Ilkka Kj Korhonen

List of Publications by Year
in descending order

115	4,715	147801	114465
papers	citations	31	63
		h-index	g-index

119	119	119	5691
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Activity Classification Using Realistic Data From Wearable Sensors. IEEE Transactions on Information Technology in Biomedicine, 2006, 10, 119-128.	3.2	597
2	Detection of Daily Activities and Sports With Wearable Sensors in Controlled and Uncontrolled Conditions. IEEE Transactions on Information Technology in Biomedicine, 2008, 12, 20-26.	3.2	593
3	Health monitoring in the home of the future. IEEE Engineering in Medicine and Biology Magazine, 2003, 22, 66-73.	0.8	384
4	Assessment of surgical stress during general anaesthesia. British Journal of Anaesthesia, 2007, 98, 447-455.	3.4	241
5	Building new computational models to support health behavior change and maintenance: new opportunities in behavioral research. Translational Behavioral Medicine, 2015, 5, 335-346.	2.4	185
6	Mobile Diary for Wellness Management—Results on Usage and Usability in Two User Studies. IEEE Transactions on Information Technology in Biomedicine, 2008, 12, 501-512.	3.2	121
7	Factors Related to Sustained Use of a Free Mobile App for Dietary Self-Monitoring With Photography and Peer Feedback: Retrospective Cohort Study. Journal of Medical Internet Research, 2014, 16, e109.	4.3	117
8	EEG spectral entropy, heart rate, photoplethysmography and motor responses to skin incision during sevoflurane anaesthesia. Acta Anaesthesiologica Scandinavica, 2005, 49, 284-292.	1.6	102
9	Evaluation of wearable consumer heart rate monitors based on photopletysmography. , 2014, 2014, 3670-3.		94
10	Photoplethysmography and nociception. Acta Anaesthesiologica Scandinavica, 2009, 53, 975-985.	1.6	88
11	Novel multiparameter approach for measurement of nociception at skin incision during general anaesthesia € €¡. British Journal of Anaesthesia, 2006, 96, 367-376.	3.4	81
12	Empowering Citizens for Well-being and Chronic Disease Management With Wellness Diary. IEEE Transactions on Information Technology in Biomedicine, 2010, 14, 456-463.	3.2	75
13	Personal Health Technologies in Employee Health Promotion: Usage Activity, Usefulness, and Health-Related Outcomes in a 1-Year Randomized Controlled Trial. JMIR MHealth and UHealth, 2013, 1, e16.	3.7	75
14	Circadian activity rhythm in demented and non€demented nursing€home residents measured by telemetric actigraphy. Journal of Sleep Research, 2005, 14, 61-68.	3.2	72
15	Evaluation of the beat-to-beat detection accuracy of PulseOn wearable optical heart rate monitor. , 2015, 2015, 8099-102.		71
16	Guest Editorial Introduction to the Special Section on Pervasive Healthcare. IEEE Transactions on Information Technology in Biomedicine, 2004, 8, 229-234.	3.2	70
17	Application of Near Field Communication for Health Monitoring in Daily Life. , 2006, 2006, 3246-9.		61
18	Feasibility of a Personal Health Technology-Based Psychological Intervention for Men with Stress and Mood Problems: Randomized Controlled Pilot Trial. JMIR Research Protocols, 2013, 2, e1.	1.0	60

