2015, 17, 1425-1440.	1.1	29
35	Analysis of Dynamic Voluntary Muscle Contractions in Parkinson's Disease. <i>IEEE Transactions on Biomedical Engineering</i> , 2009, 56, 2280-2288.	2.5	28
36	Effect of heart rate correction on pre- and post-exercise heart rate variability to predict risk of mortality – an experimental study on the FINCAVAS cohort. <i>Frontiers in Physiology</i> , 2014, 5, 208.	1.3	28

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37	Intensified emotion perception in depression: Differences in physiological arousal and subjective perceptions. <i>Psychiatry Research</i> , 2017, 253, 303-310.	1.7	28
38	Wrist band photoplethysmography in detection of individual pulses in atrial fibrillation and algorithm-based detection of atrial fibrillation. <i>Europace</i> , 2019, 21, 1031-1038.	0.7	28
39	Associations of physical activity, sedentary time, and cardiorespiratory fitness with heart rate variability in 6- to 9-year-old children: the PANIC study. <i>European Journal of Applied Physiology</i> , 2019, 119, 2487-2498.	1.2	28
40	Recovery from sauna bathing favorably modulates cardiac autonomic nervous system. <i>Complementary Therapies in Medicine</i> , 2019, 45, 190-197.	1.3	28
41	Oscillatory TMS-EEG-Responses as a Measure of the Cortical Excitability Threshold. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2018, 26, 383-391.	2.7	26
42	Heart Rate Variability Dynamics During Low-Dose Propofol and Dexmedetomidine Anesthesia. <i>Annals of Biomedical Engineering</i> , 2012, 40, 1802-1813.	1.3	23
43	Subjective sleep quality in relation to inhibition and heart rate variability in patients with panic disorder. <i>Journal of Affective Disorders</i> , 2013, 150, 152-155.	2.0	21
44	Differences in Heart Rate Variability of Female Nurses between and within Normal and Extended Work Shifts. <i>Industrial Health</i> , 2013, 51, 154-164.	0.4	20
45	Principal component model for maternal ECG extraction in fetal QRS detection. <i>Physiological Measurement</i> , 2014, 35, 1637-1648.	1.2	20
46	Dynamic estimation of cardiac repolarization characteristics during hypoglycemia in healthy and diabetic subjects. <i>Physiological Measurement</i> , 2011, 32, 649-660.	1.2	19
47	Effectiveness of the Chest Strap Electrocardiogram to Detect Atrial Fibrillation. <i>American Journal of Cardiology</i> , 2019, 123, 1643-1648.	0.7	19
48	Relationships between electrical and mechanical dyssynchrony in patients with left bundle branch block and healthy controls. <i>Journal of Nuclear Cardiology</i> , 2019, 26, 1228-1239.	1.4	18
49	Boundary element method and internal electrodes in electrical impedance tomography. <i>International Journal for Numerical Methods in Engineering</i> , 2001, 50, 809-824.	1.5	17
50	Using renyi entropy to detect early cardiac autonomic neuropathy. , 2013, 2013, 5562-5.		17
51	Moderating effects of the valence of social interaction on the dysfunctional consequences of perseverative cognition: an ecological study in major depression and social anxiety disorder. <i>Anxiety, Stress and Coping</i> , 2019, 32, 179-195.	1.7	17
52	Psycho-physiological responses of repeated exposure to natural and urban environments. <i>Landscape and Urban Planning</i> , 2021, 209, 104061.	3.4	17
53	Heart rate variability derived from exercise ECG in the detection of coronary artery disease. <i>Physiological Measurement</i> , 2007, 28, 1189-1200.	1.2	16
54	Electrical and mechanical dyssynchrony in patients with right bundle branch block. <i>Journal of Nuclear Cardiology</i> , 2020, 27, 621-630.	1.4	16

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55	Principal component analysis of heart rate variability data in assessing cardiac autonomic neuropathy. , 2014, 2014, 6667-70.		15
56	Automatic Mobile Health Arrhythmia Monitoring for the Detection of Atrial Fibrillation: Prospective Feasibility, Accuracy, and User Experience Study. JMIR MHealth and UHealth, 2021, 9, e29933.	1.8	15
