Dr. Rebecca S. Schaefer

Associate Professor
Institute for Psychology; Unit Health, Medical and Neuropsychology; Faculty of Social Science
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EMPLOYMENT

Leiden University: Unit Health, Medical and Neuropsychology	Leiden, The Netherlands
Leiden University: Academy for Creative and Performing Arts	2019 - current
Assistant Professor	2015 - 2020
Associate Professor	2020 - current
University of California, Santa Barbara: SAGE Center for the Study of the Mind	Santa Barbara, USA
SAGE Junior Research Fellow	2013 - 2015
University of Edinburgh: Reid School of Music	Edinburgh, United Kingdom
Marie Curie Research Fellow	2011 - 2013
St Maartenskliniek Nijmegen (Neurorehabilitation hospital)	Nijmegen, The Netherlands
Researcher	2011
Stanford University: Centre for Study of Language and Information	Palo Alto, USA
Visiting scholar	2008
Radboud University Nijmegen: Donders Centre for Cognition	Nijmegen, The Netherlands
Junior researcher	2005 - 2011
Brain-Computer Interface research consortium 'BrainGain'	Nijmegen, The Netherlands
Project manager. Communication & publicity, research dissemination & translation, progress monitoring, event organization	2006 - 2010
OLVG Hospital Amsterdam	Amsterdam, The Netherlands
Clinical neuropsychologist *(internship)*	2002 - 2003
Stichting HVO-Querido Amsterdam	Amsterdam, The Netherlands
Social worker/homeless care	2001 - 2002

EDUCATION & QUALIFICATIONS

PhD Cognitive Neuroscience, Radboud Universiteit Nijmegen.	2011
Donders Centre for Cognition, Dept. Cognitive Artificial Intelligence. Thesis title: Measuring the mind's ear: EEG of music imagery.	Nijmegen, The Netherlands
MSc Music Cognition, Keele University.	2004
Thesis title: The effect of musical expertise type on melody recognition: modular and interactive perspectives of musical information processing.	Keele, United Kingdom
BSc & MSc Psychonomy/Clinical Neuropsychology, Universiteit van Amsterdam.	2003
Thesis title: Limits to universality in perceptual segmentation of melodies.	Amsterdam, The Netherlands

COMPETITIVE GRANTS AND AWARDS

NWA-WECOM grant (NWO): 'SNAAR festival: Een toegankelijke verbinding tussen muziek en wetenschap.' €50K — 2020

Aspasia Grant (NWO): Based on Vidi project 'Must be the music: Enjoyment and musical movement in brain and behavior' €150K — 2019

Lorentz Workshop grant: €25K *(co-applicant with Dr. Kat Agres, Dr. Anja Volk and Prof. Susan van Hooren), '*Music, Computing and Health' — 2018

Travel funds for student supervisee conference attendance: SEMPRE travel grants, Leiden University Fund, totalling €900 — 2016-2017

SAGE Center workshop grant: $20K *(co-applicant with Dr. Corina Logan, Dr. Margaret Tarampi and Dr. Matthew Gervais), '*Coordinating interdisciplinary research on social coordination' — 2015

Marie Curie Alumni Association Micro One World Grant: €300 — 2014
Research dissemination: Conference attendance

SAGE Fellowship Research allowance: $6000, research funding part of the SAGE junior research fellowship — 2013

Leverhulme Trust Early Career Fellowship: £100K — 2013
'Playing towards health: Evidence-based musical games for movement recovery'
(declined for SAGE Research Fellowship)

Carnegie Trust Large Grant: £40K *(Co-PI, with Prof. Raymond MacDonald)* — 2013
'Scottish Music & Health Network (SMHN), Increasing collaborative infrastructure and translating innovations from theory to practice'

Nominee for Dutch Applied Research Foundation (STW) — 2012
Simon Stevin Gezel prijs; prize for best applied PhD research project

