

# Agnieszka Zuberer

## Curriculum Vitae

Frohlich Laboratory  
School of Medicine, Department of Psychiatry, University of North Carolina  
116 Manning Drive, Chapel Hill, NC 27516, USA  
☎ +1(919)9236592  
✉ [azuberer\[at\]gmail\[dot\]com](mailto:azuberer[at]gmail[dot]com)  
🌐 <https://www.frohlichlab.org/>

## Academic Background

### Current Position

Jan 2024 – **Assistant Professor.** Frohlich Laboratory, Department of Psychiatry, School of Medicine, present University of North Carolina, USA.

### Previous Positions

- May 2022 – **IZKF Junior Research Group Leader.** Attention and Affect Laboratory, Department of Psychiatry and Psychotherapy, University Hospital, Eberhard Karls University Tübingen, Tübingen, Germany.
- Oct 2020 – **Postdoctoral Research Fellow.** Department of Psychiatry and Psychotherapy, Friedrich-Schiller University, Jena & Clinical Affective Laboratory, Department of Psychiatry and Psychotherapy, University Hospital, Eberhard Karls University Tübingen, Jena & Tübingen, Germany.
- Oct 2018 – **Postdoctoral Research Fellow.** Boston Attention and Learning Laboratory, Boston University School of Medicine, Boston, USA.
- Jan 2018 – **Postdoctoral Research Fellow.** Department of Psychiatry and Psychotherapy, University Hospital Tübingen, Tübingen, Germany.
- Apr 2017 – **Postdoctoral Research Fellow.** Department of Child and Adolescent Psychiatry, Psychiatric University Hospital, University of Zürich, Zürich, Switzerland.
- Nov 2013 – **Predoctoral Research Fellow.** Department of Child and Adolescent Psychiatry, Psychiatric University Hospital, University of Zürich, Zürich, Switzerland.

## Education

- Nov 2013 – **Dr. lic. phil. (Ph.D.) