

# Curriculum Vitae

Name	Prof. Dr.-Ing. Sebastian Stober
Position	Full Professor
Affiliation	Artificial Intelligence Lab Institute for Intelligent Cooperating Systems Faculty of Computer Science Otto von Guericke University Magdeburg
Address	Universitätsplatz 2 D-39106 Magdeburg, Germany
Phone	+49 391 67-58314
Email	<a href="mailto:stober@ovgu.de">stober@ovgu.de</a>
Website	<a href="http://sebastianstober.de">sebastianstober.de</a>   <a href="http://ai.ovgu.de">ai.ovgu.de</a>   <a href="http://insight.de">insight.de</a>



## Education

2011	Dr.-Ing. (summa cum laude) Otto von Guericke University, Magdeburg, Germany
2005	Dipl.-Inform. (with distinction, overall average grade 1.0) Otto von Guericke University, Magdeburg, Germany
2000	Advanced level degree (Mittelstufe II) in Drums (with distinction) Kreismusikschule Halberstadt, Germany
1999	A Levels (with distinction, overall average grade 1.0) Gymnasium "Martineum", Halberstadt, Germany

## Honors & Scholarships

2017	University of Potsdam – E-Learning Award
2017	Erwin Schrödinger Institute, Vienna – Travel Grant
2017	German Academic Exchange Service (DAAD) – Travel Grant
2016–2017	Potsdam Graduate School / BMBF – "Senior Teaching Professionals" Fellow
2016	NVIDIA – Hardware Grant
2015	Cognitively based Music Informatics Research (CogMIR) – Best Presentation Award
2015	Highlighting Audio and Music Researchathon (HAMR), Cornell University – Best Code Award
2014–2015	<b>German Academic Exchange Service (DAAD) – Postdoc Fellowship</b>
2012	Gesellschaft für Informatik e.V. – Nomination for the Best Dissertation Award
2012	<b>Otto von Guericke University – Best Dissertation Award</b>
2012	Faculty of Computer Science, Otto von Guericke University – Best Dissertation Award
2011	International Conference on Novel Gaze-Controlled Applications – Best Paper Award
2010	International Society for Music Information Retrieval (ISMIR) – Student Travel Grant
2007–2010	<b>German National Academic Foundation – Graduate Scholarship</b>
2006	Faculty of Computer Science, Otto von Guericke University – Best Graduate Award
2001–2005	<b>German National Academic Foundation – Scholarship</b>
1998–2000	State Saxony-Anhalt – Scholarship for Extended Music Education

## Active Memberships

PoGS	Potsdam Graduate School
ISMIR	International Society for Music Information Retrieval (founding member & WiMIR mentor) Bernstein Association for Computational Neuroscience e.V.
SMPC	Society for Music Perception & Cognition
eLeMeNTe	Landesverein Sachsen-Anhalt zur Förderung mathematisch, naturwissenschaftlich und technisch interessierter und talentierter Schülerinnen, Schüler und Studierender e.V. (founding member)

## Scientific Career / Work Experience

since 10/2018	Full professor for Artificial Intelligence Faculty of Computer Science, Otto von Guericke University, Magdeburg, Germany
01/2016–09-2018	Head of junior research group “Machine Learning in Cognitive Science” Research Focus Cognitive Sciences, University of Potsdam, Germany – deep learning techniques for analyzing brain activity, gaze, language and speech
09/2013–12/2015	Post-doctoral fellow at the Owen Lab (Canada Excellence Research Chair in Cognitive Neuroscience) Brain and Mind Institute, University of Western Ontario, Canada – pioneering work on deep learning for analyzing electroencephalography (EEG)
01/2006–08/2013	Graduate / post-doctoral researcher at the Data & Knowledge Engineering Group Faculty of Computer Science, Otto von Guericke University, Magdeburg, Germany – user-adaptive information retrieval systems for text, music and multimedia
04/2004–09/2005	Research assistant at the Information Retrieval Group (part-time) Faculty of Computer Science, Otto von Guericke University, Magdeburg, Germany
09/2003–03/2004	Research intern at the Mechatronics Research Group (full-time) University of Melbourne, Australia
04/2001–08/2003	Research assistant at the Information Retrieval Group (part-time), and Software developer at the University Language Center (part-time) Otto von Guericke University, Magdeburg, Germany

