

# Tanja Schultz

## List of Publications by Year in descending order

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Version: 2024-02-01

185  
papers

5,182  
citations

331259

21  
h-index

182168

51  
g-index

194  
all docs

194  
docs citations

194  
times ranked

3105  
citing authors

#	ARTICLE	IF	CITATIONS
1	Silent speech interfaces. <i>Speech Communication</i> , 2010, 52, 270-287.	1.6	364
2	Automatic speech recognition for under-resourced languages: A survey. <i>Speech Communication</i> , 2014, 56, 85-100.	1.6	320
3	Language-independent and language-adaptive acoustic modeling for speech recognition. <i>Speech Communication</i> , 2001, 35, 31-51.	1.6	273
4	Mental workload during n-back taskâ€™ quantified in the prefrontal cortex using fNIRS. <i>Frontiers in Human Neuroscience</i> , 2013, 7, 935.	1.0	245
5	TSFEL: Time Series Feature Extraction Library. <i>SoftwareX</i> , 2020, 11, 100456.	1.2	226
6	Brain-to-text: decoding spoken phrases from phone representations in the brain. <i>Frontiers in Neuroscience</i> , 2015, 9, 217.	1.4	195
7	Modeling coarticulation in EMG-based continuous speech recognition. <i>Speech Communication</i> , 2010, 52, 341-353.	1.6	139
8	Speech synthesis from ECoG using densely connected 3D convolutional neural networks. <i>Journal of Neural Engineering</i> , 2019, 16, 036019.	1.8	138
9	Biosignal-Based Spoken Communication: A Survey. <i>IEEE/ACM Transactions on Audio Speech and Language Processing</i> , 2017, 25, 2257-2271.	4.0	117
10	Advancing Muscle-Computer Interfaces with High-Density Electromyography. , 2015, , .		115
11	Hybrid fNIRS-EEG based classification of auditory and visual perception processes. <i>Frontiers in Neuroscience</i> , 2014, 8, 373.	1.4	98
12	Multilingual deep neural network based acoustic modeling for rapid language adaptation. , 2014, , .		89
13	Airwriting: Hands-Free Mobile Text Input by Spotting and Continuous Recognition of 3d-Space Handwriting with Inertial Sensors. , 2012, , .		83
14	A first speech recognition system for Mandarin-English code-switch conversational speech. , 2012, , .		81
15	Towards continuous speech recognition using surface electromyography. , 0, , .		77
16	Generating Natural, Intelligible Speech From Brain Activity in Motor, Premotor, and Inferior Frontal Cortices. <i>Frontiers in Neuroscience</i> , 2019, 13, 1267.	1.4	76
17	Automatic Speech Recognition from Neural Signals: A Focused Review. <i>Frontiers in Neuroscience</i> , 2016, 10, 429.	1.4	75
18	Airwriting: a wearable handwriting recognition system. <i>Personal and Ubiquitous Computing</i> , 2014, 18, 191-203.	1.9	72

#	ARTICLE	IF	CITATIONS
19	Towards emotion recognition from electroencephalographic signals. , 2009, , .		65
20	Far-Field Speaker Recognition. IEEE Transactions on Audio Speech and Language Processing, 2007, 15, 2023-2032.	3.8	58
21	GlobalPhone: A multilingual text & speech database in 20 languages. , 2013, , .		58
22	Classification of mental tasks in the prefrontal cortex using fNIRS. , 2013, 2013, 2160-3.		56
23	Towards an EEG-based emotion recognizer for humanoid robots. , 2009, , .		55
24	Recurrent neural network language modeling for code switching conversational speech. , 2013, , .		53
25	Airwriting recognition using wearable motion sensors. , 2010, , .		52
26	Investigating deep learning for fNIRS based BCI. , 2015, 2015, 2844-7.		52
27	Toward a Wireless Open Source Instrument: Functional Near-infrared Spectroscopy in Mobile Neuroergonomics and BCI Applications. Frontiers in Human Neuroscience, 2015, 9, 617.	1.0	51
28	Tackling Speaking Mode Varieties in EMG-Based Speech Recognition. IEEE Transactions on Biomedical Engineering, 2014, 61, 2515-2526.	2.5	48
29	Real-time synthesis of imagined speech processes from minimally invasive recordings of neural activity. Communications Biology, 2021, 4, 1055.	2.0	46
30	Syntactic and Semantic Features For Code-Switching Factored Language Models. IEEE/ACM Transactions on Audio Speech and Language Processing, 2015, 23, 431-440.	4.0	44
31	Vision-based handwriting recognition for unrestricted text input in mid-air. , 2012, , .		41
32	Speech-Based Detection of Alzheimer's Disease in Conversational German. , 0, , .		41
33	Multimodal Recognition of Cognitive Workload for Multitasking in the Car. , 2010, , .		39
34	Unsupervised language model adaptation using latent semantic marginals. , 0, , .		38
35	Manual and Automatic Transcriptions in Dementia Detection from Speech. , 0, , .		36
36	Pattern learning with deep neural networks in EMG-based speech recognition. , 2014, 2014, 4200-3.		35

