

# Basil Wahn

Curriculum Vitae

## PERSONAL DETAILS

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*Affiliation:*

Brain, Attention, and Reality Lab  
Psychology Department, University of British Columbia  
2136 West Mall, V6T 1Z4, Vancouver, Canada

*Contact:*

basilwahn@gmail.com

## EDUCATION

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### PhD in Cognitive Science

Aug 2013 – March 2017

*University of Osnabrück*

Final Grade: Excellent (summa cum laude)

Thesis Title: “*Limitations of visuospatial attention  
(and how to circumvent them)*”

Supervisor: Prof. Dr. Peter König

### M.Sc. in Cognitive Science

Oct 2010 – Aug 2013

*University of Osnabrück*

Final Grade: Excellent with *distinction*

Thesis Title: “*Investigating Representations of Face Viewpoints  
Across the Visual Field - an fMRI Study*”

Supervisors: Prof. Dr. Peter König & Dr. Tim C. Kietzmann

### Semester abroad studying Psychology

Oct 2009 – Jan 2010

*University of Hertfordshire*

### B.Sc. in Cognitive Science

Oct 2007 – Oct 2010

*University of Osnabrück*

Final Grade: Excellent

Thesis Title: “*The Recognition of Objects in Congruent and  
Incongruent Scenes: An EEG-Study Focussing on the N400  
ERP Component*”

Supervisors: Prof. Dr. Peter König & Dr. Michael Plöchl

## **WORK AND TEACHING EXPERIENCE**

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<b>PostDoc in Brain, Attention, &amp; Reality Lab</b> <i>Department of Psychology, University of British Columbia</i>	Since Jan 2018
<b>PostDoc in Neurobiopsychology Lab</b> <i>Institute of Cognitive Science, University of Osnabrück</i>	March 2017 – Dec 2017
<b>Research associate (Wissenschaftlicher Mitarbeiter)</b> <i>Neurobiopsychology Lab</i> <i>Institute of Cognitive Science, University of Osnabrück</i>	Oct 2013 – Feb 2018
<b>Lecturer for Study Project</b> “ <i>Study Project: Mechanisms of joint attention (Part I)</i> ” together with Prof. Dr. Peter König	April 2017 – July 2017
<b>Lecturer for Study Project</b> “ <i>Study Project: Mechanisms of joint attention (Part I)</i> ” together with Prof. Dr. Peter König	April 2017 – July 2017
<b>Lecturer for Study Project</b> “ <i>The neurophysiology of joint action (Part II)</i> ” together with Prof. Dr. Peter König	April 2017 – July 2017
<b>Lecturer for Seminar:</b> “ <i>Advanced Topics in Action &amp; Cognition 17b</i> ” together with Prof. Dr. Peter König	April 2017 – July 2017
<b>Lecturer for Blockcourse:</b> “ <i>Applied Generalized Linear Models</i> ” together with Benedikt Ehinger and Prof. Dr. Peter König	March 2017
<b>Lecturer for Seminar:</b> “ <i>Advanced Topics in Action &amp; Cognition 17a</i> ” together with Prof. Dr. Peter König	Oct 2016 – March 2017
<b>Lecturer for Study Project</b> “ <i>The neurophysiology of joint action (Part I)</i> ” together with Prof. Dr. Peter König	Oct 2016 – March 2017
<b>Lecturer for Study Project</b> “ <i>Cortical mechanisms of joint action (Part II)</i> ” together with Prof. Dr. Peter König	April 2016 – July 2016
<b>Lecturer for Study Project</b> “ <i>Cortical mechanisms of joint action (Part I)</i> ” together with Prof. Dr. Peter König	Oct 2015 – Feb 2016
<b>Co-organizer</b> “ <i>Colloquium of the Institute of Cognitive Science</i> ”	Oct 2015 – Feb 2016

together with Dr. Corinna Bonhage

**Lecturer for Seminar:**

“*Doing Bayesian Data Analysis*”

