

Bart Vanrumste

List of Publications by Year in descending order

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Version: 2024-02-01

132
papers

4,078
citations

185998

28
h-index

133063

59
g-index

136
all docs

136
docs citations

136
times ranked

4377
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamic sensor activation and decision-level fusion in wireless acoustic sensor networks for classification of domestic activities. <i>Information Fusion</i> , 2022, 77, 196-210.	11.7	1
2	Automated freezing of gait assessment with marker-based motion capture and multi-stage spatial-temporal graph convolutional neural networks. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2022, 19, .	2.4	12
3	Can Wearable Devices and Machine Learning Techniques Be Used for Recognizing and Segmenting Modified Physical Performance Test Items?. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2022, 30, 1776-1785.	2.7	2
4	A Localized Learning Approach Applied to Human Activity Recognition. <i>IEEE Intelligent Systems</i> , 2021, 36, 58-71.	4.0	6
5	Building blocks of a task-oriented dialogue system in the healthcare domain. , 2021, , .		2
6	LETS: A Label-Efficient Training Scheme for Aspect-Based Sentiment Analysis by Using a Pre-Trained Language Model. <i>IEEE Access</i> , 2021, 9, 115563-115578.	2.6	10
7	Prevalence of rheumatic heart disease in a major referral cardiology clinic in Ethiopia: A retrospective cross-sectional study. <i>PLoS ONE</i> , 2021, 16, e0246519.	1.1	1
8	Recognition of Bathroom Activities in Older Adults Using Wearable Sensors: A Systematic Review and Recommendations. <i>Sensors</i> , 2021, 21, 2176.	2.1	7
9	Motion Sensor-Based Detection of Outlier Days Supporting Continuous Health Assessment for Single Older Adults. <i>Sensors</i> , 2021, 21, 6080.	2.1	3
10	Rheumatic Heart Disease Screening Based on Phonocardiogram. <i>Sensors</i> , 2021, 21, 6558.	2.1	6
11	Detecting hand washing activity among activities of daily living and classification of WHO hand washing techniques using wearable devices and machine learning algorithms. <i>Healthcare Technology Letters</i> , 2021, 8, 148-158.	1.9	6
12	A Personalized Bayesian Approach for Early Intervention in Gestational Weight Gain Management Toward Pregnancy Care. <i>IEEE Access</i> , 2021, 9, 160946-160957.	2.6	1
13	Automatically Segmenting Physical Performance Test Items for Older Adults Using a Doppler Radar: A Proof of Concept Study. <i>IEEE Access</i> , 2021, 9, 152765-152779.	2.6	3
14	Gestational weight gain prediction using privacy preserving federated learning. , 2021, 2021, 2170-2174.		1
15	Bathroom activities monitoring for older adults by a wrist-mounted accelerometer using a hybrid deep learning model. , 2021, 2021, 7112-7115.		1
16	Vital Signs Prediction for COVID-19 Patients in ICU. <i>Sensors</i> , 2021, 21, 8131.	2.1	5
17	Modelling and identification of characteristic kinematic features preceding freezing of gait with convolutional neural networks and layer-wise relevance propagation. <i>BMC Medical Informatics and Decision Making</i> , 2021, 21, 341.	1.5	8
18	Measuring and Localizing Individual Bites Using a Sensor Augmented Plate During Unrestricted Eating for the Aging Population. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2020, 24, 1509-1518.	3.9	13

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19	Vital Signs Prediction and Early Warning Score Calculation Based on Continuous Monitoring of Hospitalised Patients Using Wearable Technology. <i>Sensors</i> , 2020, 20, 6593.	2.1	16
20	Rheumatic Heart Disease Detection Using Deep Learning from Spectro-Temporal Representation of Un-segmented Heart Sounds. , 2020, 2020, 168-171.		8
21	A data-driven approach for detecting gait events during turning in people with Parkinson's disease and freezing of gait. <i>Gait and Posture</i> , 2020, 80, 130-136.	0.6	16
22	Data augmentation and semi-supervised learning for deep neural networks-based text classifier. , 2020, , .		8
23	The Unacceptance of a Self-Management Health System by Healthy Older Adults. , 2020, , .		4
24	Designing a Tablet-Based Application for Self-Assessment Questionnaires with Nursing Home Residents. , 2020, , .		0
25	Physical Activity Recognition Using Continuous Wave Radar With Deep Neural Network. , 2020, , .		2
26	Automated Rheumatic Heart Disease Detection from Phonocardiogram in Cardiology Ward. , 2020, , .		1
27	Towards an Ambient Support System for Continence Management in Nursing Homes: An Exploratory Study. , 2020, , .		0
28	From Promoting Dignity to Installing Distrust: Understanding the Role of Continence Care Technology in Nursing Homes. , 2020, , .		1
29	Bathroom activity monitoring for older adults via wearable device. , 2020, , .		5
30	Ageing is Not a Disease. , 2019, , .		21
31	PREgDICT : Early prediction of gestational weight gain for pregnancy care. , 2019, 2019, 4274-4278.		4
32	Feature Engineering for ICU Mortality Prediction Based on Hourly to Bi-Hourly Measurements. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 3525.	1.3	11
33	Quantifying Eating Behavior With a Smart Plate in Patients With Arm Impairment After Stroke. , 2019, , .		2
34	Detection of Chewing Motion Using a Glasses Mounted Accelerometer Towards Monitoring of Food Intake Events in the Elderly. <i>IFMBE Proceedings</i> , 2019, , 73-77.	0.2	1
35	Uses and Attitudes of Old and Oldest Adults towards Self-Monitoring Health Systems. , 2019, , .		3
36	Vision-Based Marker-Less Spatiotemporal Gait Analysis by Using a Mobile Platform: Preliminary Validation. <i>Communications in Computer and Information Science</i> , 2019, , 126-141.	0.4	0

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37	Privacy preserving pregnancy weight gain management. , 2019, , .		2
38	Measuring weight and location of individual bites using a sensor augmented smart plate. , 2018, 2018, 5558-5561.		8
39	Acoustic Event Classification using Low-Resolution Multi-label Non-negative Matrix Deconvolution. AES: Journal of the Audio Engineering Society, 2018, 66, 369-384.	0.8	5
40	Dynamic Gait Monitoring Mobile Platform. , 2018, , .		0
41	Feature selection methods for accelerometry-based seizure detection in children. Medical and Biological Engineering and Computing, 2017, 55, 151-165.	1.6	15
42	Improving the accuracy of existing camera based fall detection algorithms through late fusion. , 2017, 2017, 2667-2671.		15
43	Detection of chewing motion in the elderly using a glasses mounted accelerometer in a real-life environment. , 2017, 2017, 4521-4524.		6
44	Three Ways to Improve the Performance of Real-Life Camera-Based Fall Detection Systems. Journal of Sensors, 2017, 2017, 1-15.	0.6	10
45	Noise robust footstep location estimation using a wireless acoustic sensor network. Journal of Ambient Intelligence and Smart Environments, 2016, 8, 665-679.	0.8	1
46	Automated in-home gait transfer time analysis using video cameras. Journal of Ambient Intelligence and Smart Environments, 2016, 8, 273-286.	0.8	11
47	Long-term accelerometry-triggered video monitoring and detection of tonicâ€œclonic and clonic seizures in a home environment: Pilot study. Epilepsy & Behavior Case Reports, 2016, 5, 66-71.	1.5	18
48	Scalable Semi-Automatic Annotation for Multi-Camera Person Tracking. IEEE Transactions on Image Processing, 2016, 25, 2259-2274.	6.0	19
49	Biomedical wireless radar sensor network for indoor emergency situations detection and vital signs monitoring. , 2016, , .		8
50	Non-EEG seizure detection systems and potential SUDEP prevention: State of the art. Seizure: the Journal of the British Epilepsy Association, 2016, 41, 141-153.	0.9	91
51	Camera-based fall detection using real-world versus simulated data: How far are we from the solution?. Journal of Ambient Intelligence and Smart Environments, 2016, 8, 149-168.	0.8	28
52	Bridging the gap between realâ€œlife data and simulated data by providing a highly realistic fall dataset for evaluating cameraâ€œbased fall detection algorithms. Healthcare Technology Letters, 2016, 3, 6-11.	1.9	39
53	Developing a system that can automatically detect health changes using transfer times of older adults. BMC Medical Research Methodology, 2016, 16, 23.	1.4	12
54	Automated Detection of Tonicâ€œClonic Seizures Using 3-D Accelerometry and Surface Electromyography in Pediatric Patients. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 1333-1341.	3.9	62

