

# Daniel Roggen

## List of Publications by Year in descending order

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Version: 2024-02-01

158  
papers

7,197  
citations

279798  
23  
h-index

149698  
56  
g-index

162  
all docs

162  
docs citations

162  
times ranked

5573  
citing authors

#	ARTICLE	IF	CITATIONS
1	Deep Convolutional and LSTM Recurrent Neural Networks for Multimodal Wearable Activity Recognition. Sensors, 2016, 16, 115.	3.8	1,679
2	The Opportunity challenge: A benchmark database for on-body sensor-based activity recognition. Pattern Recognition Letters, 2013, 34, 2033-2042.	4.2	508
3	Wearable Assistant for Parkinson's Disease Patients With the Freezing of Gait Symptom. IEEE Transactions on Information Technology in Biomedicine, 2010, 14, 436-446.	3.2	504
4	Collecting complex activity datasets in highly rich networked sensor environments. , 2010, , .		401
5	Wearable Activity Tracking in Car Manufacturing. IEEE Pervasive Computing, 2008, 7, 42-50.	1.3	273
6	The University of Sussex-Huawei Locomotion and Transportation Dataset for Multimodal Analytics With Mobile Devices. IEEE Access, 2018, 6, 42592-42604.	4.2	181
7	Activity Recognition from On-Body Sensors: Accuracy-Power Trade-Off by Dynamic Sensor Selection. , 2008, , 17-33.		178
8	Flexible Sensors"From Materials to Applications. Technologies, 2019, 7, 35.	5.1	139
9	Online Detection of Freezing of Gait with Smartphones and Machine Learning Techniques. , 2012, , .		137
10	Enabling Reproducible Research in Sensor-Based Transportation Mode Recognition With the Sussex-Huawei Dataset. IEEE Access, 2019, 7, 10870-10891.	4.2	119
11	Wearable EOG goggles: Seamless sensing and context-awareness in everyday environments. Journal of Ambient Intelligence and Smart Environments, 2009, 1, 157-171.	1.4	87
12	Recognition of visual memory recall processes using eye movement analysis. , 2011, , .		87
13	Exploring the acceptability of google glass as an everyday assistive device for people with parkinson's. , 2014, , .		87
14	Activity recognition from on-body sensors by classifier fusion: sensor scalability and robustness. , 2007, , .		79
15	Deep convolutional feature transfer across mobile activity recognition domains, sensor modalities and locations. , 2016, , .		78
16	Probing crowd density through smartphones in city-scale mass gatherings. EPJ Data Science, 2013, 2, .	2.8	76
17	Opportunistic human activity and context recognition. Computer, 2013, 46, 36-45.	1.1	70
18	Recognition of crowd behavior from mobile sensors with pattern analysis and graph clustering methods. Networks and Heterogeneous Media, 2011, 6, 521-544.	1.1	70

#	ARTICLE	IF	CITATIONS
19	Summary of the Sussex-Huawei Locomotion-Transportation Recognition Challenge. , 2018, , .		68
20	Benchmarking classification techniques using the Opportunity human activity dataset. , 2011, , .		67
21	Wearable EOG goggles. , 2009, , .		66
22	Performance Analysis of Routing Protocol for Low Power and Lossy Networks (RPL) in Large Scale Networks. IEEE Internet of Things Journal, 2017, 4, 2172-2185.	8.7	64
23	It's in your eyes. , 2008, , .		62
24	Potentials of Enhanced Context Awareness in Wearable Assistants for Parkinson's Disease Patients with the Freezing of Gait Syndrome. , 2009, , .		60
25	Mobile sensing of pedestrian flocks in indoor environments using WiFi signals. , 2012, , .		58
26	OPPORTUNITY: Towards opportunistic activity and context recognition systems. , 2009, , .		55
27	Feature Learning for Detection and Prediction of Freezing of Gait in Parkinsonâ€™s Disease. Lecture Notes in Computer Science, 2013, , 144-158.	1.3	53
28	Detecting pedestrian flocks by fusion of multi-modal sensors in mobile phones. , 2012, , .		52
29	Flexible Temperature Sensor Integration into E-Textiles Using Different Industrial Yarn Fabrication Processes. Sensors, 2020, 20, 73.	3.8	52
30	Unsupervised Classifier Self-Calibration through Repeated Context Occurences: Is there Robustness against Sensor Displacement to Gain?. , 2009, , .		49
31	Wearable Computing. IEEE Robotics and Automation Magazine, 2011, 18, 83-95.	2.0	49
32	Inferring Crowd Conditions from Pedestrians' Location Traces for Real-Time Crowd Monitoring during City-Scale Mass Gatherings. , 2012, , .		47
33	Summary of the Sussex-Huawei locomotion-transportation recognition challenge 2019. , 2019, , .		46
34	On-body activity recognition in a dynamic sensor network. , 2007, , .		46
35	3D ActionSLAM: wearable person tracking in multi-floor environments. Personal and Ubiquitous Computing, 2015, 19, 123-141.	2.8	43
36	Real time gesture recognition using continuous time recurrent neural networks. , 2007, , .		43