#	ARTICLE	IF	CITATIONS
37	Towards direct speech synthesis from ECoG: A pilot study. , 2016, 2016, 1540-1543.		33
38	Direct conversion from facial myoelectric signals to speech using Deep Neural Networks. , 2015, , .		30
39	STAnet: A Spatiotemporal Attention Network for Decoding Auditory Spatial Attention From EEG. IEEE Transactions on Biomedical Engineering, 2022, 69, 2233-2242.	2.5	28
40	Model-Based Evaluation of Playing Strategies in a Memo Game for Elderly Users. , 2015, , .		27
41	Augmented Reality Interface for Smart Home Control using SSVEP-BCI and Eye Gaze. , 2019, , .		27
42	Motion Units: Generalized Sequence Modeling of Human Activities for Sensor-Based Activity Recognition. , 2021, , .		27
43	Multilingual spoken language processing. IEEE Signal Processing Magazine, 2008, 25, 89-97.	4.6	26
44	Cross-language bootstrapping based on completely unsupervised training using multilingual A-stabil. , 2011, , .		26
45	Increased gamma band power during movement planning coincides with motor memory retrieval. NeuroImage, 2016, 125, 172-181.	2.1	26
46	Interpretation of convolutional neural networks for speech spectrogram regression from intracranial recordings. Neurocomputing, 2019, 342, 145-151.	3.5	25
47	Rapid bootstrapping of five eastern european languages using the rapid language adaptation toolkit. , 0, , .		25
48	Locating user attention using eye tracking and EEG for spatio-temporal event selection. , 2013, , .		24
49	Rapid building of an ASR system for under-resourced languages based on multilingual unsupervised training. , 0, , .		24
50	Voice convergin: Speaker de-identification by voice transformation. , 2009, , .		23
51	Vietnamese large vocabulary continuous speech recognition. , 2009, , .		23
52	Speaker de-identification via voice transformation. , 2009, , .		23
53	HMM-based human motion recognition with optical flow data. , 2009, , .		23
54	Synthesizing speech from electromyography using voice transformation techniques. , 0, , .		22

#	ARTICLE	IF	CITATIONS
55	Correlated Latent Semantic Model for Unsupervised LM Adaptation. , 2007, , .		21
56	Continuous Recognition of Affective States by Functional Near Infrared Spectroscopy Signals. , 2013, , .		21
57	Starring into the void?. , 2016, , .		21
58	Decoding Mental Workload in Virtual Environments: A fNIRS Study using an Immersive n-back Task. , 2019, 2019, 3103-3106.		20
59	Online Workload Recognition from EEG Data during Cognitive Tests and Human-Machine Interaction. Lecture Notes in Computer Science, 2010, , 410-417.	1.0	20
60	Speaking mode recognition from functional Near Infrared Spectroscopy. , 2012, 2012, 1715-8.		19
61	Bilingual LSA-based adaptation for statistical machine translation. Machine Translation, 2007, 21, 187-207.	1.3	18
62	Is voice transformation a threat to speaker identification?. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	18
63	The I4U system in NIST 2008 speaker recognition evaluation. , 2009, , .		18
64	Initialization schemes for multilayer perceptron training and their impact on ASR performance using multilingual data. , 0, , .		18
65	Speaker identification using multilingual phone strings. , 2002, , .		17
66	Sentence segmentation and punctuation recovery for spoken language translation. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	17
67	Grapheme-to-phoneme model generation for Indo-European languages. , 2012, , .		17
68	Adaptive cognitive technical systems. Journal of Neuroscience Methods, 2014, 234, 108-115.	1.3	17
69	Impact of lack of acoustic feedback in EMG-based silent speech recognition. , 0, , .		17
70	Continuous Electromyographic Speech Recognition with a Multi-Stream Decoding Architecture. , 2007, , .		16
71	Crosscorrelation-based multispeaker speech activity detection. , 0, , .		16
72	SPICE: web-based tools for rapid language adaptation in speech processing systems. , 0, , .		16

