

Pavel Jurak

List of Publications by Year in descending order

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146
papers

2,031
citations

218677

26
h-index

315739

38
g-index

150
all docs

150
docs citations

150
times ranked

2340
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrical brain stimulation and continuous behavioral state tracking in ambulatory humans. <i>Journal of Neural Engineering</i> , 2022, 19, 016019.	3.5	18
2	Arterial Aging Best Reflected in Pulse Wave Velocity Measured from Neck to Lower Limbs: A Whole-Body Multichannel Bioimpedance Study. <i>Sensors</i> , 2022, 22, 1910.	3.8	4
3	Classification of ECG using ensemble of residual CNNs with or without attention mechanism. <i>Physiological Measurement</i> , 2022, 43, 044001.	2.1	4
4	Bilateral bundle branch capture during deep septal myocardial and nonselective left bundle branch pacing preserves interventricular synchrony. <i>Europace</i> , 2022, 24, .	1.7	0
5	Left bundle branch pacing with normal paced QRS axis produce more physiological left ventricular lateral wall depolarization than its pacing resulting in heart axis deviation. <i>Europace</i> , 2022, 24, .	1.7	0
6	Ventricular activation pattern assessment during right ventricular pacing: Ultra-high-frequency ECG study. <i>Journal of Cardiovascular Electrophysiology</i> , 2021, 32, 1385-1394.	1.7	16
7	Thalamic oscillatory activity may predict response to deep brain stimulation of the anterior nuclei of the thalamus. <i>Epilepsia</i> , 2021, 62, e70-e75.	5.1	16
8	Cover Image, Volume 32, Issue 5. <i>Journal of Cardiovascular Electrophysiology</i> , 2021, 32, ii.	1.7	0
9	A Novel Statistical Model for Predicting the Efficacy of Vagal Nerve Stimulation in Patients With Epilepsy (Pre-X-Stim) Is Applicable to Different EEG Systems. <i>Frontiers in Neuroscience</i> , 2021, 15, 635787.	2.8	4
10	3-Dimensional ventricular electrical activation pattern assessed from a novel high-frequency electrocardiographic imaging technique: principles and clinical importance. <i>Scientific Reports</i> , 2021, 11, 11469.	3.3	6
11	Left bundle branch pacing compared to left ventricular septal myocardial pacing increases interventricular dyssynchrony but accelerates left ventricular lateral wall depolarization. <i>Heart Rhythm</i> , 2021, 18, 1281-1289.	0.7	77
12	Cortical network organization reflects clinical response to subthalamic nucleus deep brain stimulation in Parkinson's disease. <i>Human Brain Mapping</i> , 2021, 42, 5626-5635.	3.6	6
13	QRS Complex Detection in Paced and Spontaneous Ultra-High-Frequency ECG. , 2021, , .		2
14	Comparison of UHF-ECG with Other Noninvasive Electrophysiological Mapping Tools for Assessing Ventricular Dyssynchrony. , 2021, , .		0
15	Ultra-High-Frequency Electrocardiography. , 2021, , .		0
16	VDI Vision - Analysis of Ventricular Electrical Dyssynchrony in Real-Time. , 2021, , .		1
17	Physiological versus non-physiological cardiac pacing as assessed by Ultra-high-frequency electrocardiography. , 2021, , .		0
18	Left Ventricular Myocardial Septal Pacing in Close Proximity to LBB Does Not Prolong the Duration of the Left Ventricular Lateral Wall Depolarization Compared to LBB Pacing. <i>Frontiers in Cardiovascular Medicine</i> , 2021, 8, 787414.	2.4	23