#	ARTICLE	IF	CITATIONS
37	ActionSLAM: Using location-related actions as landmarks in pedestrian SLAM. , 2012, , .		41
38	Gestures are strings: efficient online gesture spotting and classification using string matching. , 2007, , .		41
39	What's in the Eyes for Context-Awareness?. IEEE Pervasive Computing, 2011, 10, 48-57.	1.3	40
40	The adARC pattern analysis architecture for adaptive human activity recognition systems. Journal of Ambient Intelligence and Humanized Computing, 2013, 4, 169-186.	4.9	40
41	Multi-cellular Development: Is There Scalability and Robustness to Gain?. Lecture Notes in Computer Science, 2004, , 391-400.	1.3	38
42	SMASH: A Distributed Sensing and Processing Garment for the Classification of Upper Body Postures. , 2008, , .		38
43	Titan: A Tiny Task Network for Dynamically Reconfigurable Heterogeneous Sensor Networks. , 2007, , 127-138.		36
44	Summary of the sussex-huawei locomotion-transportation recognition challenge 2020. , 2020, , .		36
45	Decentralized Detection of Group Formations from Wearable Acceleration Sensors. , 2009, , .		33
46	Evolutionary morphogenesis for multi-cellular systems. Genetic Programming and Evolvable Machines, 2007, 8, 61-96.	2.2	32
47	Rapid prototyping of smart garments for activity-aware applications. Journal of Ambient Intelligence and Smart Environments, 2009, 1, 87-101.	1.4	32
48	Thigh-Derived Inertial Sensor Metrics to Assess the Sit-to-Stand and Stand-to-Sit Transitions in the Timed Up and Go (TUG) Task for Quantifying Mobility Impairment in Multiple Sclerosis. Frontiers in Neurology, 2018, 9, 684.	2.4	32
49	Online Detection of Freezing of Gait in Parkinsonâ€™s Disease Patients: A Performance Characterization. , 2009, , .		31
50	Network-Level Power-Performance Trade-Off in Wearable Activity Recognition. Transactions on Embedded Computing Systems, 2012, 11, 1-30.	2.9	30
51	Fusion of String-Matched Templates for Continuous Activity Recognition. , 2007, , .		29
52	Incremental kNN Classifier Exploiting Correct-Error Teacher for Activity Recognition. , 2010, , .		29
53	Improving online gesture recognition with template matching methods in accelerometer data. , 2012, , .		29
54	Time-lag method for detecting following and leadership behavior of pedestrians from mobile sensing data. , 2013, , .		28