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73	Mechanisms within the Parietal Cortex Correlate with the Benefits of Random Practice in Motor Adaptation. <i>Frontiers in Human Neuroscience</i> , 2017, 11, 403.	1.0	15
74	Enhancement of human computer interaction with facial electromyographic sensors. , 2009, , .		15
75	Thai grapheme-based speech recognition. , 2006, , .		15
76	Wiktionary as a source for automatic pronunciation extraction. , 0, , .		15
77	Hybrid fNIRS-EEG based discrimination of 5 levels of memory load. , 2015, , .		14
78	Domain-Adversarial Training for Session Independent EMG-based Speech Recognition. , 0, , .		14
79	Sub-word unit based non-audible speech recognition using surface electromyography. , 0, , .		14
80	BioKIT â€” real-time decoder for biosignal processing. , 0, , .		14
81	Further investigations on EMG-to-speech conversion. , 2012, , .		13
82	Opportunities and Challenges for Using Automatic Human Affect Analysis in Consumer Research. <i>Frontiers in Neuroscience</i> , 2020, 14, 400.	1.4	13
83	Investigating the Effect of Audio Duration on Dementia Detection Using Acoustic Features. , 0, , .		13
84	Impact of different speaking modes on EMG-based speech recognition. , 0, , .		13
85	Multilingual a-stabil: A new confidence score for multilingual unsupervised training. , 2010, , .		12
86	An EEG Adaptive Information System for an Empathic Robot. <i>International Journal of Social Robotics</i> , 2011, 3, 415-425.	3.1	12
87	I-CARE-An Interaction System for the Individual Activation of People with Dementia. <i>Geriatrics (Switzerland)</i> , 2021, 6, 51.	0.6	12
88	An Investigation of Code-Switching Attitude Dependent Language Modeling. <i>Lecture Notes in Computer Science</i> , 2013, , 297-308.	1.0	12
89	A Wearable Real-time Human Activity Recognition System using Biosensors Integrated into a Knee Bandage. , 2019, , .		12
90	Analysis of phone confusion in EMG-based speech recognition. , 2011, , .		11

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91	Multimodal person independent recognition of workload related biosignal patterns. , 2011, , .		11
92	Airwriting. Xrds, 2013, 20, 50-55.	0.2	11
93	Continuous affective states recognition using functional near infrared spectroscopy. Brain-Computer Interfaces, 2014, 1, 113-125.	0.9	11
94	Speaker Characteristics. Lecture Notes in Computer Science, 2007, , 47-74.	1.0	11
95	Active learning for accent adaptation in Automatic Speech Recognition. , 2012, , .		10
96	Intervention-free selection using EEG and eye tracking. , 2016, , .		10
97	An initial investigation into the real-time conversion of facial surface EMG signals to audible speech. , 2016, 2016, 888-891.		10
98	Selecting Features for Automatic Screening for Dementia Based on Speech. Lecture Notes in Computer Science, 2018, , 747-756.	1.0	10
99	Investigations on speaking mode discrepancies in EMG-based speech recognition. , 0, , .		10
100	Estimation of fundamental frequency from surface electromyographic data: EMG-to-F&lt;inf&gt;0&lt;/inf&gt;. , 2011, , .		9
101	Web-based tools and methods for rapid pronunciation dictionary creation. Speech Communication, 2014, 56, 101-118.	1.6	9
102	Design and Evaluation of a Self-Correcting Gesture Interface based on Error Potentials from EEG. , 2015, , .		9
103	Automatic classification of auto-correction errors in predictive text entry based on EEG and context information. , 2017, , .		9
104	The 2010 CMU GALE speech-to-text system. , 0, , .		9
105	Generalized Baum-Welch algorithm for discriminative training on large vocabulary continuous speech recognition system. , 2009, , .		8
106	Towards Continuous Speech Recognition for BCI. Springer Briefs in Electrical and Computer Engineering, 2017, , 21-29.	0.3	8
107	Speech Reveals Future Risk of Developing Dementia: Predictive Dementia Screening from Biographic Interviews. , 2019, , .		8
108	Speaker-Adaptive Speech Recognition Based on Surface Electromyography. Communications in Computer and Information Science, 2010, , 271-285.	0.4	8