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19	Ultra-fast oscillation detection in EEG signal from deep-brain microelectrodes. , 2021, 2021, 265-268.		0
20	Pre-implant Heart Activity Differs in Responders and Non-responders to Vagal Nerve Stimulation Therapy in Epileptic Patients. , 2021, 2021, 5816-5819.		2
21	Fully automated QRS area measurement for predicting response to cardiac resynchronization therapy. Journal of Electrocardiology, 2020, 63, 159-163.	0.9	9
22	Novel ultra-high-frequency electrocardiogram tool for the description of the ventricular depolarization pattern before and during cardiac resynchronization. Journal of Cardiovascular Electrophysiology, 2020, 31, 300-307.	1.7	27
23	Both selective and nonselective His bundle, but not myocardial, pacing preserve ventricular electrical synchrony assessed by ultra-high-frequency ECG. Heart Rhythm, 2020, 17, 607-614.	0.7	36
24	Suboptimal response to STN-DBS in Parkinson's disease can be identified via reaction times in a motor cognitive paradigm. Journal of Neural Transmission, 2020, 127, 1579-1588.	2.8	8
25	Response to Vagal Stimulation by Heart-rate Features in Drug-resistant Epileptic Patients*. , 2020, 2020, 46-49.		0
26	Multicenter intracranial EEG dataset for classification of graphoelements and artifactual signals. Scientific Data, 2020, 7, 179.	5.3	16
27	Intracerebral EEG Artifact Identification Using Convolutional Neural Networks. Neuroinformatics, 2019, 17, 225-234.	2.8	60
28	Exploiting Graphoelements and Convolutional Neural Networks with Long Short Term Memory for Classification of the Human Electroencephalogram. Scientific Reports, 2019, 9, 11383.	3.3	18
29	Multi-feature localization of epileptic foci from interictal, intracranial EEG. Clinical Neurophysiology, 2019, 130, 1945-1953.	1.5	53
30	Comparison of noninvasive pulse transit time determined from Doppler aortic flow and multichannel bioimpedance plethysmography. Medical and Biological Engineering and Computing, 2019, 57, 1151-1158.	2.8	5
31	EEG Reactivity Predicts Individual Efficacy of Vagal Nerve Stimulation in Intractable Epileptics. Frontiers in Neurology, 2019, 10, 392.	2.4	19
32	The relationship between ECG predictors of cardiac resynchronization therapy benefit. PLoS ONE, 2019, 14, e0217097.	2.5	10
33	Automatic Detection of Strict Left Bundle Branch Block. IFMBE Proceedings, 2019, , 435-439.	0.3	1
34	High-Frequency Cardiac Electrophysiology. , 2019, , .		0
35	Ventricular Electrical Delay Measured From Body Surface ECGs Is Associated With Cardiac Resynchronization Therapy Response in Left Bundle Branch Block Patients From the MADIT-CRT Trial (Multicenter Automatic Defibrillator Implantation-Cardiac Resynchronization Therapy). Circulation: Arrhythmia and Electrophysiology, 2018, 11, e005719.	4.8	19
36	CudaFilters: A SignalPlant library for GPU-accelerated FFT and FIR filtering. Software - Practice and Experience, 2018, 48, 3-9.	3.6	7

