

# Oliver Amft

## List of Publications by Year in descending order

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Version: 2024-02-01

181  
papers

4,859  
citations

201385

27  
h-index

155451

55  
g-index

187  
all docs

187  
docs citations

187  
times ranked

4810  
citing authors

#	ARTICLE	IF	CITATIONS
1	Gesture spotting with body-worn inertial sensors to detect user activities. Pattern Recognition, 2008, 41, 2010-2024.	5.1	315
2	Best practice for motor imagery: a systematic literature review on motor imagery training elements in five different disciplines. BMC Medicine, 2011, 9, 75.	2.3	300
3	Advanced internet of things for personalised healthcare systems: A survey. Pervasive and Mobile Computing, 2017, 41, 132-149.	2.1	291
4	Recognition of dietary activity events using on-body sensors. Artificial Intelligence in Medicine, 2008, 42, 121-136.	3.8	189
5	On-Body Sensing Solutions for Automatic Dietary Monitoring. IEEE Pervasive Computing, 2009, 8, 62-70.	1.1	144
6	Analysis of Chewing Sounds for Dietary Monitoring. Lecture Notes in Computer Science, 2005, , 56-72.	1.0	137
7	Recognizing Upper Body Postures using Textile Strain Sensors. , 2007, , .		135
8	Mobile Health Usage, Preferences, Barriers, and eHealth Literacy in Rheumatology: Patient Survey Study. JMIR MHealth and UHealth, 2020, 8, e19661.	1.8	121
9	Detection of eating and drinking arm gestures using inertial body-worn sensors. , 0, , .		105
10	Bite Weight Prediction From Acoustic Recognition of Chewing. IEEE Transactions on Biomedical Engineering, 2009, 56, 1663-1672.	2.5	100
11	Active Capacitive Sensing: Exploring a New Wearable Sensing Modality for Activity Recognition. Lecture Notes in Computer Science, 2010, , 319-336.	1.0	94
12	Effect of "activity monitor-based" counseling on physical activity and health-related outcomes in patients with chronic diseases: A systematic review and meta-analysis. Annals of Medicine, 2013, 45, 397-412.	1.5	92
13	Rapid Prototyping of Activity Recognition Applications. IEEE Pervasive Computing, 2008, 7, 22-31.	1.1	91
14	Monitoring Chewing and Eating in Free-Living Using Smart Eyeglasses. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 23-32.	3.9	87
15	Estimating Energy Expenditure Using Body-Worn Accelerometers: A Comparison of Methods, Sensors Number and Positioning. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 219-226.	3.9	86
16	From Backpacks to Smartphones: Past, Present, and Future of Wearable Computers. IEEE Pervasive Computing, 2009, 8, 8-13.	1.1	72
17	A Distributed PIR-based Approach for Estimating People Count in Office Environments. , 2012, , .		71
18	A wearable earpad sensor for chewing monitoring. , 2010, , .		66

#	ARTICLE	IF	CITATIONS
19	Designing Sensitive Wearable Capacitive Sensors for Activity Recognition. IEEE Sensors Journal, 2013, 13, 3935-3947.	2.4	66
20	Making Regular Eyeglasses Smart. IEEE Pervasive Computing, 2015, 14, 32-43.	1.1	65
21	A benchmark dataset to evaluate sensor displacement in activity recognition. , 2012, , .		63
22	Sensing Muscle Activities with Body-Worn Sensors. , 0, , .		60
23	ETHOS: Miniature orientation sensor for wearable human motion analysis. , 2010, , .		58
24	Methods for Detection and Classification of Normal Swallowing from Muscle Activation and Sound. , 2006, , .		56
25	Physical activity patterns and clusters in 1001 patients with COPD. Chronic Respiratory Disease, 2017, 14, 256-269.	1.0	56
26	COPDTrainer. , 2013, , .		51
27	LuxTrace: indoor positioning using building illumination. Personal and Ubiquitous Computing, 2007, 11, 417-428.	1.9	47
28	Towards wearable sensing-based assessment of fluid intake. , 2010, , .		46
29	Smart table surface: A novel approach to pervasive dining monitoring. , 2015, , .		45
30	Recognizing Energy-related Activities Using Sensors Commonly Installed in Office Buildings. Procedia Computer Science, 2013, 19, 669-677.	1.2	41
31	AmbientSense: A real-time ambient sound recognition system for smartphones. , 2013, , .		41
32	Diet eyeglasses: Recognising food chewing using EMG and smart eyeglasses. , 2016, , .		40
33	An opportunistic activity-sensing approach to save energy in office buildings. , 2013, , .		39
34	RoomSense. , 2013, , .		38
35	SMASH: A Distributed Sensing and Processing Garment for the Classification of Upper Body Postures. , 2008, , .		38
36	Detecting Disordered Breathing and Limb Movement Using In-Bed Force Sensors. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 930-938.	3.9	35

