

CURRICULUM VITAE

Dr. Sebastian Jentschke

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Metrics: h = 17 (Scopus) / 21 (Google Scholar)

Personal Information

Date and place of birth	31.01.1974 in Sangerhausen, Germany
Family status	married, no children
Citizenship	Germany
Home address	Fløenbakken 41C Leilighet H0302 5009 Bergen Norway

Research interests

- [1] Neurocognitive development and brain plasticity, in typically developing, impaired, and specially trained (e.g. musically) populations
- [2] Psychological and neuroscientific methods (including writing purpose-made software)
- [3] Neural correlates of music and language perception and their interrelation
- [4] Neural correlates underlying differences in memory performance, academic achievement, and general cognitive skills in children who perinatally suffered from hypoxia / ischemia
- [5] Induction of emotions (e.g., through music), exploration of their psycho- and neuro-physiological correlates and their relation with other aspects of personality

Work History

2018 – now	Associate professor for Developmental Psychology at the Department of Psychosocial Science, University of Bergen, Norway
2015 – 2018	Postdoctoral Researcher at Department of Biological and Medical Psychology, University of Bergen, Norway
2010 – 2014	Postdoctoral Research Fellow at the Cluster of Excellence “Languages of Emotion”, Freie Universität Berlin, Germany

2008 – 2010 Postdoctoral Research Fellow in the Developmental Cognitive Neuroscience Unit at University College London, Institute of Child Health, London, United Kingdom

Education

2003 – 2007 Ph.D. student in the Junior Research Group “Neurocognition of Music” at the Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
Title of dissertation: “*Neural correlates of Processing Structure in Music and Language – Influences of Musical Training and Language Impairment*”
Supervisors: Prof. Dr. A. D. Friederici
Prof. Dr. S. Koelsch

1997 – 2003 Diploma in Psychology
Johann-Wolfgang-Goethe-University, Frankfurt, Germany
Title of thesis: “*Memory for actions within life-span – Investigating memory performance and brain activity*”
Supervisor: Prof. Dr. M. Knopf

Research Group Affiliations

2007 – 2010 Junior Research Group “Neurocognition of Music” at the Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

2008 – now UCL Great Ormond Street Institute for Child Health, Developmental Neurosciences Programme; London, UK (affiliation: 2008 – 2010; honorary affiliation: since 2010)

2010 – 2015 Cluster “Languages of Emotion”, Freie Universität Berlin, Berlin, Germany

2015 – now Bergen-fMRI-Group; University of Bergen, Norway

2015 – 2018 “Brain and Music” Group; University of Bergen, Norway

2018 – now DICE-Lab: Bergen Laboratory for the Study of Decision, Intuition, Consciousness, and Emotion – Group leader; University of Bergen, Norway

Commissions of trust

2008 – now Ad-hoc grant reviewer for various funding agencies, incl. the German Research Foundation (DFG); the National Science Centre, Krakow, Poland; Riksbankens Jubileumsfond, Stockholm, Sweden

2003 – now Reviews for various journals/books, incl. NeuroImage, Cerebral Cortex, Psychophysiology, PLoS One, Scientific

Teaching experience

PhD programme “Graduate School of Human Interaction and Growth”

Universitetet i Bergen, Norway

2018 – Quantitative methods: Experimental design and analysis
(2 sessions)

MSc programme “Professional studies in psychology”

Universitetet i Bergen, Norway

2017 - Biological Psychology
(1 lecture with 2 repetitions)

2018 - Culture, Health and Development
(course responsible, 4 lectures, supervision of student work, supervising student presentations)

Developmental psychology
(5 lectures, 15 seminar groups for supervision, supervising student presentations)

Preparing for professional work in psychology
(4 lectures)

MSc programme “Psychology” / “Work- and Organizational Psychology”

Universitetet i Bergen, Norway

2018 - Research Methods
(3 lectures, 3 specialization lectures on experimental methods,
2 PC-exercises with 2 repetitions)

*BSc programmes “General Psychology”, “Work- and Organizational Psychology”, and
“Special pedagogics”; Årsprogramme in psychology*

Universitetet i Bergen, Norway

2018 - Motivation Psychology
(2 lectures)

MSc programme “Social, Cognitive and Affective Neuroscience”

Freie Universität Berlin, Germany

2010 - 2014 Applied Programming
2010 Statistical Methods
2011 – 2013 Language, Music and Emotion