57	High-resolution QRS fiducial point corrections in sparsely sampled ECG recordings. Physiological Measurement, 2005, 26, 743-751.	1.2	14
58	A Principal Component Regression Approach for Estimation of Ventricular Repolarization Characteristics. IEEE Transactions on Biomedical Engineering, 2010, 57, 1062-1069.	2.5	14
59	Fluctuations in heart rate variability of health care workers during four consecutive extended work shifts and recovery during rest and sleep. Industrial Health, 2018, 56, 122-131.	0.4	14
60	Wrist Band Photoplethysmography Autocorrelation Analysis Enables Detection of Atrial Fibrillation Without Pulse Detection. Frontiers in Physiology, 2021, 12, 654555.	1.3	14
61	Measurements of skin temperature responses to cold exposure of foot and face in healthy individuals: variability and influencing factors. Clinical Physiology and Functional Imaging, 2011, 31, 307-314.	0.5	13
62	Effects of Implementing an Ergonomic Work Schedule on Heart Rate Variability in Shift-working Nurses. Journal of Occupational Health, 2013, 55, 225-233.	1.0	13
63	Necklace-embedded electrocardiogram for the detection and diagnosis of atrial fibrillation. Clinical Cardiology, 2021, 44, 620-626.	0.7	13
64	Higher levels of Depressive Symptoms are Associated with Increased Resting-State Heart Rate Variability and Blunted Reactivity to a Laboratory Stress Task among Healthy Adults. Applied Psychophysiology Biofeedback, 2019, 44, 221-234.	1.0	12
65	Hypoglycemia detection based on cardiac repolarization features. , 2011, 2011, 4697-700.		11
66	Nitroglycerin-induced changes in facial skin temperature: "cold nose" as a predictor of headache?. Clinical Physiology and Functional Imaging, 2013, 33, 409-417.	0.5	11
67	Psychophysiological responses to positive and negative food and nonfood visual stimuli.. Journal of Neuroscience, Psychology, and Economics, 2016, 9, 78-88.	0.4	11
68	Principal Component Analysis of the Longitudinal Carotid Wall Motion in Association with Vascular Stiffness: A Pilot Study. Ultrasound in Medicine and Biology, 2016, 42, 2873-2886.	0.7	10
69	Physiological stress response patterns during a blood donation. Vox Sanguinis, 2018, 113, 357-367.	0.7	10
70	Time-varying spectrum estimation of heart rate variability signals with Kalman smoother algorithm. , 2009, 2009, 1-4.		9
71	Complexity of heart rate variability in type 2 diabetes - effect of hyperglycemia. , 2013, 2013, 5558-61.		9
72	Associations of cardiometabolic risk factors with heart rate variability in 6- to 8-year-old children: The PANIC Study. Pediatric Diabetes, 2020, 21, 251-258.	1.2	9

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73	The correlation of vectorcardiographic changes to blood lactate concentration during an exercise test. <i>Biomedical Signal Processing and Control</i> , 2013, 8, 491-499.	3.5	8
74	Time-Varying Analysis of Heart Rate Variability with Kalman Smoother Algorithm. , 2005, 2005, 2718-21.		7
75	Analysis of heart rate variability dynamics during propofol and dexmedetomidine anesthesia. , 2010, 2010, 1634-7.		7
76	Heart rate variability evaluation of Emfit sleep mattress breathing categories in NREM sleep. <i>Clinical Neurophysiology</i> , 2015, 126, 967-974.	0.7	7
77	Autonomic responses to tooth clenching in migraineursâ€”augmented trigeminocardiac reflex?. <i>Journal of Oral Rehabilitation</i> , 2018, 45, 764-769.	1.3	7
78	Cardiac Autonomic Activity in Commercial Aircrew During an Actual Flight Duty Period. <i>Aerospace Medicine and Human Performance</i> , 2019, 90, 945-952.	0.2	7
79	Heart rate variability and chronotype â€” a systematic review. <i>Chronobiology International</i> , 2021, 38, 1786-1796.	0.9	7
80	A Subspace Method for Dynamical Estimation of Evoked Potentials. <i>Computational Intelligence and Neuroscience</i> , 2007, 2007, 1-11.	1.1	6
