



Dr. rer. nat. Johannes Blöchle, Dipl.-Psych.  
Postdoctoral Researcher

Tel. 07071 29-83609  
Fax. 07071 29-4141



**Universitätsklinikum  
Tübingen**

## Training / Career

- 2009-2010: Studium der Psychologie an der Universität Greifswald
- 2010-2014: Studium der Psychologie an der Universität Tübingen
- 2014-2018: Promotion am Leibniz Institut für Wissensmedien, Tübingen (Thema der Dissertation: „Substantiating and specifying the neurocognitive architecture of numerical cognition“)
- Seit 2018: Wissenschaftlicher Mitarbeiter in der Arbeitsgruppe „Psychophysiologie und Optische Bildgebung“ (Klinik für Psychiatrie und Psychotherapie, Universitätsklinikum Tübingen)

## Research Interests

- Neuronale Korrelate der Zahlenverarbeitung
- Funktionelle und strukturelle Hirnveränderungen als Folge von Lernprozessen
- Gestalt-Wahrnehmungsprozesse bei psychischen Störungen
- Funktionelle und strukturelle Bildgebung (fMRT, DTI, VBM)

## Publications

- Scholl, A.\*, **Bloechle, J.\***, Sassenberg, K., Huber, S. & Moeller, K. (in press). The power to adapt: How sense of power predicts number processing. *Canadian journal of Experimental Psychology*.
- Klein, E., Willmes, K., Bieck, S.M., **Bloechle, J.** & Moeller, K. (in press). White matter neuro-plasticity in mental arithmetic: changes in hippocampal connectivity following arithmetic drill training. *Cortex*.
- Klein, E., Bieck, S. M., **Bloechle, J.**, Huber, S., Bahnmueller, J., Willmes, K. & Moeller, K. (2019). *Behavioral and Brain Functions*, 15(1), 4.
- Mock, J., Huber, S., **Bloechle, J.**, Bahnmueller, J., Moeller, K. & Klein, E. (2019). Processing symbolic and non-symbolic proportions: Domain-specific numerical and domain-general processes in intraparietal cortex. *Brain Research*, 1714, 135-146.
- Bloechle, J.**, Huber, J., Klein, E., Bahnmueller, J., Rennig, J., Moeller, K. & Huber, S. (2018). Spatial arrangement and set size influence the coding of non-symbolic quantities in the intraparietal sulcus. *Frontiers in Human Neuroscience*, 12, 54.

- Bloechle, J.**, Huber, S., Klein, E., Bahnmueller, J., Moeller, K. & Rennig, J. (2018). Neuro-cognitive mechanisms of global Gestalt perception in visual quantification. *Neuroimage*, *181*, 359-369.
- Mock, J., Huber, S., **Bloechle, J.**, Dietrich, J.F., Bahnmueller, J., Rennig, J., Klein, E. & Moeller, K. (2018). Magnitude processing of symbolic and non-symbolic proportions: an fMRI study. *Behavioral and Brain Functions*, *14*, 9.
- Huber, S., **Bloechle, J.**, Dackermann, T., Scholl, A., Sassenberg, K. & Moeller, K. (2017). Magnitude estimation is influenced by social power. *Journal of Numerical Cognition*, *3*(2), 147-163.
- Bloechle, J.**, Huber, S., Bahnmueller, J., Rennig, J., Willmes, K., Cavdaroglu, S., Moeller, K. & Klein, E. (2016). Fact learning in complex arithmetic – The role of the angular gyrus revisited. *Human Brain Mapping*, *37*, 3061-3079.
- Bloechle, J.**, Huber, S. & Moeller, K. (2015). In touch with numbers: Embodied and situated effects in number magnitude comparison. *Journal of Cognitive Psychology*, *27*, 478-489.
- Klein, E., Mann, A., Huber, S., **Bloechle, J.**, Willmes, K., Karim, A.A., Nuerk, H.-C. & Moeller, K. (2013). Bilateral bi-cephalic tDCS with two active electrodes of the same polarity modulates bilateral cognitive processes differentially. *PLoS One*, *8*(8), e71607.