#	ARTICLE	IF	CITATIONS
55	Improved actionSLAM for long-term indoor tracking with wearable motion sensors. , 2013, , .		28
56	Locomotion and Transportation Mode Recognition from GPS and Radio Signals: Summary of SHL Challenge 2021. , 2021, , .		28
57	A Versatile Annotated Dataset for Multimodal Locomotion Analytics with Mobile Devices. , 2017, , .		26
58	Benchmarking the SHL Recognition Challenge with Classical and Deep-Learning Pipelines. , 2018, , .		24
59	Recognition of Hearing Needs from Body and Eye Movements to Improve Hearing Instruments. Lecture Notes in Computer Science, 2011, , 314-331.	1.3	23
60	Kinect=IMU? Learning MIMO Signal Mappings to Automatically Translate Activity Recognition Systems across Sensor Modalities. , 2012, , .		22
61	On the Use of Brain Decoded Signals for Online User Adaptive Gesture Recognition Systems. Lecture Notes in Computer Science, 2010, , 427-444.	1.3	22
62	Engineers meet clinicians. , 2013, , .		21
63	Evolving discriminative features robust to sensor displacement for activity recognition in body area sensor networks. , 2009, , .		20
64	Unsupervised online activity discovery using temporal behaviour assumption. , 2017, , .		20
65	On-Body Sensing: From Gesture-Based Input to Activity-Driven Interaction. Computer, 2010, 43, 92-96.	1.1	19
66	Group affiliation detection using model divergence for wearable devices. , 2014, , .		19
67	Towards an online detection of pedestrian flocks in urban canyons by smoothed spatio-temporal clustering of GPS trajectories. , 2011, , .		18
68	Tagging human activities in video by crowdsourcing. , 2013, , .		18
69	Sound-based Transportation Mode Recognition with Smartphones. , 2019, , .		18
70	ActionSLAM on a smartphone: At-home tracking with a fully wearable system. , 2013, , .		17
71	S-SMART. ACM Transactions on Intelligent Systems and Technology, 2016, 7, 1-28.	4.5	17
72	An Educational and Research Kit for Activity and Context Recognition from On-body Sensors. , 2010, , .		16

#	ARTICLE	IF	CITATIONS
73	High reliability Android application for multidevice multimodal mobile data acquisition and annotation. , 2017, , .		16
74	Transportation mode recognition fusing wearable motion, sound and vision sensors. IEEE Sensors Journal, 2020, , 1-1.	4.7	16
75	Three-Year Review of the 2018â€“2020 SHL Challenge on Transportation and Locomotion Mode Recognition From Mobile Sensors. Frontiers in Computer Science, 2021, 3, .	2.8	16
76	EyeMote â€“ Towards Context-Aware Gaming Using Eye Movements Recorded from Wearable Electrooculography. Lecture Notes in Computer Science, 2008, , 33-45.	1.3	16
77	Titan: An Enabling Framework for Activity-Aware "Pervasive Apps" in Opportunistic Personal Area Networks. Eurasip Journal on Wireless Communications and Networking, 2011, 2011, .	2.4	15
78	Automatic correction of annotation boundaries in activity datasets by class separation maximization. , 2013, , .		14
79	Limited-Memory Warping LCSS for Real-Time Low-Power Pattern Recognition in Wireless Nodes. Lecture Notes in Computer Science, 2015, , 151-167.	1.3	13
80	Coco Stretch: Strain Sensors Based on Natural Coconut Oil and Carbon Black Filled Elastomers. Advanced Materials Technologies, 2021, 6, 2000780.	5.8	13
81	Quantifying Gait Similarity: User Authentication and Real-World Challenge. Lecture Notes in Computer Science, 2009, , 1040-1049.	1.3	13
82	Bringing Quality of Context into Wearable Human Activity Recognition Systems. Lecture Notes in Computer Science, 2009, , 164-173.	1.3	13
83	Parkinsons disease patients perspective on context aware wearable technology for auditive assistance. , 2009, , .		12
84	Modeling Service-Oriented Context Processing in Dynamic Body Area Networks. IEEE Journal on Selected Areas in Communications, 2009, 27, 49-57.	14.0	12
85	A wearable, ambient sound-based approach for infrastructureless fuzzy proximity estimation. , 2010, , .		12
86	User Acceptance Study of a Mobile System for Assistance during Emergency Situations at Large-Scale Events. , 2010, , .		11
87	A Morphogenetic Evolutionary System: Phylogenesis of the POEtic Circuit. Lecture Notes in Computer Science, 2003, , 153-164.	1.3	11
88	Evolution of Embodied Intelligence. Lecture Notes in Computer Science, 2004, , 293-311.	1.3	10
89	Activity Recognition in Opportunistic Sensor Environments. Procedia Computer Science, 2011, 7, 173-174.	2.0	10
90	Beach volleyball serve type recognition. , 2016, , .		10