81	Transfer Function Analysis of the Longitudinal Motion of the Common Carotid Artery Wall. <i>Frontiers in Physiology</i> , 2016, 7, 651.	1.3	6
82	Depression and cardiac dysautonomia in eating disorders. <i>Eating and Weight Disorders</i> , 2018, 23, 369-374.	1.2	6
83	Investigation of Linear and Nonlinear Properties of a Heartbeat Time Series Using Multiscale RÃ©nyi Entropy. <i>Entropy</i> , 2019, 21, 727.	1.1	6
84	Work community factors, occupational well-being and work ability in home care: A structural equation modelling. <i>Nursing Open</i> , 2021, 8, 3190-3200.	1.1	6
85	Cross-Cultural Adaptation, Reliability, and Psychophysical Validation of the Pain and Sleep Questionnaire Three-Item Index in Finnish. <i>Journal of Clinical Medicine</i> , 2021, 10, 4887.	1.0	6
86	Assessment of the acute impact of normobaric hypoxia as a part of an intermittent hypoxic training on heart rate variability. <i>Cor Et Vasa</i> , 2015, 57, e251-e256.	0.1	5
87	Nutritive sucking induces age-specific EEG-changes in 0â€”24 week-old infants. , 2016, 45, 98-108.		5
88	Experimental study on the effects of isoflurane with and without remifentanyl or dexmedetomidine on heart rate variability before and after nociceptive stimulation at different MAC multiples in cats. <i>BMC Veterinary Research</i> , 2019, 15, 258.	0.7	5
89	From Individual Output to Pooled Data. <i>Journal of Psychophysiology</i> , 2018, 32, 157-159.	0.3	5
90	Continuous 24-h Photoplethysmogram Monitoring Enables Detection of Atrial Fibrillation. <i>Frontiers in Physiology</i> , 2021, 12, 778775.	1.3	5

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91	The association between chronotype and sleep quality among female home care workers performing shift work. <i>Chronobiology International</i> , 2022, 39, 747-756.	0.9	5
92	From skinner box to daily life: Sign-tracker phenotype co-segregates with impulsivity, compulsivity, and addiction tendencies in humans. <i>Cognitive, Affective and Behavioral Neuroscience</i> , 2022, 22, 1358-1369.	1.0	5
93	Use of Room Temperature Semiconductor Detectors for the Verification of Nuclear Material in International Safeguards Recent Advances. <i>Materials Research Society Symposia Proceedings</i> , 1993, 302, 19.	0.1	4
94	N100 Auditory Potential and Electroencephalogram Discriminate Propofol-Induced Sedation Levels. <i>Journal of Clinical Monitoring and Computing</i> , 2003, 18, 163-170.	0.7	4
95	Discrimination of EMG and acceleration measurements between patients with Parkinson's disease and healthy persons. , 2010, 2010, 4878-81.		4
96	Causal estimation of neural and overall baroreflex sensitivity in relation to carotid artery stiffness. <i>Physiological Measurement</i> , 2013, 34, 1633-1644.	1.2	4
97	Complex nonlinear autonomic nervous system modulation link cardiac autonomic neuropathy and peripheral vascular disease. <i>Frontiers in Physiology</i> , 2015, 6, 101.	1.3	4
98	Multiscale Renyi Entropy and Cardiac Autonomic Neuropathy. , 2015, , .		4
99	Continuous mHealth Patch Monitoring for the Algorithm-Based Detection of Atrial Fibrillation: Feasibility and Diagnostic Accuracy Study. <i>JMIR Cardio</i> , 2022, 6, e31230.	0.7	4
100	Method for Testing Motion Analysis Laboratory Measurement Systems. <i>Journal of Biomechanical Engineering</i> , 2010, 132, 114501.	0.6	3
101	Computational intelligence methods for the identification of early Cardiac Autonomic Neuropathy. , 2013, , .		3
102	Autonomic nervous system response to L-dopa in patients with advanced Parkinson's disease. , 2015, 2015, 6162-5.		3
103	Determinants of Cardiorespiratory Fitness in a Population Sample of Girls and Boys Aged 6 to 8 Years. <i>Journal of Physical Activity and Health</i> , 2016, 13, 1149-1155.	1.0	3
104	Autonomic responses to tooth clenching and handgrip test. <i>Acta Odontologica Scandinavica</i> , 2022, 80, 389-395.	0.9	3
105	Altered Expiratory Flow Dynamics at Peak Exercise in Adult Men With Well-Controlled Type 1 Diabetes. <i>Frontiers in Physiology</i> , 2022, 13, 836814.	1.3	3