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55	Decision support systems for home monitoring applications: Classification of activities of daily living and epileptic seizures. , 2016, , 271-291.		0
56	Monitoring activities of daily living using Wireless Acoustic Sensor Networks in clean and noisy conditions. , 2015, 2015, 4966-9.		5
57	Automatic detection of health changes using statistical process control techniques on measured transfer times of elderly. , 2015, 2015, 5046-9.		2
58	Estimation of the maximal heart rate to improve online tonic-clonic seizure detection using ECG. , 2015, , .		0
59	Camera-based fall detection using a particle filter. , 2015, 2015, 6947-50.		15
60	Establishing a collaboration between care providers and engineers. , 2015, , .		0
61	Automated walking aid detector based on indoor video recordings. , 2015, 2015, 5040-5.		3
62	Energy efficient monitoring of activities of daily living using wireless acoustic sensor networks in clean and noisy conditions. , 2015, , .		2
63	Online detection of tonic-clonic seizures in pediatric patients using ECG and low-complexity incremental novelty detection. , 2015, 2015, 5597-600.		6
64	Dual-mode wireless sensor network for real-time contactless in-door health monitoring. , 2015, , .		7
65	Automated Respiration Detection from Neonatal Video Data. , 2015, , .		23
66	Automatic Fall Risk Estimation using the Nintendo Wii Balance Board. , 2015, , .		4
67	Embedding engineers in elderly care homes when researching new technologies for care. Anthropology and Aging, 2015, 36, 135-144.	0.4	0
68	Validation of the kinect for gait analysis using the GAITRite walkway. , 2014, 2014, 5920-3.		15
69	Three-layer-isotropic skull conductivity representation in the EEG forward problem using spherical head models. , 2014, 2014, 4904-7.		0
70	Anomaly Detection Using the Poisson Process Limit for Extremes. , 2014, , .		5
71	Accelerometry-Based Home Monitoring for Detection of Nocturnal Hypomotor Seizures Based on Novelty Detection. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 1026-1033.	3.9	50
72	Detecting rare events using extreme value statistics applied to epileptic convulsions in children. Artificial Intelligence in Medicine, 2014, 60, 89-96.	3.8	26