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109	Cross-Subject Classification of Speaking Modes Using fNIRS. Lecture Notes in Computer Science, 2012, , 417-424.	1.0	8
110	Automatic error recovery for pronunciation dictionaries. , 0, , .		8
111	Enhanced polyphone decision tree adaptation for accented speech recognition. , 0, , .		8
112	Word segmentation through cross-lingual word-to-phoneme alignment. , 2012, , .		7
113	Artifact removal algorithm for an EMG-based Silent Speech Interface. , 2013, 2013, 5750-3.		7
114	Telemanipulation with force-based display of proximity fields. , 2015, , .		7
115	DNN-Based Speech Recognition for Globalphone Languages. , 2020, , .		7
116	ICCHP Keynote: Recognizing Silent and Weak Speech Based on Electromyography. Lecture Notes in Computer Science, 2010, , 595-604.	1.0	7
117	Platform for Studying Self-Repairing Auto-Corrections in Mobile Text Entry based on Brain Activity, Gaze, and Context. , 2020, , .		7
118	Speaker identification with distant microphone speech. , 2010, , .		6
119	Word segmentation and pronunciation extraction from phoneme sequences through cross-lingual word-to-phoneme alignment. Computer Speech and Language, 2016, 35, 234-261.	2.9	6
120	Improving Fundamental Frequency Generation in EMG-to-Speech Conversion Using a Quantization Approach. , 2019, , .		6
121	A geometric interpretation of non-target-normalized maximum cross-channel correlation for vocal activity detection in meetings. , 2007, , .		6
122	Impact of different feedback mechanisms in EMG-based speech recognition. , 0, , .		6
123	SmartHelm: Towards Multimodal Detection of Attention in an Outdoor Augmented Reality Biking Scenario. , 2020, , .		6
124	Multilingual speech recognition for GlobalPhone languages. Speech Communication, 2022, 140, 71-86.	1.6	6
125	Speech Synthesis from Stereotactic EEG using an Electrode Shaft Dependent Multi-Input Convolutional Neural Network Approach. , 2021, 2021, 6045-6048.		6
126	Improving word segmentation for Thai speech translation. , 2008, , .		5



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127	Filling a glass of water: Continuously decoding the speed of 3D hand movements from EEG signals. , 2012, 2012, 4095-8.		5
128	Reliable subject-adapted recognition of EEG error potentials using limited calibration data. , 2013, , .		5
129	Subject-to-subject transfer for CSP based BCIs: Feature space transformation and decision-level fusion. , 2013, 2013, 5614-7.		5
130	Detecting Memory-Based Interaction Obstacles with a Recurrent Neural Model of User Behavior. , 2018, , .		5
131	Pronunciation Extraction from Phoneme Sequences through Cross-Lingual Word-to-Phoneme Alignment. Lecture Notes in Computer Science, 2013, , 260-272.	1.0	5
132	Example-based grapheme-to-phoneme conversion for Thai. , 0, , .		5
133	Wavelet-based front-end for electromyographic speech recognition. , 0, , .		5
134	BiosignalsStudio: A Flexible Framework for Biosignal Capturing and Processing. Lecture Notes in Computer Science, 2010, , 33-39.	1.0	5
135	Towards Closed-Loop Speech Synthesis from Stereotactic EEG: A Unit Selection Approach. , 2022, , .		5
136	Airwriting. , 2012, , .		4
137	Combining feature extraction and classification for fNIRS BCIs by regularized least squares optimization. , 2014, 2014, 2012-5.		4
138	Compensation of recording position shifts for a myoelectric Silent Speech Recognizer. , 2014, , .		4
139	Modeling Cognitive Processes from Multimodal Signals. , 2018, , .		4
140	Perplexity â€“ a new predictor of cognitive changes in spoken language? â€“ results of the Interdisciplinary Longitudinal Study on Adult Development and Aging (ILSE). Linguistics Vanguard: Multimodal Online Journal, 2019, 5, .	1.7	4
141	An Adaptive Information System for an Empathic Robot Using EEG Data. Lecture Notes in Computer Science, 2010, , 151-160.	1.0	4
142	Technik und Demenz. , 2019, , 239-255.		4
143	Improvements in non-verbal cue identification using multilingual phone strings. , 2002, , .		4
144	Continuous speech recognition from ECoG. , 0, , .		4