#	ARTICLE	IF	CITATIONS
37	How Wearable Computing Is Shaping Digital Health. IEEE Pervasive Computing, 2018, 17, 92-98.	1.1	35
38	Privacy Risk Awareness in Wearables and the Internet of Things. IEEE Pervasive Computing, 2020, 19, 60-66.	1.1	34
39	Rapid prototyping of smart garments for activity-aware applications. Journal of Ambient Intelligence and Smart Environments, 2009, 1, 87-101.	0.8	32
40	Early Indication of Decompensated Heart Failure in Patients on Home-Telemonitoring: A Comparison of Prediction Algorithms Based on Daily Weight and Noninvasive Transthoracic Bio-impedance. JMIR Medical Informatics, 2016, 4, e3.	1.3	32
41	Waving Real Hand Gestures Recorded by Wearable Motion Sensors to a Virtual Car and Driver in a Mixed-Reality Parking Game. , 2007, , .		31
42	Energy expenditure estimation using wearable sensors. , 2012, , .		31
43	Smart Textiles: From Niche to Mainstream. IEEE Pervasive Computing, 2013, 12, 81-84.	1.1	30
44	Monitoring Stress Arousal in the Wild. IEEE Pervasive Computing, 2013, 12, 28-37.	1.1	30
45	Discovery of activity composites using topic models: An analysis of unsupervised methods. Pervasive and Mobile Computing, 2014, 15, 215-227.	2.1	28
46	Automatic Event-Based Synchronization of Multimodal Data Streams from Wearable and Ambient Sensors. Lecture Notes in Computer Science, 2009, , 135-148.	1.0	27
47	Probabilistic parsing of dietary activity events. , 2007, , 242-247.		26
48	A stepwise validation of a wearable system for estimating energy expenditure in field-based research. Physiological Measurement, 2011, 32, 1983-2001.	1.2	25
49	Modeling arousal phases in daily living using wearable sensors. IEEE Transactions on Affective Computing, 2013, 4, 93-105.	5.7	25
50	Using a Thermopile Matrix Sensor to Recognize Energy-related Activities in Offices. Procedia Computer Science, 2013, 19, 678-685.	1.2	25
51	Design of the QBIC wearable computing platform. , 0, , .		24
52	Cardiorespiratory fitness estimation in free-living using wearable sensors. Artificial Intelligence in Medicine, 2016, 68, 37-46.	3.8	24
53	Wearables to Fight COVID-19: From Symptom Tracking to Contact Tracing. IEEE Pervasive Computing, 2020, 19, 53-60.	1.1	23
54	Distributed Activity Recognition with Fuzzy-Enabled Wireless Sensor Networks. , 2008, , 296-313.		22

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55	Estimating Posture-Recognition Performance in Sensing Garments Using Geometric Wrinkle Modeling. IEEE Transactions on Information Technology in Biomedicine, 2010, 14, 1436-1445.	3.6	21
56	Cardiorespiratory fitness estimation using wearable sensors: Laboratory and free-living analysis of context-specific submaximal heart rates. Journal of Applied Physiology, 2016, 120, 1082-1096.	1.2	20
57	Personalizing 3D-Printed Smart Eyeglasses to Augment Daily Life. Computer, 2017, 50, 26-35.	1.2	20
58	On-Body Sensing: From Gesture-Based Input to Activity-Driven Interaction. Computer, 2010, 43, 92-96.	1.2	19
59	Bite glasses. , 2016, , .		19
60	Recognition of User Activity Sequences Using Distributed Event Detection. , 2007, , 126-141.		18
61	Unsupervised activity clustering to estimate energy expenditure with a single body sensor. , 2013, , .		18
62	Sparse natural gesture spotting in free living to monitor drinking with wrist-worn inertial sensors. , 2018, , .		18
63	Free-living eating event spotting using EMG-monitoring eyeglasses. , 2018, , .		18
64	Recognizing Daily Life Context Using Web-Collected Audio Data. , 2012, , .		17
65	Estimating Oxygen Uptake During Nonsteady-State Activities and Transitions Using Wearable Sensors. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 469-475.	3.9	17
66	Distributed Modular Toolbox for Multi-modal Context Recognition. Lecture Notes in Computer Science, 2006, , 99-113.	1.0	17
67	Performance Analysis of an HMM-Based Gesture Recognition Using a Wristwatch Device. , 2009, , .		16
68	BodyANT: Miniature wireless sensors for naturalistic monitoring of daily activity. , 2009, , .		16
69	Daily Life Activity Routine Discovery in Hemiparetic Rehabilitation Patients Using Topic Models. Methods of Information in Medicine, 2015, 54, 248-255.	0.7	16
70	What Will We Wear After Smartphones?. IEEE Pervasive Computing, 2017, 16, 80-85.	1.1	16
71	Smart medical textiles for monitoring patients with heart conditions. , 2007, , 275-301.		16
72	Influence of a loose-fitting sensing garment on posture recognition in rehabilitation. , 2008, , .		15