106	Principal Component Regression Approach for QT Variability Estimation. , 2005, 2005, 1145-7.		2
107	Analysis of dynamic EMG and acceleration measurements in Parkinson's disease. , 2008, 2008, 5053-6.		2
108	Visualization methods for assisting detection of cardiovascular neuropathy. , 2014, 2014, 6675-8.		2

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109	Heart rate reactivity associated to positive and negative food and non-food visual stimuli. , 2016, 2016, 5279-5282.		2
110	On Correlation Between Single-Trial ERP and GSR Responses: a Principal Component Regression Approach. , 2006, 2006, 5499-502.		1
111	Noise Sensitivity of a Principal Component Regression Based RT Interval Variability Estimation Method. , 2006, 2006, 3098-101.		1
112	Tracking single-trial evoked potential changes with Kalman filtering and smoothing. , 2008, 2008, 157-60.		1
113	Kalman smoother based time-varying spectrum estimation of EEG during single agent propofol anesthesia. , 2009, 2009, 5709-12.		1
114	EMG and acceleration signal analysis for quantifying the effects of medication in Parkinson's disease. , 2011, 2011, 7496-9.		1
115	Cholesterol metabolism, endothelial dysfunction, and carotid artery stiffness in type 1 diabetes†. Artery Research, 2011, 5, 8.	0.3	1
116	Cerebral cortex and sub-cortex lateralization in cardiovascular regulation: Correlations of BOLD fMRI and heart rate variability. , 2012, 2012, 3412-5.		1
117	Dynamic modeling of respiratory sinus arrhythmia component from HRV with multivariate Kalman smoother. , 2013, 2013, 1684-7.		1
118	Evaluation of normalised Renyi entropy for classification of cardiac autonomic neuropathy. , 2014, , .		1
119	Effects of a reduction in the number of short intervals between work shifts on heart rate variability: A prospective field study of female nurses. Clinical Nursing Studies, 2015, 3, .	0.1	1
120	Is a short re-feeding program effective in reducing adverse cardiac events in eating disorder patients?. , 2015, , .		1
121	Endurance exercise improves heart rate complexity in the presence of vagal withdrawal in young adults. , 2015, , .		1
122	Subspace Approaches for fMRI Time Series Estimation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5485-8.	0.5	0
123	A Principal Component Regression Approach for Estimating Ventricular Repolarization Duration Variability. Eurasip Journal on Advances in Signal Processing, 2007, 2007, .	1.0	0
124	Estimation of single-trial fMRI BOLD responses using combined EEG and fMRI measurements. , 2008, 2008, 299-302.		0
125	Estimation of arterial baroreflex sensitivity in relation to carotid artery stiffness. , 2012, 2012, 3408-11.		0
126	Relation of arterial stiffness and axial motion of the carotid artery wall — A pilot study to test our motion tracking algorithm in practice. , 2014, 2014, 246-9.		0

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127	Socioeconomic status, age and heart rate variability in a Bangladeshi community. , 2016, 2016, 5283-5285.		0
128	Verbalization has regulatory influences on autonomic activity during recall of unpleasant experience. Speech Communication, 2021, 126, 1-8.	1.6	0
129	A Principal Component Regression Approach for Estimation of Ventricular Repolarization Characteristics. IFMBE Proceedings, 2009, , 385-388.	0.2	0
130	A transportable camera based motion analysis system with application to monitoring of rehabilitation of hand. IFMBE Proceedings, 2009, , 914-917.	0.2	0
131	Principal Component Approach for Mapping Functional Connectivity in Event-Related fMRI. IFMBE Proceedings, 2009, , 1029-1032.	0.2	0
132	Beat to Beat Estimation of cosRT Angle and cosRT RR Hysteresis from Exercise ECG Measurement. , 2014, , .		0
133	Noise Sensitivity of a Principal Component Regression Based RT Interval Variability Estimation Method. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0