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37	Shape Analysis of Consecutive Beats May Help in the Automated Detection of Atrial Fibrillation. , 2018, ,		2
38	Physiological and pathological high frequency oscillations in focal epilepsy. Annals of Clinical and Translational Neurology, 2018, 5, 1062-1076.	3.7	71
39	Fully automatic detection of strict left bundle branch block. Journal of Electrocardiology, 2018, 51, S31-S34.	0.9	5
40	Are the subthalamic nucleus, internal globus pallidus and thalamus involved in thinking?. Basal Ganglia, 2018, 14, 22-30.	0.3	0
41	Parallel use of a convolutional neural network and bagged tree ensemble for the classification of Holter ECG. Physiological Measurement, 2018, 39, 094002.	2.1	34
42	Changes in connectivity and local synchrony after cognitive stimulation â€œ Intracerebral EEG study. Biomedical Signal Processing and Control, 2018, 45, 136-143.	5.7	2
43	Respiratory-Induced Hemodynamic Changes Measured by Whole-Body Multichannel Impedance Plethysmography. Physiological Research, 2018, 67, 571-581.	0.9	6
44	Respiratory induced heart rate variability during slow mechanical ventilation. Wiener Klinische Wochenschrift, 2017, 129, 251-258.	1.9	1
45	Combined e-beam lithography using different energies. Microelectronic Engineering, 2017, 177, 30-34.	2.4	2
46	Oscillatory reactivity to effortful cognitive processing in the subthalamic nucleus and internal pallidum: a depth electrode EEG study. Journal of Neural Transmission, 2017, 124, 841-852.	2.8	5
47	Heart sounds analysis using probability assessment. Physiological Measurement, 2017, 38, 1685-1700.	2.1	33
48	Ventricular dyssynchrony assessment using ultra-high frequency ECG technique. Journal of Interventional Cardiac Electrophysiology, 2017, 49, 245-254.	1.3	32
49	Very highâ€frequency oscillations: Novel biomarkers of the epileptogenic zone. Annals of Neurology, 2017, 82, 299-310.	5.3	60
50	Interictal very fast ripples (500-1000 Hz) and ultra fast ripples (1-2 kHz): Novel biomarkers of the epileptogenic zone. Journal of the Neurological Sciences, 2017, 381, 337.	0.6	0
51	Efficient implementation of Stockwell Transform for real-time embedded processing of physiologic signals. , 2017, 2017, 2598-2601.		4
52	The VED Meter - a New Tool to Measure the Ventricular Conduction Abnormalities in Heart Failure Patients. , 2017, , .		4
53	Taming of the monitors: reducing false alarms in intensive care units. Physiological Measurement, 2016, 37, 1313-1325.	2.1	27
54	High-Frequency Oscillations in the Human Anterior Nucleus of the Thalamus. Brain Stimulation, 2016, 9, 629-631.	1.6	10

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55	Ambulatory monitoring of myocardial ischemia in the 21st century – an opportunity for high frequency QRS analysis. <i>Journal of Electrocardiology</i> , 2016, 49, 902-906.	0.9	4
56	Towards real-time QRS feature extraction for wearable monitors. , 2016, 2016, 3519-3522.		7
57	SignalPlant: an open signal processing software platform. <i>Physiological Measurement</i> , 2016, 37, N38-N48.	2.1	51
58	The functional organization of human epileptic hippocampus. <i>Journal of Neurophysiology</i> , 2016, 115, 3140-3145.	1.8	16
59	A multichannel bioimpedance monitor for full-body blood flow monitoring. <i>Biomedizinische Technik</i> , 2016, 61, 107-118.	0.8	8
60	Heart rate variability analysed by Poincaré plot in patients with metabolic syndrome. <i>Journal of Electrocardiology</i> , 2016, 49, 23-28.	0.9	11
61	Can we hear ventricle dyssynchrony? Yes, we can. , 2015, 2015, 6527-30.		0
62	Cardiac resynchronization efficiency estimation by new ultra-high-frequency ECG dyssynchrony descriptor. , 2015, , .		0
63	The impact of sedation on pulse pressure variation. <i>Australian Critical Care</i> , 2015, 28, 203-207.	1.3	0
64	Repolarization parameters in heart transplant subjects. , 2015, , .		0
65	The Role of Anterior Nuclei of the Thalamus: A Subcortical Gate in Memory Processing: An Intracerebral Recording Study. <i>PLoS ONE</i> , 2015, 10, e0140778.	2.5	34
66	An additional marker of ventricular dyssynchrony. , 2015, , .		4
67	Changes of Pulse Wave Velocity in the lower limbs in hypertensive patients. , 2015, , .		1
68	False alarms in intensive care unit monitors: Detection of life-threatening arrhythmias using elementary algebra, descriptive statistics and fuzzy logic. , 2015, , .		19
69	ARE SUBTHALAMICUS NUCLEUS, INTERNAL GLOBUS PALLIDUS AND THALAMUS INVOLVED IN THINKING?. <i>Journal of Neurology, Neurosurgery and Psychiatry</i> , 2015, 86, e4.77-e4.	1.9	0
70	Connectivity of epileptic brain regions in wake and sleep. , 2015, 2015, 2191-4.		5
71	Impact of cognitive stimulation on ripples within human epileptic and non-epileptic hippocampus. <i>BMC Neuroscience</i> , 2015, 16, 47.	1.9	17
72	Complex Motor – Cognitive Factors Processed in the Anterior Nucleus of the Thalamus: An Intracerebral Recording Study. <i>Brain Topography</i> , 2015, 28, 269-278.	1.8	6