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73	Combining wearable accelerometer and physiological data for activity and energy expenditure estimation. , 2013, , .		15
74	Hands-free gesture control with a capacitive textile neckband. , 2014, , .		15
75	SimpleSkin. , 2015, , .		15
76	Monitoring Dietary Behavior with a Smart Dining Tray. IEEE Pervasive Computing, 2015, 14, 46-56.	1.1	15
77	Regular-look eyeglasses can monitor chewing. , 2016, , .		15
78	Estimating wearable motion sensor performance from personal biomechanical models and sensor data synthesis. Scientific Reports, 2020, 10, 11450.	1.6	15
79	Textile Building Blocks: Toward Simple, Modularized, and Standardized Smart Textile. Human-computer Interaction Series, 2017, , 303-331.	0.4	15
80	Smart Energy Systems. IEEE Pervasive Computing, 2011, 10, 63-65.	1.1	13
81	Self-calibration of walking speed estimations using smartphone sensors. , 2014, , .		13
82	Using implicit user feedback to balance energy consumption and user comfort of proximity-controlled computer screens. Journal of Ambient Intelligence and Humanized Computing, 2015, 6, 207-221.	3.3	13
83	Computer Screen Use Detection Using Smart Eyeglasses. Frontiers in ICT, 2017, 4, .	3.6	13
84	A green autonomous self-sustaining sensor node for counting people in office environments. , 2012, , .		12
85	Personalizing energy expenditure estimation using physiological signals normalization during activities of daily living. Physiological Measurement, 2014, 35, 1797-1811.	1.2	12
86	Personalized Pervasive Health. IEEE Pervasive Computing, 2020, 19, 11-13.	1.1	12
87	Retrieval and Timing Performance of Chewing-Based Eating Event Detection in Wearable Sensors. Sensors, 2020, 20, 557.	2.1	12
88	Service-Oriented Architecture for Smart Environments (Short Paper). , 2013, , .		11
89	Improving energy efficiency through activity-aware control of office appliances using proximity sensing - A real-life study. , 2013, , .		11
90	How much light do you get?. , 2014, , .		11

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91	Automatic Dietary Monitoring Using Wearable Accessories. , 2018, , 369-412.		11
92	Estimating Running Performance Combining Non-invasive Physiological Measurements and Training Patterns in Free-Living. , 2018, 2018, 2845-2848.		11
93	Ambient, On-Body, and Implantable Monitoring Technologies to Assess Dietary Behavior. , 2011, , 3507-3526.		11
94	Wearable motion sensors and digital biomarkers in stroke rehabilitation. Current Directions in Biomedical Engineering, 2020, 6, 229-232.	0.2	11
95	Does loose fitting matter? Predicting sensor performance in smart garments.. , 2012, , .		11
96	Wearable therapist. , 2009, , .		10
97	Adaptive Activity Spotting Based on Event Rates. , 2010, , .		10
98	Personalizing Energy Expenditure Estimation Using a Cardiorespiratory Fitness Predicate. , 2013, , .		10
99	Personalization of Energy Expenditure Estimation in Free Living Using Topic Models. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 1577-1586.	3.9	10
100	Relation between estimated cardiorespiratory fitness and running performance in free-living: An analysis of HRV4Training data. , 2017, , .		10
101	Modeling and simulation of sensor orientation errors in garments. , 2009, , .		10
102	Arousal pattern analysis of an Olympic champion in ski jumping. Sports Technology, 2010, 3, 192-203.	0.4	9
103	A bayesian hierarchical mixture of experts approach to estimate speech quality. , 2010, , .		9
104	A Hierarchical Bayesian Approach to Modeling Heterogeneity in Speech Quality Assessment. IEEE Transactions on Audio Speech and Language Processing, 2012, 20, 136-146.	3.8	9
105	Transfer Learning in Body Sensor Networks Using Ensembles of Randomized Trees. IEEE Internet of Things Journal, 2015, 2, 33-40.	5.5	9
106	Longitudinal Walking Analysis in Hemiparetic Patients Using Wearable Motion Sensors: Is There Convergence Between Body Sides?. Frontiers in Bioengineering and Biotechnology, 2018, 6, 57.	2.0	9
107	Wearables and the Brain. IEEE Pervasive Computing, 2019, 18, 94-100.	1.1	9
108	Gesture-Controlled User Input to Complete Questionnaires on Wrist-Worn Watches. Lecture Notes in Computer Science, 2009, , 131-140.	1.0	9