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91	Opportunistic Activity Recognition in IoT Sensor Ecosystems via Multimodal Transfer Learning. Neural Processing Letters, 2021, 53, 3169-3197.	3.2	10
92	Ontogenetic Development and Fault Tolerance in the POEtic Tissue. Lecture Notes in Computer Science, 2003, , 141-152.	1.3	10
93	Effect of movements on the electrodermal response after a startle event. , 2008, , .		9
94	Towards an Interactive Snowboarding Assistance System. , 2009, , .		9
95	Wearable assistant for load monitoring: recognition of on-body load placement from gait alterations. , 2010, , .		9
96	Human and Machine Recognition of Transportation Modes from Body-Worn Camera Images. , 2019, , .		9
97	Opportunity++: A Multimodal Dataset for Video- and Wearable, Object and Ambient Sensors-Based Human Activity Recognition. Frontiers in Computer Science, 2021, 3, .	2.8	9
98	Collection and curation of a large reference dataset for activity recognition. , 2011, , .		8
99	Using Mobile Technology and a Participatory Sensing Approach for Crowd Monitoring and Management During Large-Scale Mass Gatherings. Understanding Complex Systems, 2013, , 61-77.	0.6	8
100	Enhancing action recognition through simultaneous semantic mapping from body-worn motion sensors. , 2014, , .		8
101	ShapeSense3D. , 2019, , .		8
102	Context Cells: Towards Lifelong Learning in Activity Recognition Systems. Lecture Notes in Computer Science, 2009, , 121-134.	1.3	8
103	Organizing Context Information Processing in Dynamic Wireless Sensor Networks. , 2007, , .		7
104	Scenario Based Modeling for Very Large Scale Simulations. , 2010, , .		7
105	Real-time detection and recommendation of thermal spots by sensing collective behaviors in paragliding. , 2011, , .		7
106	ISWC 2013–Wearables Are Here to Stay. IEEE Pervasive Computing, 2014, 13, 14-18.	1.3	7
107	Identifying Important Action Primitives for High Level Activity Recognition. Lecture Notes in Computer Science, 2010, , 149-162.	1.3	7
108	The OPPORTUNITY Framework and Data Processing Ecosystem for Opportunistic Activity and Context Recognition. International Journal of Sensors, Wireless Communications and Control, 2012, 1, 102-125.	0.7	7

#	ARTICLE	IF	CITATIONS
109	Smartphone location identification and transport mode recognition using an ensemble of generative adversarial networks. , 2020, , .		6
110	Fast Deep Neural Architecture Search for Wearable Activity Recognition by Early Prediction of Converged Performance. , 2021, , .		5
111	ARM cortex M4-based extensible multimodal wearable platform for sensor research and context sensing from motion & sound. , 2020, , .		5
112	On strategies for budget-based online annotation in human activity recognition. , 2014, , .		4
113	Exploring human activity annotation using a privacy preserving 3D model. , 2016, , .		4
114	Exploring glass as a novel method for hands-free data entry in flexible cystoscopy. , 2016, , .		4
115	Inferring Complex Textile Shape from an Integrated Carbon Black-infused Ecoflex-based Bend and Stretch Sensor Array. , 2021, , .		4
116	Analyzing the impact of different action primitives in designing high-level human activity recognition systems. Journal of Ambient Intelligence and Smart Environments, 2013, 5, 443-461.	1.4	3
117	Detecting Freezing of Gait with Earables Trained from VR Motion Capture Data. , 2021, , .		3
118	Evolving Genetic Regulatory Networks for Hardware Fault Tolerance. Lecture Notes in Computer Science, 2004, , 561-570.	1.3	3
119	Service Discovery and Composition in Body Area Networks. , 2008, , .		3
120	Multimodal fusion of IMUs and EPS body-worn sensors for scratch recognition. , 2020, , .		3
121	Wearable FPGA Platform for Accelerated DSP and AI Applications. , 2022, , .		3
122	Chairs' summary/proposal for international workshop on human activity sensing corpus and its application (hasca2013). , 2013, , .		2
123	International workshop on human activity sensing corpus and its application (HASCA2014). , 2014, , .		2
124	International workshop on human activity sensing corpus and its application (HASCA2015). , 2015, , .		2
125	Electric field phase sensing for wearable orientation and localisation applications. , 2016, , .		2
126	Benchmarking deep classifiers on mobile devices for vision-based transportation recognition. , 2019, , .		2