FP7-PEOPLE-2010-IEF grant (EU): €200K — 2010
Marie Curie Fellowship, acronym MusicMoves

2010 BCI Meeting Monterey, CA: Poster prize for most innovative Brain-Computer Interface design *(second author)* — 2010

BrainGain Valorization award for dissemination efforts & online presence of the research consortium (YouTube/social networks) — 2009

Radboud University PhD mobility funding, €3000 — 2009
towards a 5-month stay at Stanford University, USA

Gerry Farrell Travel Award, £600 — 2004
(awarded by the Society for Education, Music and Psychology Research)

VSB Scholarship (towards MSc course at Keele University, UK), *fl*. 7000 — 2003

PUBLICATIONS

Peer-reviewed journal papers

Agres*, K.A., **Schaefer*, R.S.**, Volk*, A., van Hooren, S., et al. (under review). Music, Computing, and Health: Current and future roles of music technology for healthcare and well-being. *Publication based on Lorentz Workshop 'Music, Computing, and Health', co-organized in March 2019, 17 co-authors, shared first authorship.*

Williams, S.G., van Ketel, J.E. & **Schaefer, R.S.** (under review) Practicing musical intention: The effects of external focus of attention on musicians' skill acquisition.

Floridou, G.A., Peerdeman, K. & **Schaefer, R.S.** (under review). Individual differences in experiences of mental imagery in different modalities and levels of intentionality. Preprint at PsyArXiv, doi: 10.31234/osf.io/j2h8k

Moore, E.V., **Schaefer, R.S.**, Bastin, M., Roberts, N. & Overy, K. (2017). Diffusion tensor MRI tractography reveals increased fractional anisotropy (FA) in arcuate fasciculus following music-cued motor training. *Brain and Cognition 116*, 40-46.

Schaefer, R. S., Beijer, L. J., Seuskens, W., Rietveld, T. C., and Sadakata, M. (2016). Intuitive visualization of pitch and loudness in speech. *Psychonomic Bulletin & Review 23*(2), 548-555.

Davidson Kelly, K., **Schaefer, R. S.**, Moran, N. & Overy, K. (2015). "Total Inner Memory": Deliberate uses of multimodal musical imagery during performance preparation. *Psychomusicology: Music, Mind & Brain 25*(1), 83-92.

Schaefer, R. S. & Overy, K. (2015). Motor responses to a steady beat. *Annals of the New York Academy of Sciences, 1337*, 40-44.

Schaefer, R. S. (2014). Mental representations in musical processing and their role in action-perception loops. *Empirical Musicology Review, 9*(3-4), 161-176

Schaefer, R. S. (2014). Auditory cueing in clinical settings: findings and possible mechanisms. *Philosophical Transactions of the Royal Society B 369,* 20130402.

Schaefer, R. S., Morcom, A. M., Roberts, N. & Overy, K. (2014). Moving to music: Effects of heard and imagined musical cues on movement-related brain activity. *Frontiers in Human Neuroscience, 8:*774.

Schaefer, R. S. (2014). Images of time: Temporal aspects of auditory and movement imagination. *Frontiers in Psychology: Perception Science 5*:877.

Moore, E. V., **Schaefer, R. S.**, Bastin, M., Roberts, N. & Overy, K. (2014). Can musical training influence brain connectivity? Evidence from diffusion tensor MRI. *Brain Sciences 4*, 405-427.

Schaefer, R. S., Overy, K. & Nelson, P. (2013). Affect and non-uniform characteristics of predictive processing in musical behaviour. *Behavioral and Brain Sciences 36*(3), 226- 227.

Schaefer, R. S., Desain, P. & Farquhar, J. (2013). Shared processing of perception and imagery of music in decomposed EEG. *NeuroImage 70*, 317-325.

Schaefer, R. S., Furuya, S., Smith, L. M., Bohannan Kaneshiro, B. & Toiviainen, P. (2012). Probing neural mechanisms of music perception, cognition and performance using multivariate decoding. *Psychomusicology: Music, Mind and Brain 22*(2), 168-174.

