Rik Vullings

List of Publications by Year
in descending order

53 papers	1,097 citations	430843 18 h-index	434170 31 g-index
54 all docs	54 docs citations	54 times ranked	1180 citing authors

#	Article	IF	Citations
1	An Adaptive Kalman Filter for ECG Signal Enhancement. IEEE Transactions on Biomedical Engineering, 2011, 58, 1094-1103.	4.2	136
2	Motion Artifact Reduction for Wrist-Worn Photoplethysmograph Sensors Based on Different Wavelengths. Sensors, 2019, 19, 673.	3.8	89
3	Dynamic segmentation and linear prediction for maternal ECG removal in antenatal abdominal recordings. Physiological Measurement, 2009, 30, 291-307.	2.1	77
4	Doppler Ultrasound Technology for Fetal Heart Rate Monitoring: A Review. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 226-238.	3.0	54
5	Wearable monitoring of sleep-disordered breathing: estimation of the apneaâ€“hypopnea index using wrist-worn reflective photoplethysmography. Scientific Reports, 2020, 10, 13512.	3.3	51
6	Reduction of false arrhythmia alarms using signal selection and machine learning. Physiological Measurement, 2016, 37, 1204-1216.	2.1	46
7	Comparison between electrocardiogram- and photoplethysmogram-derived features for atrial fibrillation detection in free-living conditions. Physiological Measurement, 2018, 39, 084001.	2.1	46
8	Fetal heart rate variability during pregnancy, obtained from nonâ€invasive electrocardiogram recordings. Acta Obstetricia Et Gynecologica Scandinavica, 2014, 93, 93-101.	2.8	45
9	Measures of cardiovascular autonomic activity in insomnia disorder: A systematic review. PLoS ONE, 2017, 12, e0186716.	2.5	34
10	Detecting Atrial Fibrillation and Atrial Flutter in Daily Life Using Photoplethysmography Data. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 1610-1618.	6.3	33
11	Hierarchical Probabilistic Framework for Fetal R-Peak Detection, Using ECG Waveform and Heart Rate Information. IEEE Transactions on Signal Processing, 2018, 66, 4388-4397.	5.3	31
12	Decreasing the false alarm rate of arrhythmias in intensive care using a machine learning approach. , 2015, , .		25
13	Normal ranges for fetal electrocardiogram values for the healthy fetus of 18â€“24Âweeks of gestation: a prospective cohort study. BMC Pregnancy and Childbirth, 2016, 16, 227.	2.4	25
14	Maternal ECG removal from non-invasive fetal ECG recordings. , 2006, 2006, 1394-7.		22
15	Novel Bayesian Vectorcardiographic Loop Alignment for Improved Monitoring of ECG and Fetal Movement. IEEE Transactions on Biomedical Engineering, 2013, 60, 1580-1588.	4.2	22
16	Multi-Channel Fetal ECG Denoising With Deep Convolutional Neural Networks. Frontiers in Pediatrics, 2020, 8, 508.	1.9	21
17	A systematic review of prenatal screening for congenital heart disease by fetal electrocardiography. International Journal of Gynecology and Obstetrics, 2016, 135, 129-134.	2.3	20
18	Fetal Heart Rate Monitoring Implemented by Dynamic Adaptation of Transmission Power of a Flexible Ultrasound Transducer Array. Sensors, 2019, 19, 1195.	3.8	19