MSc Programme “Clinical and Applied Paediatric Neuropsychology”

University College London, Institute of Child Health, London, UK

2009 Advanced developmental cognitive neuroscience

Special skills

Computer skills:

- [1] Evaluation of MRI data:
- [a] functional MRI: SPM, FS-FAST (FreeSurfer), FSL, Lipsia
 - [b] structural MRI: SPM, FreeSurfer, FSL-FIRST, FSL-MIST
 - [c] diffusion MRI: FSL-FDT/TBSS, Tractor, mrtrix
- [2] Evaluation of EEG data: EEGLAB/ERPLAB, EEP/EEProbe, FieldTrip
- [3] Stimulus presentation: PsychoPy, Psychophysics-Toolbox, Presentation, e-Prime, Cogent, self-written software
- [4] Statistical analysis: SPSS, R, MATLAB (including writing of purpose-made functions for non-standard analyses)
- [5] Programming: MATLAB, Shell-scripts, Perl, Visual Basic / VBA
- [6] Operating systems: UNIX / Linux, Microsoft Windows, Mac OS X (including experience in system administration for all of them)

Languages:

German	native
English	fluent
Norwegian	fluent
Japanese	beginner

J. Hansen
Jenssen

Articles in peer-reviewed journals

- [1] Visted, E., Sørensen, L., Vøllestad, J., Osnes, B., Svendsen, J. L., Jentschke, S., ... Schanche, E. (2019). The Association Between Juvenile Onset of Depression and Emotion Regulation Difficulties. *Frontiers in Psychology*, *10*, e2262. <https://doi.org/10.3389/fpsyg.2019.02262>
- [2] Koelsch, S., Bashevkin, T., Kristensen, J., Tvedt, J., & Jentschke, S. (2019). Heroic music stimulates empowering thoughts during mind-wandering. *Scientific Reports*, *9*, e10317. <https://doi.org/10.1038/s41598-019-46266-w>
- [3] Tsogli, V., Jentschke, S., Daikoku, T., Koelsch, S. (2019). When the statistical MMN meets the physical MMN. *Scientific reports*, *9*, e5563. <https://doi.org/10.1038/s41598-019-42066-4>
- [4] Koelsch, S., Busch, T. Jentschke, S., Rohrmeier, M. A. (2016). Under the hood of statistical learning: A statistical MMN reflects the magnitude of transitional probabilities in auditory sequences. *Scientific reports*, *6*, e19741. <https://doi.org/10.1038/srep19741>
- [5] Seunarine, K. K., Clayden, J. D., Jentschke, S., Muñoz, M., Cooper, J. M., Chadwick, M. J., Banks, T., Vargha-Khadem, F., Clark, C. A. (2016). Sexual dimorphism in white matter developmental trajectories demonstrated using tract based spatial statistic. *Brain Connectivity*, *6*(1), 37-47. <https://doi.org/10.1089/brain.2015.0340>
- [6] Guderian, S., Dzieciol, A., Gadian, D., Jentschke, S., Doeller, C., Burgess, N., Mishkin, M., Vargha-Khadem, F. (2015). Hippocampal volume reduction in humans predicts impaired spatial memory in virtual-reality navigation. *Journal of Neuroscience*, *35*(42), 14123-14131. <https://doi.org/10.1523/jneurosci.0801-15.2015>
- [7] Sallat, S., Jentschke, S. (2015). Music Perception Influences Language Acquisition – Melodic and Rhythmic-Melodic Perception in Children with Specific Language Impairment. *Behavioural Neurology*, *501*, 606470. <https://doi.org/10.1155/2015/606470>
- [8] Sumpf, M., Jentschke, S., & Koelsch, S. (2015). Effects of aesthetic chills on a cardiac signature of emotionality. *PLoS One*, *10*(6), e0130117. <https://doi.org/10.1371/journal.pone.0130117>
- [9] Cooper, J. M., Gadian, D. G., Jentschke, S., Goldman, A., Munoz, M., Pitts, G., Banks, T., Chong, W. K., Hoskote, A. Deanfield, J., Baldeweg, T., de Haan, M., Mishkin, M., Vargha-Khadem, F. (2015). Neonatal Hypoxia, Hippocampal Atrophy, and Memory Impairment: Evidence of a Causal Sequence. *Cerebral Cortex*, *25*(6), 1469-1476. <https://doi.org/10.1093/cercor/bht332v1>
- [10] Dayan, M., Munoz, M., Jentschke, S., Chadwick, M. J., Cooper, J. M., Riney, K., Vargha-Khadem, F., Clark, C. A. (2015). Optic radiation structure and anatomy in the normally developing brain determined using diffusion MRI and tractography. *Brain Structure and Function*, *220*(1), 291-306. <https://doi.org/10.1007/s00429-013-0655-y>
- [11] Aust, S., Stasch, J., Jentschke, S., Alkan Härtwig, E., Koelsch, S., Heuser, I., & Bajbouj, M. (2014). Differential effects of early life stress on hippocampus and amygdala volume as a function of emotional abilities. *Hippocampus*, *24*(9), 1094-1101. <https://doi.org/10.1002/hipo.22293>
- [12] Jentschke, S., Friederici, A. D., & Koelsch, S. (2014). Neural correlates of music-syntactic processing in two-year old children. *Developmental Cognitive Neuroscience: A Journal for Cognitive, Affective and Social Developmental Neuroscience*, *9*, 200-208. <https://doi.org/10.1016/j.dcn.2014.04.005>
- [13] Koelsch, S., Skouras, S., & Jentschke, S. (2013). Neural correlates of emotional personality: a structural and functional magnetic resonance imaging study. *PloS One*, *8* (11), e77196. <https://doi.org/10.1371/journal.pone.0077196>