together with Dr. Tim C. Kietzmann & Prof. Dr. Peter König

April 2015 – July 2015

**Statistical consultant**

*Psychology Department, University of Osnabrück*

June 2013 – July 2016

**Teaching assistant for “Multivariate Statistics”**

Oct 2012 – Feb 2013

**Teaching assistant for “Test, Scale & Decide”**

*(Statistics Course on Questionnaire Design and Analysis)*

Oct 2012 – Feb 2013

**Teaching assistant for “Action & Cognition I”**

*(Introductory Neuroscience Course)*

Oct 2012 – Feb 2013

**Teaching assistant for “Action & Cognition II”**

*(Introductory Neuroscience Course)*

April 2012 – July 2012

**Teaching assistant for “Statistics I”**

Oct 2011 – Feb 2012

## **PEER-REVIEWED PUBLICATIONS**

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*J* = Journal publication

*C* = Conference publication

### **2018**

*J14. Wahn, B.,* Karlinsky, A., Schmitz, L., & König, P. (2018) Let’s Move It Together: A Review of Group Benefits in Joint Object Control. *Frontiers in Psychology*. 9. 918. doi: 10.3389/fpsyg.2018.00918

*J13. Wahn, B.,* Kingstone, A., & König, P. (2018) Group benefits in joint perceptual tasks—a review. *Annals of the New York Academy of Sciences*. [Epub ahead of print]. doi: 10.1111/nyas.13843

*J12. Wahn, B.,* Czeszumski, A., & König, P. (2018) Performance similarities predict collective benefits in dyadic and triadic joint visual search. *PLoS ONE*. 13(1), e0191179. doi: 10.1371/journal.pone.0191179

### **2017**

*J11. Wahn, B.,* & König, P. (2017) Can Limitations of Visuospatial Attention Be Circumvented? A Review. *Frontiers in Psychology*, 8:1896, doi: 10.3389/fpsyg.2017.01896.

C3. **Wahn, B.**, Keshava, A., Sinnett, S., Kingstone, A., & König, P. (2017). Audiovisual integration is affected by performing a task jointly. Proceedings of the 39th Annual Conference of the Cognitive Science Society, 1296 - 1301. Austin, TX: Cognitive Science Society.

J10. **Wahn, B.**, Kingstone, A. & König, P. (2017). Two trackers are better than one: Information about the co-actor's actions and performance scores contribute to the collective benefit in a joint visuospatial task. *Frontiers in Psychology*. 8:669. doi: 10.3389/fpsyg.2017.00669

J9. **Wahn, B.**, & König, P. (2017). Is Attentional Resource Allocation Across Sensory Modalities Task-Dependent? *Advances in Cognitive Psychology*, 13, 83-96, doi: 10.5709/acp-0209-2

J8. **Wahn, B.**, Murali, S., Sinnett, S., & König, P. (2017). Auditory stimulus detection partially depends on visuospatial attentional resources. *i-Perception*, 1–18, doi: 10.1177/2041669516688026

J7. Vesper, C., Abramova, E., Bütepage, J., Ciardo, F., Crossey, B., Effenberg, A., Hristova, D., Karlinsky, A., McEllin, L., Nijssen, S., Schmitz, L., & **Wahn, B.** (2017). Joint Action: Mental Representations, Shared Information and General Mechanisms for Coordinating with Others. *Frontiers in Psychology*, 7, 2039. doi: 10.3389/fpsyg.2016.02039

C2. **Wahn, B.**, & König, P. (2017). Multimodal integration, attention, and sensory augmentation. Brain-Computer Interface (BCI), 5th International Winter Conference, IEEE. doi: 10.1109/IWW-BCI.2017.7858148.