#	ARTICLE	IF	CITATIONS
19	Short-term variability of blood pressure and heart rate in borderline and mildly hypertensive subjects.. Hypertension, 1994, 23, 18-24.	2.7	57
20	Postural sway and stepping response among working population: reproducibility, long-term stability, and associations with symptoms of the low back. Clinical Biomechanics, 1997, 12, 429-437.	1.2	56
21	Compliance and technical feasibility of long-term health monitoring with wearable and ambient technologies. Journal of Telemedicine and Telecare, 2009, 15, 302-309.	2.7	55
22	Bridging the physical and virtual worlds by local connectivity-based physical selection. Personal and Ubiquitous Computing, 2006, 10, 333-344.	2.8	53
23	An Activity Recognition Framework Deploying the Random Forest Classifier and A Single Optical Heart Rate Monitoring and Triaxial Accelerometer Wrist-Band. Sensors, 2018, 18, 613.	3.8	52
24	Weight Rhythms: Weight Increases during Weekends and Decreases during Weekdays. Obesity Facts, 2014, 7, 36-47.	3.4	51
25	Use of a mobile phone diary for observing weight management and related behaviours. Journal of Telemedicine and Telecare, 2010, 16, 260-264.	2.7	47
26	Monitoring of heart rate and inter-beat intervals with wrist plethysmography in patients with atrial fibrillation. Physiological Measurement, 2018, 39, 065007.	2.1	44
27	Heart rate variability does not discriminate between different levels of haemodynamic responsiveness during surgical anaesthesia â€. British Journal of Anaesthesia, 2007, 98, 728-736.	3.4	41
28	Behavioral Informatics and Computational Modeling in Support of Proactive Health Management and Care. IEEE Transactions on Biomedical Engineering, 2015, 62, 2763-2775.	4.2	40
29	Physical Activity. Medicine and Science in Sports and Exercise, 2017, 49, 474-481.	0.4	40
30	Evaluation of accuracy and reliability of PulseOn optical heart rate monitoring device. , 2015, 2015, 430-3.		39
31	Automatic sleep-wake and nap analysis with a new wrist worn online activity monitoring device vivago WristCare. Sleep, 2003, 26, 86-90.	1.1	38
32	Are Breaks in Daily Self-Weighing Associated with Weight Gain?. PLoS ONE, 2014, 9, e113164.	2.5	37
33	Tetanic stimulus of ulnar nerve as a predictor of heart rate response to skin incision in propofolâ€"remifentanil anaesthesia â€. British Journal of Anaesthesia, 2007, 99, 509-513.	3.4	35
34	Wearable Monitoring of Physical Functioning and Disability Changes, Circadian Rhythms and Sleep Patterns in Nursing Home Residents. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 856-864.	6.3	35
35	Entropy and bispectral index for assessment of sedation, analgesia and the effects of unpleasant stimuli in critically ill patients: an observational study. Critical Care, 2008, 12, R119.	5.8	34
36	Auditory Event-Related Potentials, Bispectral Index, and Entropy for the Discrimination of Different Levels of Sedation in Intensive Care Unit Patients. Anesthesia and Analgesia, 2009, 109, 807-816.	2.2	32

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37	Evaluation of the accuracy and reliability for photoplethysmography based heart rate and beat-to-beat detection during daily activities. IFMBE Proceedings, 2018, , 145-148.	0.3	30
38	Detection of artifacts in monitored trends in intensive care. Computer Methods and Programs in Biomedicine, 2000, 63, 203-209.	4.7	29
39	Relationship of Psychological and Physiological Variables in Long-Term Self-Monitored Data During Work Ability Rehabilitation Program. IEEE Transactions on Information Technology in Biomedicine, 2009, 13, 141-151.	3.2	29
40	Application of Optical Heart Rate Monitoring. , 2014, , 105-129.		28
41	Diurnal and weekly rhythms of health-related variables in home recordings for two months. Physiology and Behavior, 2006, 87, 650-658.	2.1	27
42	Intra- and inter-individual variation of BIS-indexÂ® and EntropyÂ® during controlled sedation with midazolam/remifentanil and dexmedetomidine/remifentanil in healthy volunteers: an interventional study. Critical Care, 2009, 13, R20.	5.8	27
43	Warming of insufflation gas during laparoscopic hysterectomy: effect on body temperature and the autonomic nervous system. Acta Anaesthesiologica Scandinavica, 1999, 43, 974-978.	1.6	26
44	The Effects of Dexmedetomidine/Remifentanil and Midazolam/Remifentanil on Auditory-Evoked Potentials and Electroencephalogram at Light-to-Moderate Sedation Levels in Healthy Subjects. Anesthesia and Analgesia, 2006, 103, 1163-1169.	2.2	25
45	Estimating Heart Rate, Energy Expenditure, and Physical Performance With a Wrist Photoplethysmographic Device During Running. JMIR MHealth and UHealth, 2017, 5, e97.	3.7	25
46	Characterization of thin films and their structures in surface plasmon resonance measurements. Optical Engineering, 1995, 34, 2581.	1.0	23
47	Stimulation induced variability of pulse plethysmography does not discriminate responsiveness to intubation. British Journal of Anaesthesia, 2006, 96, 323-329.	3.4	23
48	Objectively measured physical activity in Finnish employees: a cross-sectional study. BMJ Open, 2014, 4, e005927.	1.9	23
49	The use of crowdsourcing for dietary self-monitoring: crowdsourced ratings of food pictures are comparable to ratings by trained observers. Journal of the American Medical Informatics Association: JAMIA, 2015, 22, e112-e119.	4.4	23
50	A home-based care model for outpatient cardiac rehabilitation based on mobile technologies. , 2009, , .		22
51	Measuring Depth of Sedation with Auditory Evoked Potentials During Controlled Infusion of Propofol and Remifentanil in Healthy Volunteers. Anesthesia and Analgesia, 2004, 99, 1728-1736.	2.2	21
52	Circadian profile of low-frequency oscillations in blood pressure and heart rate in hypertension. American Journal of Hypertension, 1999, 12, 874-881.	2.0	20
53	Acute Effect of Alcohol Intake on Cardiovascular Autonomic Regulation During the First Hours of Sleep in a Large Real-World Sample of Finnish Employees: Observational Study. JMIR Mental Health, 2018, 5, e23.	3.3	20
54	Single sweep analysis of event related auditory potentials for the monitoring of sedation in cardiac surgery patients. Computer Methods and Programs in Biomedicine, 2000, 63, 219-227.	4.7	17