Schaefer, R. S., Vlek, R. J. & Desain, P. (2011). Music perception and imagery in EEG: alpha band effects of task and stimulus. *International Journal for Psychophysiology, 82*(3), 254-259.

Vlek, R. J., **Schaefer, R. S.**, Gielen, C. C. A. M., Farquhar, J. D. & Desain, P. (2011). Shared mechanisms in perception and imagery of auditory accents. *Clinical Neurophysiology, 122*(8), 1526-1532.

Schaefer, R. S., Farquhar, J. D., & Desain, P. (2011). Name that tune: Decoding music from the listening brain. *NeuroImage 56,* 843-849.

Vlek, R. J., **Schaefer, R. S.**, Gielen, C. C. A. M., Farquhar, J. D. & Desain, P. (2011). Sequenced subjective accents for Brain-Computer Interfaces. *Journal of Neural Engineering, 8*(3):036002.

Schaefer, R. S., Vlek, R. J. & Desain, P. (2011). Decomposing rhythm processing electroencephalography of perceived and self-imposed rhythmic patterns. *Psychological Research, 75*(2), 95-106.

Schaefer, R. S., Desain, P. & Suppes, P. (2009). Structural decomposition of EEG signatures of melodic processing. *Biological Psychology 82*, 253-259.

Van Gerven, M., Farquhar, J., **Schaefer, R. S.**, Vlek, R. J., Geuze, J., Nijholt, A., Ramsey, N., Haselager, P., Vuurpijl, L., Gielen, S. & Desain, P. (2009). The brain-computer interface cycle. *Journal of Neural Engineering 6*(4):041001. *(No. 2 most cited paper in JNE of 2009-2010)*

Book Chapters

Schaefer, R.S. (accepted). Music imagery and movement in rehabilitation and music pedagogy. In: Kussner, et al. (Eds). *Music and mental imagery: an interdisciplinary framework for research and applications.* Book proposal accepted by Routledge, to be completed in 2020

Schaefer, R.S. & Grafton, S. T (2017). Modifying movement optimization processes with music. In: LeSaffre, M., Maes, P.-J. & Leman, M. (Eds.) *The Routledge Companion to Embodied Music Interaction*. Taylor & Francis.

Schaefer, R.S. (2017). Music in the brain: Imagery and memory. In: Ashley, R. & Timmers, R. (Eds.) *The Routledge Companion to Music Cognition*. Taylor & Francis. *(selected for 'Citation of Special Merit' by the Society for Music Theory)*

De Bruin, J.J. & **Schaefer, R.S.** (2017). Musical activities for cognitive enhancement in dementia. In: Colzato, L.S. (Ed.) *Handbook of Cognitive Enhancement*. Springer.

Scientific event organization

Lorentz Workshop 'Music, Computing and Health: interdisciplinary workshop on the use of music technology in health care *(co-organizer)*	2019
SAGE JRF workshop: Coordinating research on coordination, Multidisciplinary methods for research on social coordination *(co-organizer)*	2014
Symposium at 13th International Conference on Music Perception & Cognition, Seoul, Republic of South Korea entitled 'Musical movement: Effects of cueing and feedback' *(symposium convener)*	2014
'Perspectives on Rhythm and Timing (PoRT), Glasgow, UK international conference *(organizing assistance)*	2012
Symposium at 12th International Conference on Music Perception & Cognition, Thessaloniki, Greece entitled 'Classification as a tool in probing neural mechanisms of music perception, cognition, and performance' *(symposium co-convener, with Dr. Shinichi Furuya, Sophia University Tokyo, JP)*	2012
Approaches to Rhythm and Timing in Scotland Today (ARTiST)', connecting researchers and practitioners for collaboration *(co-organizer)*	2012
BrainGain Consortium meetings with scientific, industry-related and public science components *(concept and co-organizer)*	2008, 2009, 2010