## 2016

J6. **Wahn, B.**, Ferris, D.P., Hairston, W. D., & König, P. (2016). Pupil sizes scale with attentional load and task experience in a multiple object tracking task. PLoS ONE, 11(12), e0168087. doi: 10.1371/journal.pone.0168087

J5. König, S. U., Schumann, F., Keyser, J., Goeke, C., Krause, C., Wache, S., Lytochkin, A., Ebert, M., Brunsch, V., **Wahn, B.**, Kaspar, K., Nagel, S. K., Meilinger, T., Bühlhoff, H., Wolbers, T., Büchel, C., & König, P. (2016). Learning New Sensorimotor Contingencies: Effects of Long-Term Use of Sensory Augmentation on the Brain and Conscious Perception. PLoS ONE, 11(12), e0166647. doi: 10.1371/journal.pone.0166647

C1. **Wahn, B.**, Schmitz, L., König P.<sup>+</sup>, & Knoblich, G.<sup>+</sup> (2016) Benefiting from being alike: Interindividual skill differences predict collective benefit in joint object control (<sup>+</sup>shared senior authorship) *Proceedings of the 38th Annual Conference of the Cognitive Science Society*, 2747 - 2752. Austin, TX: Cognitive Science Society.

J4. **Wahn, B.**, & König, P. (2016). Attentional resource allocation in visuotactile processing depends on the task, but optimal visuotactile integration does not depend on attentional resources. *Frontiers in Integrative Neuroscience*. 10:13. doi: 10.3389/fnint.2016.00013

## 2015

J3. **Wahn, B.**, Schwandt, J., Krüger, M., Crafa, D., Nunnendorf, V., & König P. (2015)

Multisensory teamwork: Using a tactile or an auditory display to exchange gaze information improves performance in joint visual search. *Ergonomics*. 59, 781–795

J2. **Wahn, B.**, & König, P. (2015). Audition and vision share spatial attentional resources, yet attentional load does not disrupt audiovisual integration. *Frontiers in Psychology*. 6:1084. doi: 10.3389/fpsyg.2015.01084

J1. **Wahn, B.**, & König, P. (2015). Vision and haptics share spatial attentional resources and visuotactile integration is not affected by high attentional load. *Multisensory Research*. 28 (3-4), 371-392. doi: 10.1163/22134808-00002482

## **AD-HOC REVIEWER**

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Frontiers in Psychology

Attention, Perception, & Psychophysics

Journal of Personality and Social Psychology: Attitudes and Social Cognition

## **TALKS**

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**2017**

*Let's cooperate: The interdisciplinary investigation of social interaction*

**Wahn, B.** (invited talk, 2017). Collective benefits in joint perceptual tasks.

*European Conference on Eye Movements (ECEM)*

**Wahn, B.**, Ferris, D.P., Hairston, W. D., & König, P. (2017) Pupil Sizes Scale with Attentional Load and Task Experience in a Multiple Object Tracking Task.

*Proceedings of the 39th Annual Conference of the Cognitive Science*

**Wahn, B.**, Keshava, A., Sinnott, S., Kingstone A., König P. (2017) Audiovisual integration is affected by performing a task jointly.

*Joint Action Meeting (JAM)*

**Wahn, B.**, Kingstone, A. & König, P. (2017). Two Trackers Are Better than One: Information about the Co-actor's Actions and Performance Scores Contribute to the Collective Benefit in a Joint Visuospatial Task.

*Osnabrück Computational Alliance Meeting (OCCAM)*

**Wahn, B.** (invited talk, 2017). Limitations of visuospatial attention (and how to circumvent them)

*International Conference of Multimodal Communication (ICMC)*

**Wahn, B.**, & König, P. (2017). Is Attentional Resource Allocation Across Sensory Modalities Task-Dependent?

**2016**

*KogWis 2016: Space for Cognition*

**Wahn, B.**, Murali, S., & König, P. (2016) Auditory stimulus detection partially depends on visuospatial attentional resources.

*Proceedings of the 38th Annual Conference of the Cognitive Science*

**Wahn, B.**, Schmitz, L., König P.<sup>+</sup>, & Knoblich, G.<sup>+</sup> (2016) Benefiting from being alike: Interindividual skill differences predict collective benefit in joint object control (+shared senior authorship)

*Northwest Cognition and Memory (NOWCAM)*

**Wahn, B.**, Milani, S., König, P. & Kingstone, A. (2016). Humans' willingness to cooperate with a computer partner depends on feedback about the team's performance.