## Conference Contributions

- Bieck, S.M., **Bloechle, J.**, Klein, E., Bahnmueller, J., Kiili, K., Ninaus, M., Moeller, K. (2018, June). Neurofunctional changes in fraction learning: results of a training study. *3rd Jean Piaget Conference: The origins of number*. Geneva, Switzerland. [Poster]
- Bieck, S. M., **Bloechle, J.**, Klein, E., Bahnmueller, J., Ninaus, M., Kiili, K., Dresler, T., & Moeller, K. (2018, April). Neurofunctional plasticity in fraction learning. *6th International Mind, Brain and Education Society Conference*. Los Angeles, USA. [Talk]
- Bieck, S.M., Klein, E., **Bloechle, J.**, Bahnmueller, J., & Moeller, K. (2018, June). Task preparation and emotion regulation in numerical cognition. *5th SIG22 Neuroscience and Education Conference*. London, UK. [Poster]
- Bieck, S. M., Ninaus, M., Klein, E., Kiili, K., **Bloechle, J.**, Bahnmueller, J., Dresler, T., & Moeller, K. (2018, April). Neurofunctional plasticity in fraction learning assessed by pre-post intervention fMRI. *1st Conference of the Mathematical Cognition and Learning Society*. Oxford, UK. [Talk]
- Bloechle, J.**, Bahnmueller, J., Klein, E., Moeller, K., & Rennig, J. (2018, January). Neuronal mechanisms of higher visual perception in visual quantification. *36th European Workshop of Cognitive Neuropsychology*. Bressanone, Italy. [Poster]
- Bloechle, J.**, Dietrich, J. F., Klein, E., Bahnmueller, J., Rennig, J., Moeller, K., & Huber, S. (2017, June). Dots and Dice - Coding of non-symbolic quantities in the Intraparietal sulcus. *23rd Annual Meeting of the Organization for Human Brain Mapping*. Vancouver, BC, Canada. [Poster]
- Rennig, J., **Bloechle, J.**, Klein, E., Huber, S., Bahnmueller, J., & Moeller, K. (2017, June). Neuronal Mechanisms of Gestalt Perception in visual Quantification. *23rd Annual Meeting of the Organization for Human Brain*

*Mapping*. Vancouver, BC, Canada. [Poster]

Bieck, S. M., Klein, E., Huber, S., **Bloechle, J.**, Bahnmueller, J., Mock, J., & Moeller, K. (2017, January). Math anxiety - it's all about emotion regulation. *35th European Workshop on Cognitive Neuropsychology*. Bressanone, Italy. [Talk]

**Bloechle, J.**, Dietrich, J., Rennig, J., Klein, E., Bieck, S., Ninaus, M., Moeller, K., & Huber, S. (2017, June). Spatial arrangement and set size influence the coding of non-symbolic quantities in the IPS. *Annual Meeting of the Organization for Human Brain Mapping*. Vancouver, Canada. [Poster]

**Bloechle, J.**, Dietrich, J. F., Klein, E., Bahnmueller, J., Rennig, J., Moeller, K., & Huber, S. (2017, January). Spatial arrangement and set size influence the coding of non-symbolic quantities in intraparietal sulcus. *35th European Workshop on Cognitive Neuropsychology*. Bressanone, Italy. [Poster]

**Bloechle, J.**, Huber, S., Dackermann, T., Scholl, A., Sassenberg, K., & Moeller, K. (2016, September). Manipulated Social power influences magnitude estimation. *Workshop on Domain-General and Domain-Specific Foundations of Numerical and Arithmetic Processing*. Tübingen. [Poster]

Klein, E., Mock, J., Dietrich, J. F., **Bloechle, J.**, Bahnmueller, J., Huber, S., & Moeller, K. (2016, March). A common neural substrate of processing symbolic and non-symbolic proportions - Evidence from fMRI. *58th Conference of Experimental Psychologists (TeaP)*. Heidelberg. [Talk]

Mock, J., Huber, S., Bahnmueller, J., **Bloechle, J.**, Dietrich, J. F., Klein, E., & Moeller, K. (2016, June). A common neural substrate for processing symbolic and non-symbolic proportions. *European Association for Research on Learning and Instruction (EARLI). Special Interest Group (SIG) 22*. Amsterdam, The Netherlands. [Poster]

Mock, J., Huber, S., Dietrich, J. F., **Bloechle, J.**, Bahnmueller, J., Klein, E., & Moeller, K. (2016, January). Same same, but different - on the neural correlates of processing symbolic and non-symbolic proportions. *34th European Workshop on Cognitive Neuropsychology*. Bressanone, Italy. [Talk]

Bahnmueller, J., **Bloechle, J.**, Huber, S., Dackermann, T., Roesch, S., Moeller, K., & Klein, E. (2015, June). Time matters – Temporal dynamics of number magnitude processing and arithmetic fact retrieval. *21st Annual Meeting of the Organization for Human Brain Mapping*. Honolulu, HI, USA. [Poster]

**Bloechle, J.**, Huber, S., Bahnmueller, J., Rennig, J., Willmes, K., Moeller, K., & Klein, E. (2015, January). Fact learning in complex arithmetic – The role of the angular gyrus revisited. *33th European Workshop on Cognitive Neuropsychology*. Bressanone, Italy. [Talk]

Klein, E., Moeller, K., Mann, A., Huber, S., **Bloechle, J.**, Nuerk, H.-C., & Willmes, K. (2013, January). Bilateral unipolar tDCS-induced modulation of bilateral cognitive processes. *31st European Workshop on Cognitive Neuropsychology*. Bressanone, Italy. [Poster]