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73	Multichannel QRS Morphology Clustering - Data Preprocessing for Ultra-High-Frequency ECG Analysis. , 2015, , .		6
74	The analysis of linear/nonlinear coupling between heart rate and QT intervals. , 2014, , .		0
75	Influence of tilt load on pulse wave velocity in the lower limbs. , 2014, , .		2
76	Time-frequency interpretation of ultra-high-frequency QRS components. , 2014, , .		0
77	Subthalamic nucleus involvement in executive functions with increased cognitive load: a subthalamic nucleus and anterior cingulate cortex depth recording study. Journal of Neural Transmission, 2014, 121, 1287-1296.	2.8	7
78	Mismatch negativity-like potential (MMN-like) in the subthalamic nuclei in Parkinson's disease patients. Journal of Neural Transmission, 2014, 121, 1507-1522.	2.8	10
79	Endovascular brain intervention and mapping in a dog experimental model using magnetically-guided micro-catheter technology. Biomedical Papers of the Medical Faculty of the University Palacký, Olomouc, Czechoslovakia, 2014, 158, 221-226.	0.6	5
80	Oscillatory changes in cognitive networks activated during a three-stimulus visual paradigm: An intracerebral study. Clinical Neurophysiology, 2013, 124, 283-291.	1.5	11
81	The posterior medial cortex is involved in visual but not in verbal memory encoding processing: an intracerebral recording study. Journal of Neural Transmission, 2013, 120, 391-397.	2.8	12
82	Effect of cognitive stimulation on hippocampal ripples in epileptic patients. Journal of the Neurological Sciences, 2013, 333, e35.	0.6	0
83	Intracerebrally recorded high frequency oscillations: Simple visual assessment versus automated detection. Clinical Neurophysiology, 2013, 124, 1935-1942.	1.5	26
84	Analysis of evoked deep brain connectivity. , 2013, 2013, 4358-61.		0
85	Hippocampal negative event-related potential recorded in humans during a simple sensorimotor task occurs independently of motor execution. Hippocampus, 2013, 23, 1337-1344.	1.9	3
86	Statistical significance of task related deep brain EEG dynamic changes in the time-frequency domain. , 2013, 2013, 1025-8.		0
87	Pulse Wave Velocity and Cardiac Output vs. Heart Rate in Patients with an Implanted Pacemaker Based on Electric Impedance Method Measurement. Journal of Physics: Conference Series, 2013, 434, 012050.	0.4	2
88	On the Time Course of Synchronization Patterns of Neuronal Discharges in the Human Brain during Cognitive Tasks. PLoS ONE, 2013, 8, e63293.	2.5	18
89	Measure of the QT's RR Dynamic Coupling in Patients with the Long QT Syndrome. Annals of Noninvasive Electrocardiology, 2012, 17, 323-330.	1.1	14
90	Respiratory induced heart rate and blood pressure variability during mechanical ventilation in critically ill and brain death patients. , 2012, 2012, 3821-4.		0