**2015**

*European Conference on Visual Perception (ECVP)*

**Wahn, B.**, & König, P. (2015). Vision shares spatial attentional resources with haptics and audition, yet attentional load does not disrupt visuotactile or audiovisual integration. *Perception*, 44, 373-374

## **POSTER PRESENTATIONS**

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**2018**

*International Multisensory Research Forum (IMRF)*

**Wahn, B.**, Keshava, A., Sinnett, S., Kingstone, A., & König P. (2018). Performing a task jointly modulates audiovisual integration in timing and motion judgements.

*International Multisensory Research Forum (IMRF)*

**Wahn, B.**, Dosso, J., Tomaszewski, M., & Kingstone, A. (2018). Performing a task jointly modulates audiovisual integration in timing and motion judgements.

*International Multisensory Research Forum (IMRF)*

**Wahn, B.**, & König, P. (2018). Is attentional resource allocation across sensory modalities task-dependent?

*12th Annual Canadian Neuroscience Meeting. Satellite 1: CAPnet/CPS*

**Wahn, B.**, Dosso, J., Tomaszewski, M., & Kingstone, A. (2018). Audiovisual integration in timing and motion judgements is affected by performing a task jointly.

**2017**

*25th Annual Workshop on Object Perception, Attention, and Memory (OPAM)*

**Wahn, B.**, Kingstone, A. & König, P. (2017). Two Trackers Are Better than One: Information about the Co-actor's Actions and Performance Scores Contribute to the Collective Benefit in a Joint Visuospatial Task.

*58th Annual Meeting of the Psychonomic Society*

**Wahn, B.**, Keshava, A., Sinnett, S., Kingstone A., König P. (2017). Performing a task jointly modulates audiovisual integration.

*European Conference on Visual Perception (ECVP)*

**Wahn, B.**, Gschossmann, L., Diallo, D., Ghai S., Effenberg, A., & Knig, P. (2017). Does corresponding visuospatial information facilitate learning to discriminate auditory pitches?

*Joint Action Meeting (JAM)*

**Wahn, B.**, Czeszumski, A. & König, P. (2017). Performance similarities predict collective benefits in dyadic and triadic joint visual search

*International Multisensory Research Forum (IMRF)*

**Wahn, B.**, & König, P. (2017). Shared or distinct: Is attentional resource allocation across sensory modalities task-dependent?

*Osnabrück Computational Alliance Meeting (OCCAM)*

**Wahn, B.**, Gschossmann, L., Diallo, D., Ghai S., Effenberg, A., & Knig, P. (2017). Do audiovisual crossmodal correspondences facilitate learning to discriminate auditory pitch intervals?

## 2016

*European Conference on Visual Perception (ECVP)*

**Wahn, B.**, Kingstone, A. & König, P. (2016). Collaborative multiple object tracking: How many objects can you track and which ones did you pick?

*Proceedings of the 38th Annual Conference of the Cognitive Science*

**Wahn, B.**, & König, P. (2016). Attentional Resource Allocation in Multisensory Processing is Task-dependent.

*Spatial Cognition*

**Wahn, B.**, & König, P. (2016). How effective is an auditory or a tactile display to circumvent visuospatial processing limitations in tasks performed alone or in a group?

## 2015

*Joint Action Meeting (JAM)*

Schmitz, L.\*, **Wahn, B.\***, Knoblich, G.<sup>+</sup>, & König P.<sup>+</sup> (2015) Let's move it together: The costs and benefits of shared action control. (\*shared first authorship, <sup>+</sup>shared senior authorship)

*International Multisensory Research Forum (IMRF)*

**Wahn, B.**, & König, P. (2015). Visual and tactile attentional resources are shared in sustained spatial tasks and high attentional load does not disrupt visuotactile integration.