## Grants

04/2018	Project planning workshop for “Artificial Intelligence and the Society of the Future” VolkswagenStiftung
02/2018	Demo “How does Artificial Intelligence work?” in the exhibition “Forschungsfenster” at Wissenschaftsetage Potsdam VolkswagenStiftung
11/2017–10/2019	UPracticeML – Extending the Machine Learning Curriculums in the Cognitive Systems Master at the University of Potsdam (co-applicant with Manfred Stede) Federal Ministry of Science and Research (BMBF)
05/2017–03/2018	Holmes – Phase 1: Intelligent Snapshot Analysis (R&D project) Revacom GmbH
02/2014–12/2015	Brain-Computer Interaction through Music Imagery German Academic Exchange Service (DAAD)
03/2012–08/2013	BLE-X Navigator (R&D project) EFB – European Research Association for Sheet Metal Working
01/2013–12/2016	SFB-TRR 62: Companion Technology – Project B4: Characterization and Modelling of Information Seeking Dialogues (co-applicant) German Research Foundation (DFG) Collaborative Research Center (CRC/SFB)
01/2008–03/2012	Adaptive User-Centered Organization of Music Archives (co-applicant) German Research Foundation (DFG)

## Selected Invited Talks

29.06.2016	<i>Deep Feature Learning for EEG Recordings</i> Organization for Human Brain Mapping (OHBM), Geneva, Switzerland
31.08.2015	<i>Similarity &amp; Feature Learning for EEG Recordings of Music Perception and Imagination</i> Center for Computer Research in Music and Acoustics, Stanford University, CA, USA
07.05.2015	<i>Decoding EEG of Music Perception and Imagination</i> Institut de Recherche et Coordination Acoustique/Musique (IRCAM), Paris, France
31.01.2013	<i>Adaptive Music Retrieval and Beyond</i> AES Students Section – Fraunhofer IDMT, Ilmenau, Germany
23.07.2011	<i>Adaptive Distance Measures for Exploration and Structuring of Music Collections</i> Keynote at AES 42nd Conference on Semantic Audio, Ilmenau, Germany

## Teaching Experience

Winter 2018/2019	Introduction to Deep Learning (lecture) Neural Models for Machine Translation (lecture, as mentor) Cognition – Bridging Neuroscience and Artificial Intelligence (lecture, as mentor)
26.07.2018	Introduction to Deep Learning (full-day tutorial) Helmholtz NextGen Summer School, Potsdam, Germany
Summer 2018	Introduction to Deep Learning (lecture) Text Simplification (project module) Neural Models for Speech Synthesis (seminar, as mentor)
Winter 2017/2018	Introduction to Deep Learning (lecture) Learning Generative Models (lecture, as mentor)
Summer 2017	Applied Deep Representation Learning (lecture) Learning – Cognitive Science Perspectives (ring lecture)
02.2016 – 02.2017	Senior Teaching Professionals Program (certified training) Potsdam Graduate School, University of Potsdam, Germany
Winter 2016/2017	Representation Learning (lecture)
07.08.2016	“Introduction to EEG Decoding for Music Information Retrieval Research” (tutorial) 17th International Society for Music Information Retrieval Conference, New York, USA
Summer 2016	Deep Learning for Natural Language Processing (lecture)
11 – 13.12.2013	Instructional Skills Workshop (certified training) Teaching Support Center, University of Western Ontario, Canada
16 – 20.09.2013	“Adaptivity in Audio and Music Retrieval” (lecture) 7th Russian Summer School in Information Retrieval, Kazan, Russia
Winter 2012/2013	Data & Knowledge Engineering Research Seminar
11.07.2012	“Learning Similarity Measures for Music” (full-day tutorial) 9th Sound and Music Computing Conference, Copenhagen, Denmark
Summer 2012	Data & Knowledge Engineering Research Seminar
Winter 2011/2012	Machine Learning (lecture)
Summer 2011	Bioinformatics (tutorial lecture)
Winter 2010/2011	Machine Learning (tutorial)
Winter 2010/2011	Seminar for IT Projects in Data & Knowledge Engineering
Summer 2010	Computer Music (seminar)
Winter 2009/2010	Concepts for Adaptive Interaction with Multimedia (seminar)
Summer 2009	Computer Music (seminar)
Summer 2008	Bioinformatics (tutorial lecture)
Winter 2007/2008	Multimedia Retrieval (tutorial)
Summer 2007	Multimedia-Retrieval: Focus Audio (seminar)
Winter 2006/2007	Concepts of Information Retrieval (tutorial)
Summer 2006	Machine Learning (tutorial in English)
Winter 2004/2005	Introduction to Intelligent Systems (undergraduate tutorial)
Winter 2002/2003	Mathematics for Computer Scientists (undergraduate tutorial)
2006 – 2013 <sup>1</sup>	(co-)supervision of 14 bachelor, master and diploma theses, 7 undergraduate IT projects with groups of 2–5 students, 1 undergraduate part-time lab intern for 1 semester, 1 full-time intern for 6 month, 3 school interns, and 15 research assistants in several projects