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73	Detection of epileptic convulsions from accelerometry signals through machine learning approach. , 2014, , .		1
74	Fall incidents unraveled: a series of 26 video-based real-life fall events in three frail older persons. BMC Geriatrics, 2013, 13, 103.	1.1	22
75	An exemplar-based NMF approach to audio event detection. , 2013, , .		62
76	Long-term home monitoring of hypermotor seizures by patient-worn accelerometers. Epilepsy and Behavior, 2013, 26, 118-125.	0.9	51
77	Single trial <scp>ERP</scp> reading based on parallel factor analysis. Psychophysiology, 2013, 50, 97-110.	1.2	26
78	Non-EEG seizure-detection systems and potential SUDEP prevention: State of the art. Seizure: the Journal of the British Epilepsy Association, 2013, 22, 345-355.	0.9	85
79	Welcome to WASPAA 2013. , 2013, , .		0
80	Ambulatory Monitoring of Physical Activity Based on Knee Flexion/Extension Measured by Inductive Sensor Technology. ISRN Biomedical Engineering, 2013, 2013, 1-10.	0.4	9
81	Integrating video and accelerometer signals for nocturnal epileptic seizure detection. , 2012, , .		11
82	Time-domain generalized cross correlation phase transform sound source localization for small microphone arrays. , 2012, , .		21
83	Using spatio-temporal interest points (STIP) for myoclonic jerk detection in nocturnal video. , 2012, 2012, 4454-7.		14
84	The "why" and "how" of JointICA: Results from a visual detection task. NeuroImage, 2012, 60, 1171-1185.1	2.1	42
85	Camera-Based Fall Detection on Real World Data. Lecture Notes in Computer Science, 2012, , 356-375.	1.0	36
86	The BOLD correlates of the visual P1 and N1 in single-trial analysis of simultaneous EEG-fMRI recordings during a spatial detection task. NeuroImage, 2011, 54, 824-835.	2.1	57
87	Ambient Assisted Living and Care in The Netherlands. International Journal of Ambient Computing and Intelligence, 2011, 3, 25-40.	0.8	10
88	Automatic video detection of body movement during sleep based on optical flow in pediatric patients with epilepsy. Medical and Biological Engineering and Computing, 2010, 48, 923-931.	1.6	43
89	Removal of Muscle Artifacts from EEG Recordings of Spoken Language Production. Neuroinformatics, 2010, 8, 135-150.	1.5	115
90	On-site electronic observational assessment tool for discomfort and pain. Computer Methods and Programs in Biomedicine, 2010, 99, 34-42.	2.6	3

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91	Validation of ICA as a tool to remove eye movement artifacts from EEG/ERP. <i>Psychophysiology</i> , 2010, 47, 1142-50.	1.2	53
92	NeuroMath: advanced methods for the estimation of human brain activity and connectivity. <i>Biomedizinische Technik</i> , 2010, 55, 121.	0.9	0
93	Removal of BCG artifacts from EEG recordings inside the MR scanner: A comparison of methodological and validation-related aspects. <i>NeuroImage</i> , 2010, 50, 920-934.	2.1	85
94	Detection of Epileptic Seizures Using Video Data. , 2010, , .		5
95	Acquiring a Dataset of Labeled Video Images Showing Discomfort in Demented Elderly. <i>Telemedicine Journal and E-Health</i> , 2009, 15, 370-378.	1.6	5
96	Detection of nocturnal frontal lobe seizures in pediatric patients by means of accelerometers: A first study. , 2009, 2009, 6608-11.		26
97	EEG/MEG Source Imaging: Methods, Challenges, and Open Issues. <i>Computational Intelligence and Neuroscience</i> , 2009, 2009, 1-12.	1.1	91
98	P152 Detection of nocturnal frontal lobe seizures in pediatric patients by means of accelerometers: preliminary results. <i>European Journal of Paediatric Neurology</i> , 2009, 13, S67.	0.7	3
99	Removing muscle and eye artifacts using blind source separation techniques in ictal EEG source imaging. <i>Clinical Neurophysiology</i> , 2009, 120, 1262-1272.	0.7	34
100	Towards automatic detection of movement during sleep in pediatric patients with epilepsy by means of video recordings and the optical flow algorithm. <i>IFMBE Proceedings</i> , 2009, , 784-789.	0.2	5
101	Reduction of alpha distortion in event related potentials. <i>IFMBE Proceedings</i> , 2009, , 1298-1301.	0.2	4
102	Review on solving the inverse problem in EEG source analysis. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2008, 5, 25.	2.4	865
103	Detection of focal epileptiform events in the EEG by spatio-temporal dipole clustering. <i>Clinical Neurophysiology</i> , 2008, 119, 1756-1770.	0.7	23
104	Dipole estimation errors due to differences in modeling anisotropic conductivities in realistic head models for EEG source analysis. <i>Physics in Medicine and Biology</i> , 2008, 53, 1877-1894.	1.6	65
105	Dipole estimation errors in EEG source localization due to not incorporating anisotropic conductivities of white matter in realistic head models. , 2007, , .		4
106	Canonical Decomposition of Ictal Scalp EEG and Accurate Source Localisation: Principles and Simulation Study. <i>Computational Intelligence and Neuroscience</i> , 2007, 2007, 1-10.	1.1	38
107	Canonical Decomposition of scalp EEG as preprocessing for source localisation. , 2007, , .		0
108	Can dipole modelling be improved by removing muscular and ocular artifacts from ictal scalp EEG?. , 2007, , .		1