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145	Investigating Objective Intelligibility in Real-Time EMG-to-Speech Conversion. , 0, , .		4
146	Modeling Socio-Emotional and Cognitive Processes from Multimodal Data in the Wild. , 2020, , .		4
147	Combined intention, activity, and motion recognition for a humanoid household robot. , 2011, , .		4
148	Statistical machine translation based text normalization with crowdsourcing. , 2013, , .		3
149	Rapid bootstrapping of a Ukrainian large vocabulary continuous speech recognition system. , 2013, , .		3
150	Neighbour selection and adaptation for rapid speaker-dependent ASR. , 2013, , .		3
151	Investigating Intrusiveness of Workload Adaptation. , 2014, , .		3
152	Connectivity based feature-level filtering for single-trial EEG BCIs. , 2014, , .		3
153	Decoding Lip Movements During Continuous Speech using Electrocorticography. , 2019, , .		3
154	Biosignale-basierte Mensch-Maschine Schnittstellen. Automatisierungstechnik, 2013, 61, 760-769.	0.4	3
155	Comparative Analysis of Think-Aloud Methods for Everyday Activities in the Context of Cognitive Robotics. , 0, , .		3
156	A multiplatform speech recognition decoder based on weighted finite-state transducers. , 2009, , .		2
157	Modeling gender dependency in the Subspace GMM framework. , 2012, , .		2
158	Initial Experiments with Tamil LVCSR. , 2012, , .		2
159	Dummy Model Based Workload Modeling. , 2015, , .		2
160	Introduction to the Special Issue on Biosignal-Based Spoken Communication. IEEE/ACM Transactions on Audio Speech and Language Processing, 2017, 25, 2254-2256.	4.0	2
161	Adaptation of an EMG-Based Speech Recognizer via Meta-Learning. , 2019, , .		2
162	Visual and Memory-based HCI Obstacles: Behaviour-based Detection and User Interface Adaptations Analysis. , 2019, , .		2

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163	End-to-End Multilingual Automatic Speech Recognition for Less-Resourced Languages: The Case of Four Ethiopian Languages. , 2021, , .		2
164	Towards Semantic Segmentation of Human Motion Sequences. Lecture Notes in Computer Science, 2010, , 436-443.	1.0	2
165	Investigating static and sequential models for intervention-free selection using multimodal data of EEG and eye tracking. , 2018, , .		2
166	Automatic Speech Recognition Based on Electromyographic Biosignals. Communications in Computer and Information Science, 2008, , 305-320.	0.4	2
167	Incorporating monolingual corpora into bilingual latent semantic analysis for crosslingual LM adaptation. , 2009, , .		1
168	Towards single pass discriminative training for speech recognition. , 2012, , .		1
169	Biomedical Engineering Systems and Technologies. Communications in Computer and Information Science, 2015, , .	0.4	1
170	Joint optimization for discriminative, compact and robust Brain-Computer Interfacing. , 2015, , .		1
171	Data-driven analysis of interactions between people with dementia and a tablet device. Current Directions in Biomedical Engineering, 2017, 3, 735-738.	0.2	1
172	3rd Workshop on Modeling Socio-Emotional and Cognitive Processes from Multimodal Data in the Wild. , 2021, , .		1
173	Model-Based Identification of EEG Markers for Learning Opportunities in an Associative Learning Task with Delayed Feedback. Lecture Notes in Computer Science, 2014, , 387-394.	1.0	1
174	Intelligente und aufmerksamkeitsensitive Systeme in der FahrradmobilitÄt. Studien Zur MobilitÄts- Und Verkehrsforschung, 2020, , 143-158.	0.0	1
175	Predicting Activation Liking of People With Dementia. Frontiers in Computer Science, 2022, 3, .	1.7	1
176	Exploring Dementia Detection from Speech: Cross Corpus Analysis. , 2022, , .		1
177	Experts Versus All-Rounders: Target Language Extraction for Multiple Target Languages. , 2022, , .		1
178	Translating language with technology's help. IEEE Potentials, 2007, 26, 30-35.	0.2	0
179	Detecting bandlimited audio in broadcast television shows. , 2009, , .		0
180	Compressed signal representation for inertial sensor signals. , 2013, , .		0

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181	Enhancement of EMG-based Thai number words classification using frame-based time domain features with stacking filter. , 2014, , .		0
182	Bremen Big Data Challenge 2017: Predicting University Cafeteria Load. Lecture Notes in Computer Science, 2017, , 380-386.	1.0	0
183	Application of Electrode Arrays for Artifact Removal in an Electromyographic Silent Speech Interface. Communications in Computer and Information Science, 2014, , 300-312.	0.4	0
184	Towards Speech Synthesis from Intracranial Signals. Springer Briefs in Electrical and Computer Engineering, 2020, , 47-54.	0.3	0
185	Evaluation of an Engagement-Aware Recommender System for People with Dementia. , 2022, , .		0