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55	The effect of interruption to propofol sedation on auditory event-related potentials and electroencephalogram in intensive care patients. Critical Care, 2004, 8, R483.	5.8	16
56	Comparative assessment of sleep quality estimates using home monitoring technology. , 2014, 2014, 4979-82.		16
57	Health timeline: an insight-based study of a timeline visualization of clinical data. BMC Medical Informatics and Decision Making, 2019, 19, 170.	3.0	15
58	Linear multivariate models for physiological signal analysis: theory. Computer Methods and Programs in Biomedicine, 1996, 51, 85-94.	4.7	14
59	TERVA: System for Long-Term Monitoring of Wellness at Home. Telemedicine Journal and E-Health, 2001, 7, 61-72.	2.8	13
60	Long-Term Subjective and Objective Sleep Analysis of Total Sleep Time and Sleep Quality in Real Life Settings. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5202-5.	0.5	13
61	Outlier detection in weight time series of connected scales. , 2015, , .		13
62	Frequency of Self-Weighing and Weight Change: Cohort Study With 10,000 Smart Scale Users. Journal of Medical Internet Research, 2021, 23, e25529.	4.3	13
63	Linear multivariate models for physiological signal analysis: applications. Computer Methods and Programs in Biomedicine, 1996, 51, 121-130.	4.7	12
64	Seasonal weight variation patterns in seven countries located in northern and southern hemispheres. , 2016, 2016, 2475-2478.		12
65	Technical description of the IBIS Data Library. Computer Methods and Programs in Biomedicine, 2000, 63, 175-186.	4.7	11
66	The Accuracy of Atrial Fibrillation Detection from Wrist Photoplethysmography. A Study on Post-Operative Patients. , 2018, 2018, 1-4.		11
67	Frequency Shift in Baroregulatory Oscillation in Borderline Hypertensive Subjects. American Journal of Hypertension, 1997, 10, 500-504.	2.0	10
68	Assessment of postoperative sedation level with spectral EEG parameters. Clinical Neurophysiology, 2002, 113, 1633-1639.	1.5	10
69	Personal health promotion through personalized health technologies — Nuadu experience. , 2009, 2009, 316-9.		10
70	Comparison of Heart Rate Monitoring Accuracy between Chest Strap and Vest during Physical Training and Implications on Training Decisions. Sensors, 2021, 21, 8411.	3.8	10
71	Multivariate autoregressive model with immediate transfer paths for assessment of interactions between cardiopulmonary variability signals. Medical and Biological Engineering and Computing, 1996, 34, 199-206.	2.8	9
72	Longâ€term Selfâ€monitoring of Weight: A Case Study. Cognitive Behaviour Therapy, 2005, 34, 108-114.	3.5	9

