Tanja Schultz

List of Publications by Year
in descending order

185 papers	**5,182** citations	331670 **21** h-index	182427 **51** g-index
194 all docs	**194** docs citations	**194** times ranked	**3105** citing authors

#	Article	IF	Citations
1	Silent speech interfaces. Speech Communication, 2010, 52, 270-287.	2.8	364
2	Automatic speech recognition for under-resourced languages: A survey. Speech Communication, 2014, 56, 85-100.	2.8	320
3	Language-independent and language-adaptive acoustic modeling for speech recognition. Speech Communication, 2001, 35, 31-51.	2.8	273
4	Mental workload during n-back task—quantified in the prefrontal cortex using fNIRS. Frontiers in Human Neuroscience, 2013, 7, 935.	2.0	245
5	TSFEL: Time Series Feature Extraction Library. SoftwareX, 2020, 11, 100456.	2.6	226
6	Brain-to-text: decoding spoken phrases from phone representations in the brain. Frontiers in Neuroscience, 2015, 9, 217.	2.8	195
7	Modeling coarticulation in EMG-based continuous speech recognition. Speech Communication, 2010, 52, 341-353.	2.8	139
8	Speech synthesis from ECoG using densely connected 3D convolutional neural networks. Journal of Neural Engineering, 2019, 16, 036019.	3.5	138
9	Biosignal-Based Spoken Communication: A Survey. IEEE/ACM Transactions on Audio Speech and Language Processing, 2017, 25, 2257-2271.	5.8	117
10	Advancing Muscle-Computer Interfaces with High-Density Electromyography. , 2015, , .		115
11	Hybrid fNIRS-EEG based classification of auditory and visual perception processes. Frontiers in Neuroscience, 2014, 8, 373.	2.8	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. Frontiers in Neuroscience, 2019, 13, 1267.	2.8	76
17	Automatic Speech Recognition from Neural Signals: A Focused Review. Frontiers in Neuroscience, 2016, 10, 429.	2.8	75
18	Airwriting: a wearable handwriting recognition system. Personal and Ubiquitous Computing, 2014, 18, 191-203.	2.8	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.	3.2	58
21	GlobalPhone: A multilingual text &amp; 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.	2.0	51
28	Tackling Speaking Mode Varieties in EMG-Based Speech Recognition. IEEE Transactions on Biomedical Engineering, 2014, 61, 2515-2526.	4.2	48
29	Real-time synthesis of imagined speech processes from minimally invasive recordings of neural activity. Communications Biology, 2021, 4, 1055.	4.4	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.	5.8	44
31	Vision-based handwriting recognition for unrestricted text input in mid-air. , 2012, , .		41
32	Speech-Based Detection of Alzheimerâ€™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

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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.	4.2	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.	5.6	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.	4.2	26
46	Interpretation of convolutional neural networks for speech spectrogram regression from intracranial recordings. Neurocomputing, 2019, 342, 145-151.	5.9	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

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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.	1.3	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.	2.5	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. Frontiers in Human Neuroscience, 2017, 11, 403.	2.0	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. Frontiers in Neuroscience, 2020, 14, 400.	2.8	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. International Journal of Social Robotics, 2011, 3, 415-425.	4.6	12
87	I-CARE-An Interaction System for the Individual Activation of People with Dementia. Geriatrics (Switzerland), 2021, 6, 51.	1.7	12
88	An Investigation of Code-Switching Attitude Dependent Language Modeling. Lecture Notes in Computer Science, 2013, , 297-308.	1.3	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.	0.3	11
93	Continuous affective states recognition using functional near infrared spectroscopy. Brain-Computer Interfaces, 2014, 1, 113-125.	1.8	11
94	Speaker Characteristics. Lecture Notes in Computer Science, 2007, , 47-74.	1.3	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.	1.3	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$_0$. , 2011, , .		9
101	Web-based tools and methods for rapid pronunciation dictionary creation. Speech Communication, 2014, 56, 101-118.	2.8	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.	0.5	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.	0.5	8

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109	Cross-Subject Classification of Speaking Modes Using fNIRS. Lecture Notes in Computer Science, 2012, , 417-424.	1.3	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.	1.3	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.	4.3	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.	2.8	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.	1.3	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.	1.3	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, .	2.0	4
141	An Adaptive Information System for an Empathic Robot Using EEG Data. Lecture Notes in Computer Science, 2010, , 151-160.	1.3	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.	0.8	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.	5.8	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.	1.3	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.	0.5	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, , .	0.5	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.	0.4	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.	1.3	1
174	Intelligente und aufmerksamkeitssensitive 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, .	2.8	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.	0.3	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.	1.3	0
183	Application of Electrode Arrays for Artifact Removal in an Electromyographic Silent Speech Interface. Communications in Computer and Information Science, 2014, , 300-312.	0.5	0
184	Towards Speech Synthesis from Intracranial Signals. Springer Briefs in Electrical and Computer Engineering, 2020, , 47-54.	0.5	0
185	Evaluation of an Engagement-Aware Recommender System for People with Dementia. , 2022, , .		0