

CURRICULUM VITAE

Sarah Blum
Oldenburg

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EDUCATION

- since 04/2017 **PhD Candidate** Neuropsychology Lab, Carl von Ossietzky University of Oldenburg, Prof. Debener. Main research focus: advancing signal processing methods for EEG-based Brain-Computer Interfaces.
- 10/2014-10/2016 **M.Sc. Neurocognitive Psychology** Carl von Ossietzky University of Oldenburg
Thesis: Closing the Brain-Computer Interface Loop on Android: A Signal Processing Application for Single Trial Classification of Selective Auditory Attention ERPs. Overall Grade: 1.19
- 10/2011-10/2014 **B.A. Computer Science and Philosophy** Carl von Ossietzky University of Oldenburg
Thesis: An Investigation of the Turing Machine and Turing Computability („Eine Untersuchung der Turingmaschine und der Turingberechenbarkeit“). Overall Grade: 1.74
- 04/2007-04/2010 **Training for Nurses Responsible for General Care** Karl-Jaspers-Klinik Bad Zwischenahn
- 2006 General Qualification for University Entrance, Neues Gymnasium Oldenburg

WORK EXPERIENCE

- since 09/2017 **Software Developer** Development of hearing aid signal processing algorithms and frameworks. Hörtech AG, Oldenburg
- 10/2016-03/2017 **Research assistant** Neuropsychology Lab, Carl von Ossietzky University of Oldenburg
- 09/2016-12/2016 **Software Developer** Development of mobile signal processing frameworks for EEG measurements. Fraunhofer IDMT, Oldenburg
- 04/2015-05/2017 **Research Assistant for App Development** Development of Arduino Code for integrating sensor data into mobile data measurement setups. Carl von Ossietzky University, Oldenburg
- 07/2015-10/2015 **Research Assistant** Data Analysis. OFFIS, Oldenburg
- 05/2015-06/2015 **Internship Multimodal Sensory Processing** Development and implementation of an experiment in the anechoic chamber. OFFIS, Oldenburg
- 2012-2014 **Tutor in Computer Science** Teaching of students and development of programming workshops for pupils. Carl von Ossietzky University, Oldenburg
- 2010-2012 **Nurse in a Care Home for Elderly** FaSeniHa, Oldenburg

PUBLICATIONS: JOURNAL ARTICLES

- 04/2019 **Blum S, Bleichner, MG, Debener S. A Riemannian Modification of Artifact Subspace Reconstruction for EEG Artifact Handling**, Frontiers in Human Neuroscience. [frontiersin.org](https://www.frontiersin.org)
- 01/2019 **Dehais, F., Dupres, A., Blum S, Drougard, N., Scannella, S., Roy, R.N., Lotte, F. Monitoring Pilot's Mental Workload Using ERPs and Spectral Power with a Six-Dry-Electrode EEG System in Real Flight Conditions**, Sensors. [mdpi.com](https://www.mdpi.com)

- 11/2017 **Blum S**, Debener S, Emkes R, Volkening N, Fudickar S, and Bleichner M (2017). **EEG Recording and Online Signal Processing on Android: A Multiapp Framework for Brain-Computer Interfaces on Smartphone**, BioMed Research International, vol. 2017, Article ID 3072870, 12 pages, doi:10.1155/2017/3072870 hindawi.com
- 06/2017 Löcken A, **Blum S**, Stratmann T, Grünefeld U, Heuten W, Boll S and van de Par S (2017). **Effects of Location and Fade-In Time of (Audio-)Visual Cues on Response Times and Success-Rates in a Dual-Task Experiment**. Conference Paper at the ACM SAP 2017. dl.acm.org

PUBLICATIONS: SCIENTIFIC POSTERS

- 07/2018 **Blum S**, Debener S (2018). **EEG Artifact Attenuation with Artifact Subspace Reconstruction for Android**, Scientific Poster at the 40th IEEE Engineering in Medicine and Biology Conference, Hawaii, USA. github.com
- 06/2018 **Blum S**, Bleichner MG and Debener S (2018). **Evaluation of Riemannian Artifact Subspace Reconstruction for the correction of EEG artifacts**. Front. Hum. Neurosci. Conference Abstract: 2nd International Neuroergonomics Conference. doi: 10.3389/conf.fnhum.2018.227.00134 frontiers.org
- 07/2018 **Blum S**, Bleichner M, Debener S (2018). **Evaluation of Riemannian Artifact Subspace Reconstruction for the Correction of EEG Artifacts**, Scientific Poster at the Neuroergonomics Conference, Philadelphia, USA. github.com
- 07/2017 **Blum S**, Debener S, Emkes R, Volkening N, Fudickar S, Bleichner M (2017). **Brain-Computer Interfaces on Android**, Scientific Poster at the Neuroadaptive Technology Conference, Berlin. github.com

INVITED TALKS

- 10/2018 **User Interface Software and Technology Symposium Summer School** Correction of artifacts in EEG signals for BCIs. Berlin. [UIST Summer School](http://uist-summer-school.org)
- 09/2018 **Second International Workshop on LSL** Hanse-Wissenschaftskolleg, Delmenhorst. hwk.de/LSL
- 07/2018 **MoBI Conference** Berlin. tu-berlin.de
- 12/2016 **First International Workshop on LSL** Hanse-Wissenschaftskolleg, Delmenhorst. hwk.de/LSL

MASTER THESIS SUPERVISION

- 11/2018-04/2019 Recordings and Analysis of Long-Term EEG Data from Patients in Minimally Conscious State. A master thesis in the program Neurocognitive Psychology at the University of Oldenburg.

AWARDS

- 07/2018 MoBI Award, Berlin (3rd winner). [MoBI Winners 2018](http://mobiconference.org)

EXTRACURRICULAR ACTIVITIES

- since 2018 **Member in the doctoral examination board (Promotionsausschuss)**, Faculty VI Carl von Ossietzky University, Oldenburg
- 2018-2019 **Member in the examination committee (Prüfungsausschuss)**, Faculty VI Carl von Ossietzky University, Oldenburg
- 2018 **Organisation of Future Day for Boys and Girls** Department of Psychology, Carl von Ossietzky, Oldenburg
- 2014-2015 **Equal Opportunities Officer** Department of Computer Science, Carl von Ossietzky, Oldenburg

2011-2016 **Active member in the Student Body and in several committees, Faculty for Computer Science** Carl von Ossietzky University, Oldenburg

PORTFOLIO AND PROFILES

Code and Projects	github.com
Code and Projects	gitlab.com
Career Network	linkedin.com
Team Page Neuropsychology	uol.de