- [14] Koelsch, S., Rohrmeier, M., Torrecuso, R., & Jentschke, S. (2013). Processing of hierarchical syntactic structure in music. *Proceedings of the National Academy of Sciences of the United States of America*, 110 (38), 15443–8. <https://doi.org/10.1073/pnas.1300272110>
- [15] Fritz, T. H., Schmude, P., Jentschke, S., Friederici, A. D., & Koelsch, S. (2013). From understanding to appreciating music cross-culturally. *PloS One*, 8 (9), e72500. <https://doi.org/10.1371/journal.pone.0072500>
- [16] Horner, A. J., Gadian, D. G., Fuentemilla, L., Jentschke, S., Vargha-Khadem, F., & Duzel, E. (2012). A Rapid, Hippocampus-Dependent, Item-Memory Signal that Initiates Context Memory in Humans. *Current Biology*, 22 (24), 2369–2374. <https://doi.org/10.1016/j.cub.2012.10.055>
- [17] Clayden, J. D., Jentschke, S., Muñoz, M., Cooper, J. M., Chadwick, M. J., Banks, T., Clark, C. A., & Vargha-Khadem, F. (2011). Normative development of white matter tracts: similarities and differences in relation to age, gender, and intelligence. *Cerebral Cortex*, 22 (8), 1738-1747. <https://doi.org/10.1093/cercor/bhr243>
- [18] Koelsch, S., Enge, J., & Jentschke, S. (2012). Cardiac signatures of personality. *PLoS One*, 7 (2), e31441. <https://doi.org/10.1371/journal.pone.0031441>
- [19] Koelsch, S., & Jentschke, S. (2010). Differences in electric brain responses to melodies and chords. *Journal of Cognitive Neuroscience*, 22 (10), 2251-2262. <https://doi.org/10.1162/jocn.2009.21338>
- [20] Jentschke, S., & Koelsch, S. (2009). Musical training modulates the development of syntax processing in children. *NeuroImage*, 47(2), 735-44. <https://doi.org/10.1016/j.neuroimage.2009.04.090>
- [21] Fritz, T., Jentschke, S., Gosselin, N., Sammler, D., Peretz, I., Turner, R., Friederici, A. D., & Koelsch, S. (2009). Universal Recognition of Three Basic Emotions in Music. *Current Biology*, 19 (7), 573-576. <https://doi.org/10.1016/j.cub.2009.02.058>
- [22] Jentschke, S., Koelsch, S., Sallat, S., & Friederici, A. D. (2008). Processing of musical syntax in children with and without Specific Language Impairment. *Journal of Cognitive Neuroscience*, 20(11), 1940-1951. <https://doi.org/10.1162/jocn.2008.20135>
- [23] Koelsch, S., & Jentschke, S. (2008). Short-term effects of processing musical syntax: An ERP study. *Brain Research*, 1212, 55-62. <https://doi.org/10.1016/j.brainres.2007.10.078>
- [24] Koelsch, S., Sammler, D., Jentschke, S., & Siebel, W. A. (2008). EEG correlates of moderate intermittent explosive disorder. *Clinical Neurophysiology*, 119 (1), 151-162. <https://doi.org/10.1016/j.clinph.2007.09.131>
- [25] Koelsch, S., Remppis, A., Sammler, D., Jentschke, S., Fritz, T., Bonnemeier, H., Mietchen, D., & Siebel, W.A. (2007). A cardiac signature of emotionality. *European Journal of Neuroscience*, 26 (11), 3328–3338. <https://doi.org/10.1111/j.1460-9568.2007.05889.x>
- [26] Koelsch, S., Jentschke, S., Sammler, D., & Mietchen, D. (2007). Untangling syntactic and sensory processing: An ERP study of music perception. *Psychophysiology*, 44 (3), 476-490. <https://doi.org/10.1111/j.1469-8986.2007.00517.x>
- [27] Jentschke, S., Koelsch, S., & Friederici, A. D. (2005). Neural Correlates of Processing Structure in Music and Language – Influences of Musical Training and Language Impairment. *Annals of the New York Academy of Sciences*, 1060, 231-242. <https://doi.org/10.1196/annals.1360.016>