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19	Using Tri-Axial Accelerometry in Daily Elite Swim Training Practice. Sensors, 2017, 17, 990.	3.8	18
20	Bayesian Approach to Patient-Tailored Vectorcardiography. IEEE Transactions on Biomedical Engineering, 2010, 57, 586-595.	4.2	15
21	Non-invasive Fetal Electrocardiography for Intrapartum Cardiotocography. Frontiers in Pediatrics, 2020, 8, 599049.	1.9	15
22	Atrial fibrillation monitoring with wrist-worn photoplethysmography-based wearables: State-of-the-art review. Cardiovascular Digital Health Journal, 2020, 1, 45-51.	1.3	15
23	Orientation of the electrical heart axis in mid-term pregnancy. European Journal of Obstetrics, Gynecology and Reproductive Biology, 2016, 207, 243-246.	1.1	14
24	An Extended Kalman Filter for Fetal Heart Location Estimation During Doppler-Based Heart Rate Monitoring. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 3221-3231.	4.7	13
25	Estimation of the apnea-hypopnea index in a heterogeneous sleep-disordered population using optimised cardiovascular features. Scientific Reports, 2019, 9, 17448.	3.3	12
26	Intrapartum nonâ€invasive electrophysiological monitoring: A prospective observational study. Acta Obstetricia Et Gynecologica Scandinavica, 2020, 99, 1387-1395.	2.8	12
27	An Overview of the Sensors for Heart Rate Monitoring Used in Extramural Applications. Sensors, 2022, 22, 4035.	3.8	12
28	Simulator of a Full Fetal Electrocardiogram Measurement Chain by Multichannel Capacitive Sensing. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 4348-4357.	4.7	11
29	Comparative Review of the Algorithms for Removal of Electrocardiographic Interference from Trunk Electromyography. Sensors, 2020, 20, 4890.	3.8	11
30	Lying Awake at Night: Cardiac Autonomic Activity in Relation to Sleep Onset and Maintenance. Frontiers in Neuroscience, 2019, 13, 1405.	2.8	11
31	The electrical heart axis and ST events in fetal monitoring: A post-hoc analysis following a multicentre randomised controlled trial. PLoS ONE, 2017, 12, e0175823.	2.5	11
32	Improved ultrasound transducer positioning by fetal heart location estimation during Doppler based heart rate measurements. Physiological Measurement, 2017, 38, 1821-1836.	2.1	10
33	The influence of betamethasone on fetal heart rate variability, obtained by non-invasive fetal electrocardiogram recordings. Early Human Development, 2018, 119, 8-14.	1.8	10
34	The standardized 12-lead fetal electrocardiogram of the healthy fetus in mid-pregnancy: A cross-sectional study. PLoS ONE, 2020, 15, e0232606.	2.5	9
35	Artifact reduction in maternal abdominal ECG recordings for fetal ECG estimation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 43-6.	0.5	8
36	Dedicated Algorithm for Unobtrusive Fetal Heart Rate Monitoring Using Multiple Dry Electrodes. Sensors, 2021, 21, 4298.	3.8	8

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37	Ultrasound transducer positioning aid for fetal heart rate monitoring. , 2016, 2016, 4105-4108.		7
38	Comparison of ECG-based physiological markers for hypoxia in a preterm ovine model. Pediatric Research, 2016, 79, 907-915.	2.3	6
39	Relative versus absolute rises in T/QRS ratio by ST analysis of fetal electrocardiograms in labour: A case-control pilot study. PLoS ONE, 2019, 14, e0214357.	2.5	6
40	ST waveform analysis for monitoring hypoxic distress in fetal sheep after prolonged umbilical cord occlusion. PLoS ONE, 2018, 13, e0195978.	2.5	5
41	The electrical heart axis of the fetus between 18 and 24 weeks of gestation: A cohort study. PLoS ONE, 2021, 16, e0256115.	2.5	5
42	Probabilistic Source Separation for Robust Fetal Electrocardiography. Computational and Mathematical Methods in Medicine, 2013, 2013, 1-8.	1.3	3
43	Changes in Maternal Heart Rate Variability in Response to the Administration of Routine Obstetric Medication in Hospitalized Patients: Study Protocol for a Cohort Study (MAMA-Heart Study). Clinics and Practice, 2021, 11, 13-25.	1.4	3
44	Fetal Heart Rate Measurements of Twins Using a Single Flexible Transducer Matrix. , 2018, , .		1
45	Head orientation and electrode placement potentially influence fetal scalp ECG waveform. PLoS ONE, 2019, 14, e0223282.	2.5	1
46	Prenatal diagnosis of a bundle branch block based on the fetal ECG. BMJ Case Reports, 2019, 12, e229998.	0.5	1
47	Feasibility of non-invasive Foetal electrocardiography in a twin pregnancy. BMC Pregnancy and Childbirth, 2020, 20, 215.	2.4	1
48	Pharmacological cardioversion of supraventricular tachycardia in pregnancy during continuous electrophysiological fetal monitoring: a case report. European Heart Journal - Case Reports, 0, , .	0.6	1
49	Why -aVF can be used in STAN as a proxy for scalp electrode-derived signal; reply to comments by Kjellmer et al.. PLoS ONE, 2019, 14, e0221220.	2.5	0
50	Title is missing!. , 2020, 15, e0232606.		0
51	Title is missing!. , 2020, 15, e0232606.		0
52	Title is missing!. , 2020, 15, e0232606.		0
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