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109	Review on solving the forward problem in EEG source analysis. Journal of NeuroEngineering and Rehabilitation, 2007, 4, 46.	2.4	388
110	Improving the Interpretation of Ictal Scalp EEG: BSS?CCA Algorithm for Muscle Artifact Removal. Epilepsia, 2007, 48, 950-958.	2.6	86
111	Muscle and eye movement artifact removal prior to EEG source localization. , 2006, 2006, 1002-5.		12
112	Canonical Correlation Analysis Applied to Remove Muscle Artifacts From the Electroencephalogram. IEEE Transactions on Biomedical Engineering, 2006, 53, 2583-2587.	2.5	418
113	Determination of dominant simulated spindle frequency with different methods. Journal of Neuroscience Methods, 2006, 156, 275-283.	1.3	24
114	Modeling common dynamics in multichannel signals with applications to artifact and background removal in EEG recordings. IEEE Transactions on Biomedical Engineering, 2005, 52, 2006-2015.	2.5	20
115	A new muscle artifact removal technique to improve the interpretation of the ictal scalp electroencephalogram. , 2005, 2006, 944-7.		18
116	Removing Artifacts and Background Activity in Multichannel Electroencephalograms by Enhancing Common Activity. , 2005, 2005, 3699-702.		1
117	Slow-wave activity arising from the same area as epileptiform activity in the EEG of paediatric patients with focal epilepsy. Clinical Neurophysiology, 2005, 116, 9-17.	0.7	18
118	A finite difference method with reciprocity used to incorporate anisotropy in electroencephalogram dipole source localization. Physics in Medicine and Biology, 2005, 50, 3787-3806.	1.6	86
119	Background activity originating from same area as events in the EEG of paediatric patients with focal epilepsy. , 2004, 2004, 4397-400.		0
120	Comparing iterative solvers for linear systems associated with the finite difference discretisation of the forward problem in electro-encephalographic source analysis. Medical and Biological Engineering and Computing, 2003, 41, 75-84.	1.6	26
121	Ictal Source Localization in Presurgical Patients With Refractory Epilepsy. Journal of Clinical Neurophysiology, 2002, 19, 461-468.	0.9	55
122	Comparison of performance of spherical and realistic head models in dipole localization from noisy EEG. Medical Engineering and Physics, 2002, 24, 403-418.	0.8	31
123	Comparing the Performance of Solvers for a Bioelectric Field Problem. Lecture Notes in Computer Science, 2002, , 528-537.	1.0	3
124	The validation of the finite difference method and reciprocity for solving the inverse problem in EEG dipole source analysis. Brain Topography, 2001, 14, 83-92.	0.8	61
125	<title>Automatic detection of EEG electrode markers on 3D MR data</title>. , 2000, , .		0
126	Automatic localization of EEG electrode markers within 3D MR data. Magnetic Resonance Imaging, 2000, 18, 485-488.	1.0	19

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127	Dipole location errors in electroencephalogram source analysis due to volume conductor model errors. <i>Medical and Biological Engineering and Computing</i> , 2000, 38, 528-534.	1.6	70
128	Influence of measurement noise and electrode mislocalisation on EEG dipole-source localisation. <i>Medical and Biological Engineering and Computing</i> , 2000, 38, 287-296.	1.6	49
129	EEG dipole source localization using artificial neural networks. <i>Physics in Medicine and Biology</i> , 2000, 45, 997-1011.	1.6	32
130	Detection of focal epileptiform activity in the EEG: an SVD and dipole model approach. , 0, , .		7
131	Self-taught assistive vocal interfaces: an overview of the ALADIN project. , 0, , .		13
132	A multi-channel speech enhancement framework for robust NMF-based speech recognition for speech-impaired users. , 0, , .		0