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73	A Concept for ICT Assisted Health Promotion in the Occupational Healthcare. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1786-9.	0.5	9
74	Moving the Science of Behavioral Change into the 21st Century: Part 2. IEEE Pulse, 2013, 4, 32-33.	0.3	9
75	W2E-â€"Wellness Warehouse Engine for Semantic Interoperability of Consumer Health Data. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 1632-1639.	6.3	9
76	IEEE EMBS Technical Committee on Wearable Biomedical Sensors & Systems: Position Paper. , 0, , .		8
77	Exploratory analysis of associations between individual lifestyles and heart rate variability -based recovery during sleep. , 2015, 2015, 2339-42.		8
78	Detection of beat-to-beat intervals from wrist photoplethysmography in patients with sinus rhythm and atrial fibrillation after surgery. , 2018, , .		8
79	Exploring Associations Between the Self-Reported Values, Well-Being, and Health Behaviors of Finnish Citizens: Cross-Sectional Analysis of More Than 100,000 Web-Survey Responses. JMIR Mental Health, 2019, 6, e12170.	3.3	8
80	P4Well concept to empower self-management of psychophysiological wellbeing and load recovery. , 2009, , .		8
81	Multivariate autoregressive modelling combined with transcephalic electrical impedance: method to relate neonatal systemic circulation and respiration to cerebral circulation. Medical and Biological Engineering and Computing, 1995, 33, 458-463.	2.8	7
82	Evaluation of Technology-Based Service Scenarios for Supporting Independent Living. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 4041-4.	0.5	7
83	Human Activity Recognition Using A Single Optical Heart Rate Monitoring Wristband Equipped with Triaxial Accelerometer. IFMBE Proceedings, 2018, , 587-590.	0.3	7
84	Mobile and personal health and wellness management systems. , 2006, , 105-134.		7
85	Towards 24/7 continuous heart rate monitoring. , 2016, 2016, 186-189.		6
86	Nuadu Concept for personal management of lifestyle related health risks. , 2008, 2008, 5846-50.		5
87	Service and business model for technology enabled and home-based cardiac rehabilitation programs. , 2009, 2009, 303-7.		5
88	Ectopic Beat Detection from Wrist Optical Signals for Sinus Rhythm and Atrial Fibrillation Subjects. IFMBE Proceedings, 2020, , 150-158.	0.3	5
89	Facilitation of Goal-Setting and Follow-Up in an Internet Intervention for Health and Wellness. Lecture Notes in Computer Science, 2010, , 238-249.	1.3	5
90	ASSOCIATION BETWEEN CONTINUOUS WEARABLE ACTIVITY MONITORING AND SELF-REPORTED FUNCTIONING IN ASSISTED LIVING FACILITY AND NURSING HOME RESIDENTS. Journal of Frailty & Aging,the, 2016, 5, 1-8.	1.3	5

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91	N100 Auditory Potential and Electroencephalogram Discriminate Propofol-Induced Sedation Levels. Journal of Clinical Monitoring and Computing, 2003, 18, 163-170.	1.6	4
92	Recovery of N100 component of auditory event-related potentials and EEG after cardiac arrest during propofol sedation. British Journal of Anaesthesia, 2005, 94, 626-629.	3.4	4
93	Time-series modeling of long-term weight self-monitoring data. , 2015, 2015, 1616-20.		4
94	Application of Near Field Communication for Health Monitoring in Daily Life. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	4
95	Learning healthy habits with a mobile self-intervention. , 2014, , .		4
96	Wide-band spectral analysis of blood pressure and RR interval variability in borderline and mild hypertension. Clinical Physiology, 1999, 19, 490-496.	0.7	3
97	Quantification of haemodynamic response to auditory stimulus in intensive care. Computer Methods and Programs in Biomedicine, 2000, 63, 211-218.	4.7	3
98	Estimation of frequency shift in cardiovascular variability signals. Medical and Biological Engineering and Computing, 2001, 39, 465-470.	2.8	3
99	A concept for personal wellness management based on activity monitoring. , 2008, , .		3
100	Short-term relaxation responses to a voice-guided mobile phone relaxation application and self-guided relaxation. , 2009, , .		3
101	W2E — Wellness Warehouse Engine for semantic interoperability of consumer health data. , 2014, , .		3
102	Applications of Optical Cardiovascular Monitoring. , 2021, , 487-517.		3
103	Procedures for Evaluating the Adequacy of Anesthesia. Critical Reviews in Biomedical Engineering, 2017, 45, 187-218.	0.9	3
104	Personal health systems - need, market place and challenges to their wide scale adoption. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6153-4.	0.5	2
105	A concept to empower self-management of psychophysiological wellbeing: Preliminary user study experiences. , 2009, 2009, 312-5.		2
106	Habit change as a learning process: Design framework for mobile interventions. , 2014, , .		2
107	Implementation and user testing of a system for visualizing continuous health data and events. , 2016, , .		2
108	Atrial Fibrillation Detection from Wrist Photoplethysmography Data Using Artificial Neural Networks. IFMBE Proceedings, 2019, , 399-404.	0.3	2

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109	A Concept for Personal Wellness Management Based on Activity Monitoring. , 2008, , .		2
110	Physiological state characterization by clustering heart rate, heart rate variability and movement activity information. , 2008, 2008, 1749-52.		1
111	Estimating Older People's Physical Functioning with Automated Health Monitoring Technologies at Home: Feature Correlations and Multivariate Analysis. Lecture Notes in Computer Science, 2012, , 94-104.	1.3	1
112	Connections of Daytime Napping and Vigilance Measures to Activity Behaviour and Physical Functioning. , 2011, , .		1
113	UbiComp 2006 Workshops, Part 2. IEEE Pervasive Computing, 2007, 6, 109-112.	1.3	0
114	Personal health systems - Opportunities and barriers for adoption. , 2010, 2010, 5272.		0
115	Health coaching in Finland — A market study. , 2014, , .		0