Articles in journals without peer-review (invited reviews)

- [1] Jentschke, S., & Koelsch, S. (2006). Gehirn, Musik, Plastizität und Entwicklung [Brain, Music, Plasticity, and Development]. *Zeitschrift für Erziehungswissenschaft, Beiheft 5*, 51-70. https://doi.org/10.1007/978-3-531-90607-2_5
- [2] Jentschke, S., & Koelsch, S. (2011). *Neurokognition von Sprache und Musik. Sprachheilarbeit, 56(4)*, 178-185. https://www.dbs-ev.de/fileadmin/dokumente/Publikationen/Sprachheilarbeit/sha_4_11.pdf

Books or book sections

- [1] Jentschke, S. (2018). *Interaktionen zwischen Sprache und Musik [Interactions between language and music]*. in H. Böttger, M. Sambanis (Eds.). Focus on Evidence II: Netzwerke zwischen Fremdsprachendidaktik und Neurowissenschaften. Tübingen, Germany: Narr.
- [2] Jentschke, S. (2016). The relationship between music and language. in S. Hallam, I. Cross & M. Thaut (Eds.), *The Oxford Handbook of Music Psychology, 2nd edition*. Oxford, UK: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198722946.013.24>
- [3] Jentschke, S., & Koelsch, S. (2010). Sprach- und Musikverarbeitung bei Kindern: Einflüsse musikalischen Trainings. In G. Blell & R. Kupetz (Eds.), *Der Einsatz von Musik und die Entwicklung von audio literacy im Fremdsprachenunterricht*. Frankfurt am Main: Peter Lang.
- [4] Jentschke, S., & Koelsch, S. (2007). Einflüsse von Entwicklungsveränderungen auf die Musikwahrnehmung und die Beziehung von Musik und Sprache [The relationship of music and language and developmental influences on music perception]. In M. Fuchs (Ed.), *Kinder- und Jugendstimme* (Vol. 1: Singen und lernen, pp. 67-90). Berlin: Logos.
- [5] Jentschke, S. (2007). Neural Correlates of Processing Syntax in Music and Language – Influences of Development, Musical Training, and Language Impairment. Leipzig, Germany: MPI for Human Cognitive and Brain Sciences. <https://edoc.mpg.de/get.epl?fid=51414&did=394818&ver=0>.

Conference Proceedings and Invited Talks (only if first author)

- [1] Jentschke, S., Daikoku, T., Tsogli, V., Lachmann, T., Koelsch, S. (2019). Statistical learning in the developing brain: Towards early diagnosis of specific learning impairment. Invited talk at the 21st Congress of the Japanese Human Brain Mapping Society, Tokyo, Japan, March 14 – 16, 2019.
- [2] Jentschke, S. (2017). Interaktionen zwischen Sprache und Musik [Interactions between Language and Music]. Invited talk at the Conference “Focus on Evidence: Foreign Language Didactics Meets Neuroscience”, Free University of Berlin, December 8, 2017.
- [3] Jentschke, S. (2016). *Modulation of syntax processing in music and language by musical training and language impairment*. Talk given at the 31st International Congress of Psychology, Yokohama, Japan, July 24-29, 2016.
- [4] Jentschke, S. (2016). *Children processing musical and linguistic syntax. Influences of language impairment and musical training*. Talk given at the Logopediveiledersamlingen, University of Bergen, Norway, May 9-10, 2016.
- [5] Jentschke, S. (2016). *Development of processing musical and linguistic syntax*. Talk given at the IGSIN seminar series, University of Bergen, Norway, February 24, 2016.
- [6] Jentschke, S. (2012). *Music, Language and the Brain. Can music help language acquisition?* Talk at the final meeting of the Comenius-project “European Music Portfolio - A Creative Way into Languages”, Stuttgart, Germany, September 17, 2012.