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127	WLCSSLearn: Learning Algorithm for Template Matching-based Gesture Recognition Systems. , 2019, , .		2
128	Design of a multimodal hearing system. Computer Science and Information Systems, 2013, 10, 483-501.	1.0	2
129	CausalBatch. , 2020, , .		2
130	Copper wire based electrical contacts for direct interfacing of stretchable sensors. , 2020, , .		2
131	Slow Feature Preprocessing in Deep Neural Networks for Wearable Sensor-Based Locomotion Recognition. , 2022, , .		2
132	Towards multi-modal context recognition for hearing instruments. , 2010, , .		1
133	Design of a bilateral vibrotactile feedback system for lateralization. , 2011, , .		1
134	Robust activity recognition combining anomaly detection and classifier retraining. , 2013, , .		1
135	4 th workshop on human activity sensing corpus and applications. , 2016, , .		1
136	5th Int. workshop on human activity sensing corpus and applications (HASCA). , 2017, , .		1
137	Using Wearable Inertial Sensors to Compare Different Versions of the Dual Task Paradigm during Walking. , 2017, , .		1
138	A Case Study for Human Gesture Recognition from Poorly Annotated Data. , 2018, , .		1
139	Evaluation of a Pseudo Zero-Potential Flexible Readout Circuit for Resistive Sensor Matrixes. , 2020, , .		1
140	Strain Sensors: Coco Stretch: Strain Sensors Based on Natural Coconut Oil and Carbon Black Filled Elastomers (Adv. Mater. Technol. 2/2021). Advanced Materials Technologies, 2021, 6, 2170012.	5.8	1
141	Soft Gel-free ECG electrodes based on Biocompatible Coconut-Oil and Carbon Black. , 2021, , .		1
142	Bilateral Vibrotactile Feedback for Accurate Lateralization in Hearing Instrument Body Area Networks. , 2011, , .		1
143	Identification of Relevant Multimodal Cues to enhance Context-Aware Hearing Instruments. , 2011, , .		1
144	Mapping Vicon Motion Tracking to 6-Axis IMU Data for Wearable Activity Recognition. Smart Innovation, Systems and Technologies, 2021, , 3-20.	0.6	1

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145	Improving Smartphone-Based Transport Mode Recognition Using Generative Adversarial Networks. Smart Innovation, Systems and Technologies, 2021, , 63-79.	0.6	1
146	Design of an Ecology of Activity-aware Cells in Ambient Intelligence Environments. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 441-446.	0.4	0
147	DactyLoc: A minimally geo-referenced WiFi+GSM-fingerprint-based localization method for positioning in urban spaces. , 2012, , .		0
148	Exploration of head gesture control for hearing instruments. International Journal of Ad Hoc and Ubiquitous Computing, 2014, 16, 240.	0.5	0
149	Theme issue from ISWC 2013. Personal and Ubiquitous Computing, 2015, 19, 103-104.	2.8	0
150	Collecting a Dataset of Gestures for Skill Assessment in the Field: a beach volleyball serves case study. , 2021, , .		0
151	Mapping by Seeing “Wearable Vision-Based Dead-Reckoning, and Closing the Loop. Lecture Notes in Computer Science, 2007, , 29-45.	1.3	0
152	Automatic Power-Off for Binaural Hearing Instruments. Lecture Notes in Computer Science, 2012, , 409-414.	1.3	0
153	Benchmark Performance for the Sussex-Huawei Locomotion and Transportation Recognition Challenge 2018. Springer Series in Adaptive Environments, 2019, , 153-170.	0.3	0
154	Lessons from Hands-Free Data Entry in Flexible Cystoscopy with Glass for Future Smart Assistance. Computer Communications and Networks, 2020, , 63-87.	0.8	0
155	WLCSSCuda. , 2019, , .		0
156	Lessons Learned in “Developing Sensorised Textiles to “Capture Body Shapes. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2022, , 365-380.	0.3	0
157	A Public Repository to Improve Replicability and Collaboration in Deep Learning for HAR*. , 2022, , .		0
158	The 25th Edition of the International Symposium on Wearable Computers. IEEE Pervasive Computing, 2022, 21, 105-111.	1.3	0