<sup>1</sup>Full details can be found at <http://www.sebastianstober.de/teaching/>

## Scientific Services

Workshops	<i>International Workshop on Adaptive Multimedia Retrieval (AMR)</i> , 2007–2012 <i>International Workshop on Learning Semantics of Audio Signals (LSAS)</i> , 2006–2008 <i>Workshop on Learning, Knowledge and Adaptivity (LWA)</i> , 2011
Reviewing (selected)	Nature Scientific Reports; Biomedical Engineering; Psychomusicology: Music, Mind, and Brain; J. of Intelligent Information Systems; IEEE Trans. on Systems, Man and Cybernetics; IEEE Trans. on Knowledge and Data Engineering; IEEE Trans. on Biomedical Engineering; IEEE Trans. on Affective Computing; ACM Trans. on Intelligent Systems and Technology; Trans. of the Int. Society for Music Information Retrieval (TISMIR); National Science Foundation (NSF); Conf. on Neural Information Processing Systems (NIPS); Conf. of the Int. Society for Music Information Retrieval (ISMIR); ACM Conf. on Human Factors in Computing Systems (CHI); ACM Conf. on Intelligent User Interfaces (IUI); Association for Computational Linguistics (ACL); Organization for Human Brain Mapping (OHBM); AES Conf. on Semantic Audio
Mentoring	Mentoring Plus Programme at the University of Potsdam (since 2017) Junior Teaching Professionals at the Potsdam Graduate School (since 2017) Women in MIR (WiMIR, since 2016) UniMentor at the Otto von Guericke University (2004–2006)
Other	Faculty Research Commission – staff representative (2007–2013) University of Potsdam Research Focus Cognitive Sciences – executive committee member (2016–2018) Potsdam Graduate School – postdoc representative (2016–2018)

## Selected Publications

- A. Ofner and **S. Stober**. Hybrid Active Inference. *arXiv preprint arXiv:1810.02647*, 2018.
- A. Krug and **S. Stober**. Introspection for convolutional automatic speech recognition. *Conference on Empirical Methods in Natural Language Processing (EMNLP'18)*, 2018.
- A. Ofner and **S. Stober**. Shared generative representation of auditory concepts and EEG to reconstruct perceived and imagined music. In *19th International Society for Music Information Retrieval Conference (ISMIR'18)*, 2018.
- D. A. Bridwell, J. F. Cavanagh, A. G. E. Collins, M. D. Nunez, R. Srinivasan, **S. Stober** and V. D. Calhoun. Moving Beyond ERP Components: A Selective Review of Approaches to Integrate EEG and Behavior. *Frontiers in Human Neuroscience*, 12:106, 2018.
- S. Stober**. Towards Studying Music Cognition with Information Retrieval Techniques: Lessons Learned from the OpenMIIR Initiative. *Frontiers in Psychology*, 8, 2017.
- A. Krug and **S. Stober**. Adaptation of the event-related potential technique for analyzing artificial neural nets. In *Conference on Cognitive Computational Neuroscience (CCN'17)*, 2017.
- J. Kunze, L. Kirsch, I. Kurenkov, A. Krug, J. Johannsmeier, and **S. Stober**. Transfer learning for speech recognition on a budget. In *2nd Workshop on Representation Learning for NLP at the Annual Meeting of the Association for Computational Linguistics (ACL'17)*, 2017.
- S. Stober**, D. J. Cameron, and J. A. Grahn. Using convolutional neural networks to recognize rhythm stimuli from electroencephalography recordings. In *Advances in Neural Information Processing Systems 27 (NIPS'14)*, pages 1449–1457, 2014.
- S. Stober** and A. Nürnberger. Adaptive Music Retrieval - A State of the Art. *Multimedia Tools and Applications*, 65(3):467–494, 2013.
- S. Stober** and A. Nürnberger. User-Adaptive Music Information Retrieval. *KI*, 23(2):54–57, 2009.
- A full list of publication is available at <https://bib.sebastianstober.de>.