## 2014

*Interdisciplinary College Günne*

**Wahn, B.**, Schwandt J., Krüger, M., Crafa, D., Nunnendorf, V., & König P. (2014). Sensing Where You Search: Attentional Benefits in a Collaborative Visual Search Task Through Tactile Transmission of 2D Spatial Information

*Synaesthesia in Perspective: Development, Networks, and Multisensory Processing*

**Wahn, B.**, Schwandt J., Krüger, M., Crafa, D., Nunnendorf, V., & König P. (2014).

Sensing Where You Search: Attentional Benefits in a Collaborative Visual Search Task Through Tactile Transmission of 2D Spatial Information

**2013**

*European Conference on Visual Perception (ECVP)*

Kietzmann, T. C., **Wahn, B.**, König, P., & Tong, F. (2013). Face selective areas in the human ventral stream exhibit a preference for 3/4 views in the fovea and periphery. *Perception*, 42, 54.

*Osnabrück Computational Alliance Meeting (OCCAM)*

**Wahn, B.**, Schwandt J., Krüger, M., Crafa, D., Nunnendorf, V., & König P. (2013). Attentional Benefits in a Visual Joint Search Task Through Tactile and Auditory Transmission of Two-Dimensional Spatial Information

## **F1000 RECOMMENDATIONS**

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König, P. & **Wahn, B.**: F1000Prime Recommendation of [Cohen MA et al., Proc Natl Acad Sci U S A 2014, 111(24):8955-60]. In F1000Prime, 13 Apr 2016; DOI: 10.3410/f.718431295.793516535.

König, P. & **Wahn, B.**: F1000Prime Recommendation of [Alnæs D et al., J Vis 2014, 14(4)]. In F1000Prime, 17 Dec 2015; DOI:10.3410/f.718336015.793512341.

König P. & **Wahn, B.**: F1000Prime Recommendation of [Talsma D, Front Integr Neurosci 2015, 9:19]. In F1000Prime, 08 Oct 2015; DOI:10.3410/f.725431254.793510169.

## **SUPERVISED BSC, MSC, & STUDYPROJECTS**

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“Cortical mechanisms of joint action” (2016). Studyproject by Anete Aumeistere, Chiara Carrera, Artur Czeszumski, Ernesto Andres Lopez Montecinos, & Ann Xavier. Supervisors: Peter König & Basil Wahn

“Attentional resources for audition and vision depend on the type of task and audio-visual integration is not affected by attention load” (2016). Master’s thesis by Supriya Murali. Supervisors: Peter König & Basil Wahn

“Compete or cooperate: Is feedback processing affected by the social situation?” (2017). Master’s thesis by Artur Czeszumski. Supervisors: Peter König & Basil Wahn

“Error processing in joint action” (2017). Master’s thesis by Chiara Carrera. Supervisors: Peter König & Basil Wahn

“Decision making in the joint loss experiment” (2017). Master’s thesis by Max Räucker. Supervisors: Peter König & Basil Wahn

“The neurophysiology of joint action” (2017). Studyproject by Kristina Baumgart, Petr Byvshev, Alexa-Nicole Sliby, Raul Sulaimanov, Andreas Strube, & Paola Ramirez Suarez. Supervisors: Peter König & Basil Wahn

“Mechanisms of joint attention” (2018). Studyproject by Dominic Akwesi Agyei, Obioma



Chimezie Amaefule, Mohammadreza Baghery, Shadi Derakhshan, Regina Gerber, Greta Häberle, Mahsa Khaleghi, Gürhan Konya, & Steven Osborne. Supervisors: Peter König & Basil Wahn

## **FELLOWSHIPS & AWARDS**

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DAAD PostDoc Short-term Stipend (January 2018 – June 2018): 19000 Euros

OPAM Conference Travel Award, 350 US \$

University of Osnabrück, Open Access Prize: 2000 Euro

Quinn Exchange Fellowship (February 2016 – March 2016), 3000 CAD \$

## **RESEARCH VISITS**

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### **Brain, Attention, & Reality (BAR) Lab**

*Director: Prof. Kingstone*

*University of British Columbia*

Feb 2016 – March 2016

### **Social Mind and Body (SOMBY) research group**

*Directors: Prof. Knoblich & Prof. Sebanz*

*Central European University Budapest*

Feb 2015 – March 2015

## **SKILLS**

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*Programming*    Excellent with R, MATLAB, & Python

*Software*        Excellent with SPSS & LATEX

*Languages*       German (mother tongue)  
English (fluent in speech and writing)