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91	Intracranial EEG Connectivity Analysis and Result Imaging. International Journal of Bioscience, Biochemistry, Bioinformatics (IJBBB), 2012, , 275-279.	0.2	1
92	Analysis of Time Evolution of Couplings in the Repetitive EEG. , 2012, , .		1
93	Excitation specificity of repolarization parameters. , 2011, 2011, 961-4.		2
94	Ictal and peri-ictal oscillations in the human basal ganglia in temporal lobe epilepsy. Epilepsy and Behavior, 2011, 20, 512-517.	1.7	32
95	The Executive Functions in Frontal and Temporal Lobes: A Flanker Task Intracerebral Recording Study. Journal of Clinical Neurophysiology, 2011, 28, 30-35.	1.7	32
96	Involvement of the subthalamic nucleus and globus pallidus internus in attention. Journal of Neural Transmission, 2011, 118, 1235-1245.	2.8	38
97	Use of a novel transfer function to reduce repolarization interval hysteresis. Journal of Interventional Cardiac Electrophysiology, 2010, 29, 23-32.	1.3	26
98	Interictal high-frequency oscillations indicate seizure onset zone in patients with focal cortical dysplasia. Epilepsy Research, 2010, 90, 28-32.	1.6	40
99	Gene-specific paradoxical QT responses during rapid eye movement sleep in women with congenital long QT syndrome. Heart Rhythm, 2010, 7, 1067-1074.	0.7	10
100	QT/RR Coupling and Gender Differences. Computing in Cardiology, 2010, 37, 365-368.	0.4	4
101	The Effect of Short-term Isometric Muscle Contraction and the Valsalva Maneuver on Systemic and Pulmonary Hemodynamics in Patients with Severe Heart Failure. Clinical Cardiology, 2009, 32, E31-E38.	1.8	7
102	PO18-WE-17 Interictal high-frequency oscillations indicate seizure onset zone in patients with focal cortical dysplasia. Journal of the Neurological Sciences, 2009, 285, S248.	0.6	0
103	Neural correlates of affective picture processing " A depth ERP study. NeuroImage, 2009, 47, 376-383.	4.2	18
104	Heightened acute circulatory responses to smoking in women. Blood Pressure, 2008, 17, 141-146.	1.5	13
105	Dynamic coupling between heart rate and ventricular repolarisation. Biomedizinische Technik, 2007, 52, 255-263.	0.8	11
106	Cardiac Output Measurement in Patients with an Implanted Pacemaker. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 916-8.	0.5	0
107	Blood Pressure Dynamics in Hypertensive Subjects During Tilt Table Test. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 939-42.	0.5	0
108	Dynamic QT/RR Coupling in Patients with Pacemakers. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 919-22.	0.5	7

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109	Executive functions processed in the frontal and lateral temporal cortices: Intracerebral study. <i>Clinical Neurophysiology</i> , 2007, 118, 2625-2636.	1.5	32
110	P3 and ERD/ERS in a Visual Oddball Paradigm. <i>Journal of Psychophysiology</i> , 2006, 20, 32-39.	0.7	6
111	Sympathetic neural responses to smoking are age dependent. <i>Journal of Hypertension</i> , 2006, 24, 691-695.	0.5	19
112	Intracerebral recording of cortical activity related to self-paced voluntary movements: a Bereitschaftspotential and event-related desynchronization/synchronization. SEEG study. <i>Experimental Brain Research</i> , 2006, 173, 637-649.	1.5	51
113	Two-Channel Bioimpedance Monitor for Impedance Cardiography. , 2006, 2006, 6061-3.		3
114	Noninvasive Detection of Vessel Stiffness from Continuous Blood Pressure Recordings in Hypertensive Subjects. , 2006, 2006, 3222-5.		0
115	Intracerebral P3-like waveforms and the length of the stimulusâ€“response interval in a visual oddball paradigm. <i>Clinical Neurophysiology</i> , 2005, 116, 160-171.	1.5	16
116	Menopause, hormone replacement and RR and QT modulation during sleep. <i>Sleep Medicine</i> , 2005, 6, 561-566.	1.6	6
117	Synchronization of gamma oscillations increases functional connectivity of human hippocampus and inferior-middle temporal cortex during repetitive visuomotor events. <i>European Journal of Neuroscience</i> , 2004, 19, 3088-3098.	2.6	19
118	THE EFFECT OF VALSALVA MANEUVER AND SHORT ISOMETRIC CONTRACTION ON AUTONOMIC FUNCTIONS AND CORONARY FLOW IN PATIENTS WITH SEVERE CHRONIC HEART FAILURE. <i>Journal of Hypertension</i> , 2004, 22, S92.	0.5	0
119	CHANGES IN AUTONOMIC FUNCTIONS DURING TILT TABLE TEST WITH PACED BREATHING IN YOUNG AND ELDERLY HEALTHY VOLUNTEERS. <i>Journal of Hypertension</i> , 2004, 22, S27.	0.5	0
120	Identical event-related potentials to target and frequent stimuli of visual oddball task recorded by intracerebral electrodes. <i>Clinical Neurophysiology</i> , 2003, 114, 1292-1297.	1.5	11
121	The effect of apomorphine administration on smooth pursuit ocular movements in early Parkinsonian patients. <i>Parkinsonism and Related Disorders</i> , 2003, 9, 139-144.	2.2	41
122	Variability of Phase Shift Between Blood Pressure and Heart Rate Fluctuations. <i>Circulation</i> , 2003, 108, 292-297.	1.6	43
123	Sex-Selective QT Prolongation During Rapid Eye Movement Sleep. <i>Circulation</i> , 2002, 106, 1488-1492.	1.6	37
124	Error processing â€“ evidence from intracerebral ERP recordings. <i>Experimental Brain Research</i> , 2002, 146, 460-466.	1.5	80
125	Intracerebral event-related potentials to subthreshold target stimuli. <i>Clinical Neurophysiology</i> , 2001, 112, 650-661.	1.5	88
126	CHANGES IN AUTOREGULATION OF BRAIN CIRCULATION IN PATIENTS WITH VASOVAGAL SYNCOPE DURING TILT TABLE TEST. <i>Journal of Hypertension</i> , 2000, 18, S60.	0.5	0