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109	Personalized cardiorespiratory fitness and energy expenditure estimation using hierarchical Bayesian models. <i>Journal of Biomedical Informatics</i> , 2015, 56, 195-204.	2.5	8
110	Self-Taught Learning for Activity Spotting in On-body Motion Sensor Data. , 2011, , .		7
111	USABILITY OF DIGITAL MEDIA IN PATIENTS WITH COPD: A PILOT STUDY. <i>International Journal of Technology Assessment in Health Care</i> , 2013, 29, 162-165.	0.2	7
112	WISEglass. , 2015, , .		7
113	Mining relations and physical grouping of building-embedded sensors and actuators. , 2015, , .		7
114	Evaluation of 3D-printed conductive lines and EMG electrodes on smart eyeglasses frames. , 2018, , .		7
115	Physical Activity Comparison Between Body Sides in Hemiparetic Patients Using Wearable Motion Sensors in Free-Living and Therapy: A Case Series. <i>Frontiers in Bioengineering and Biotechnology</i> , 2018, 6, 136.	2.0	7
116	WISEglass: Smart eyeglasses recognising context. , 2015, , .		7
117	CRNTC+: A smartphone-based sensor processing framework for prototyping personal healthcare applications. , 2013, , .		7
118	An Interdisciplinary Approach to Designing Adaptive Lighting Environments. , 2011, , .		6
119	Novel stochastic model for presence detection using ultrasound ranging sensors. , 2014, , .		6
120	Estimating physical ability of stroke patients without specific tests. , 2015, , .		6
121	Using smart eyeglasses as a wearable game controller. , 2015, , .		6
122	Joint segmentation and activity discovery using semantic and temporal priors. , 2015, , .		6
123	A generic sensor fabric for multi-modal swallowing sensing in regular upper-body shirts. , 2016, , .		6
124	Mining hierarchical relations in building management variables. <i>Pervasive and Mobile Computing</i> , 2016, 26, 91-101.	2.1	6
125	Regression-based, mistake-driven movement skill estimation in Nordic Walking using wearable inertial sensors. , 2018, , .		6
126	Evaluating Daily Life Activity Using Smartphones as Novel Outcome Measure for Surgical Pain Therapy. , 2013, , .		6



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127	Collaborative real-time speaker identification for wearable systems. , 2010, , .		5
128	Collaborative personal speaker identification: A generalized approach. Pervasive and Mobile Computing, 2012, 8, 415-428.	2.1	5
129	Activity monitoring in daily life as an outcome measure for surgical pain relief intervention using smartphones. , 2013, , .		5
130	Towards LuxTrace: Using Solar Cells to Measure Distance Indoors. Lecture Notes in Computer Science, 2005, , 40-51.	1.0	5
131	Activity Routine Discovery in Stroke Rehabilitation Patients without Data Annotation. , 2014, , .		5
132	Analysis of Heart Stress Response for a Public Talk Assistant System. Lecture Notes in Computer Science, 2008, , 326-342.	1.0	5
133	Automatic Identification of Temporal Sequences in Chewing Sounds. , 2007, , .		4
134	Reducing motion artifacts for robust QRS detection in capacitive sensor arrays. , 2011, , .		4
135	Body weight-normalized Energy Expenditure estimation using combined activity and allometric scaling clustering. , 2013, 2013, 6752-5.		4
136	Hierarchical motion artefact compensation in smart garments. , 2014, , .		4
137	Data mining-based localisation of spatial low-resolution sensors in commercial buildings. , 2016, , .		4
138	Printing Wearable Devices in 2D and 3D: An Overview on Mechanical and Electronic Digital Co-design. IEEE Pervasive Computing, 2019, 18, 38-50.	1.1	4
139	DynDSE: Automated Multi-Objective Design Space Exploration for Context-Adaptive Wearable IoT Edge Devices. Sensors, 2020, 20, 6104.	2.1	4
140	Simulation of Garment-Embedded Contact Sensor Performance under Motion Dynamics. , 2021, , .		4
141	Design Challenges of Real Wearable Computers. , 2015, , 602-637.		4
142	Benefits of Dynamically Reconfigurable Activity Recognition in Distributed Sensing Environments. Atlantis Ambient and Pervasive Intelligence, 2011, , 265-290.	0.2	4
143	Sparse Bayesian hierarchical mixture of experts. , 2011, , .		3
144	Removing respiratory artefacts from transthoracic bioimpedance spectroscopy measurements. Journal of Physics: Conference Series, 2013, 434, 012018.	0.3	3