- [7] Jentschke, S., Munoz-Lopez, M., Cooper, J. M., Baldeweg, T., Gadian, D., de Haan, M., Mishkin, M., Vargha-Khadem, F. (2010). *Reduced gray matter density in the memory circuit after neonatal hypoxia/ischaemia*. Poster presented at the 40th Meeting of the Society for Neuroscience, San Diego, CA, United States, November 13-17, 2010.
- [8] Jentschke, S. (2009). *Hands on EEGLAB*. Workshop held at the Annual Meeting of the British Association of Cognitive Neuroscience, London, United Kingdom, September 1-3, 2009.
- [9] Jentschke, S., & Koelsch, S. (2008). *Development of music and language perception in children – Effects of musical training and Specific Language Impairment*. Talk given in the “Memory and Communication” Seminar Series, UCL Institute of Child Health, London, UK, November 5, 2008.
- [10] Jentschke, S. (2008). *Data processing with EEGLAB*. Workshop held at the University of Sussex, Brighton, United Kingdom, October 10, 2008.
- [11] Jentschke, S., & Koelsch, S. (2008). *Neural Correlates of Processing Linguistic and Musical Syntax - Influences of Musical Training, Specific Language Impairment, and Development*. Talk given at the Annual Meeting of the British Association of Cognitive Neuroscience, Swansea, United Kingdom, September 1-3, 2008.
- [12] Jentschke, S., & Koelsch, S. (2007). *Processing of Musical Syntax – Influences of Long-term exposure, of Physical Deviancy vs. Syntactic Irregularity, and of Embedding in Chords*. Talk given at the workshop “Music, Brain and Cognition – Learning the Structure of Music and Its Effects On the Brain” during the 21st conference “Neural Information Processing Systems”, Whistler, British Columbia, Canada, December 7 - 8, 2007.
- [13] Jentschke, S., & Koelsch, S. (2007). *Processing of musical syntax in 2½-year old children*. Talk given at the workshop “Music, Language, and Movement”, Herstmonceux Castle, UK, August 6 - 10, 2007.
- [14] Jentschke, S. (2006). *Processing musical and linguistic syntax – Investigating Influences of Musical Training and Language Impairment*. Talk given at the workshop “Compositionality in Logic, Language and Arts”, Humboldt-University Berlin, Institute for Philosophy, Germany, October 15, 2006.
- [15] Jentschke, S., & Koelsch, S. (2005). *Influences of Musical Training on Neurophysiological Correlates of Music and Language Perception in Children*. Poster presented at the “International Conference on Cognitive Neuroscience IX”, Havana, Cuba, September 5 - 10, 2005.
- [16] Jentschke, S., & Koelsch, S. (2005). *Investigating the Influences of Musical Training and Language Impairment on the Processing of Musical and Linguistic Syntax*. Talk given at the “International Conference on Cognitive Neuroscience IX”, Havana, Cuba, September 5 - 10, 2005.
- [17] Jentschke, S., Koelsch, S., & Friederici, A.D. (2005). *Neural Correlates of Processing Structure in Music and Language - Influences of Musical Training and Language Impairment*. Talk given at the conference “The Neurosciences and Music – II: From Perception to Performance”, Leipzig, Germany, May 5 - 8, 2005.
- [18] Jentschke, S., & Koelsch, S. (2004). *Neurophysiological correlates of music perception and musical expertise: A developmental view*. Poster presented at the “Evoked Potentials International Conference XIV“, Leipzig, Germany, March 28 - 31, 2004.
- [19] Jentschke, S., Knopf, M., & Mack, W. (2003). *Das Erinnern ausgeführter Handlungen im Altersverlauf [Memory for actions during lifespan]*. Poster presented on the 16th Meeting of Developmental Psychology Section within the German Society for Psychology, Johannes Gutenberg-University, Mainz, Germany, September 7 - 10, 2003.