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127	THE INFLUENCE OF SYMPATHETIC CHOLINERGIC SYSTEM ON BLOOD PRESSURE REGULATION. Journal of Hypertension, 2000, 18, S60.	0.5	0
128	BREATHING AND TESTING OF AUTONOMIC NERVOUS SYSTEM. Journal of Hypertension, 2000, 18, S59.	0.5	0
129	The role of frontal and temporal lobes in visual discrimination task " depth ERP studies. Neurophysiologie Clinique, 1999, 29, 339-350.	2.2	53
130	Reproducibility of methods for assessing baroreflex sensitivity in normal controls and in patients with chronic heart failure. Clinical Science, 1999, 97, 515-522.	4.3	86
131	Reproducibility of methods for assessing baroreflex sensitivity in normal controls and in patients with chronic heart failure. Clinical Science, 1999, 97, 515.	4.3	39
132	Effect of subthreshold target stimuli on event-related potentials. Electroencephalography and Clinical Neurophysiology, 1998, 107, 64-68.	0.3	32
133	Vibration plethysmography: A method for studying the visco-elastic properties of finger arteries. Medical and Biological Engineering and Computing, 1997, 35, 633-637.	2.8	22
134	Automatic Detection of Atrial Fibrillation and Other Arrhythmias in Holter ECG Recordings using PQRS Morphology and Rhythm Features. , 0, , .		17
135	Fast Detection of Ventricular Tachycardia and Fibrillation in 1-Lead ECG from Three-Second Blocks. , 0, , .		2
136	Automated Sleep Arousal Detection Based on EEG Envelopgrams. , 0, , .		7
137	The Relationship between Mechanical and Electrical Dyssynchrony. , 0, , .		2
138	Precise pacing artefact detection. , 0, , .		2
139	Discrimination of Normal and Abnormal Heart Sounds Using Probability Assessment. , 0, , .		3
140	Biventricular Pacing Optimization by Means of the Dyssynchrony Parameter. , 0, , .		0
141	Attenuation of QRS Power in the Frequency Range from 0.05 to 1 kHz. , 0, , .		0
142	Reverse Electrical Remodeling Assessed by High-Frequency QRS Dyssynchrony and QRS Duration. , 0, , .		0
143	High Frequency QRS Analysis From Orthogonal Leads. , 0, , .		0
144	A Method for Removing Pacing Artifacts From Ultra-High-Frequency Electrocardiograms. , 0, , .		1

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145	Epicardial Isochrones from a New High-Frequency ECG Imaging Technique. , 0, , .		0
146	Body-Surface Mapping Using High-Frequency ECG to Characterize Electrical Activation Delay. , 0, , .		0