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145	Using RFID tags as reference for phone location and orientation in daily life. , 2013, , .		3
146	An intervention study on automated lighting control to save energy in open space offices. , 2015, , .		3
147	Synthesising motion sensor data from biomechanical simulations to investigate motion sensor placement and orientation variations. , 2019, 2019, 6391-6394.		3
148	Psychophysiological Body Activation Characteristics in Daily Routines. , 2009, , .		2
149	Comment on "Non-invasive monitoring of chewing and swallowing for objective quantification of ingestive behavior". Physiological Measurement, 2009, 30, L1-L4.	1.2	2
150	Modelling of distributed activity recognition in the home environment. , 2011, 2011, 1781-4.		2
151	Personalized physical activity monitoring on the move. , 2013, , .		2
152	Accuracy-coverage tradeoff of nocturnal vital sign estimation in smart beds. , 2014, , .		2
153	CRNTC+: A smartphone-based sensor processing framework for prototyping personal healthcare applications. , 2013, , .		2
154	Personalizing Energy Expenditure Estimation Using a Cardiorespiratory Fitness Predicate. , 2013, , .		2
155	Monitoring stage fright outside the laboratory: an example in a professional musician using wearable sensors. Medical Problems of Performing Artists, 2012, 27, 21-30.	0.2	2
156	Wearable monitoring of stage fright in professional musicians. , 2010, , .		1
157	MyConverse. , 2013, , .		1
158	Exploring concept drift using interactive simulations. , 2013, , .		1
159	Workshop on smart garments. , 2014, , .		1
160	Transfer Learning in Body Sensor Networks Using Ensembles of Randomised Trees. , 2014, , .		1
161	Motion-adaptive duty-cycling to estimate orientation using inertial sensors. , 2014, , .		1
162	Personalised phone placement recognition in daily life using RFID tagging. , 2014, , .		1

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163	Guest Editorial - Body Sensor Networks: Novel Sensors, Algorithms, Platforms, and Applications. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 783-783.	3.9	1
164	Smart Eyeglasses, e-Textiles, and the Future of Wearable Computing. Advances in Science and Technology, 2016, 100, 141-150.	0.2	1
165	Attention-Based Adaptive Sampling for Continuous EMG Data Streams. , 2019, , .		1
166	Makers of Pervasive Systems and Crafts. IEEE Pervasive Computing, 2019, 18, 61-70.	1.1	1
167	Deep 3D Body Landmarks Estimation for Smart Garments Design. , 2021, , .		1
168	Activity Patterns in Stroke Patients - Is There a Trend in Behaviour During Rehabilitation?. Lecture Notes in Computer Science, 2015, , 146-159.	1.0	1
169	1st workshop on human factors and activity recognition in healthcare, wellness and assisted living. , 2013, , .		0
170	MyConverse in action. , 2013, , .		0
171	Toward smartphone assisted personal rehabilitation training. Xrds, 2013, 20, 33-37.	0.2	0
172	Mining Device Data to Auto-commission Buildings. , 2016, , .		0
173	Fabricating Pervasive Computing Systems. IEEE Pervasive Computing, 2019, 18, 18-19.	1.1	0
174	Audio-Based Onset Detection applied to Chewing Cycle Segmentation. , 2021, , .		0
175	AIM in Wearable and Implantable Computing. , 2021, , 1-16.		0
176	Inferring Model Structures from Inertial Sensor Data in Distributed Activity Recognition. Lecture Notes in Computer Science, 2013, , 62-77.	1.0	0
177	Case-load simulation using home telemonitoring data of heart failure patients to assess the impact of new sensor technologies and alerting algorithms on the decision making of healthcare professionals. International Journal of Integrated Care, 2013, 13, .	0.1	0
178	AIM in Unsupervised Data Mining. , 2021, , 1-15.		0
179	AIM in Eating Disorders. , 2022, , 1643-1661.		0
180	AIM in Unsupervised Data Mining. , 2022, , 303-317.		0

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181	AIM in Wearable and Implantable Computing. , 2022, , 1187-1201.		0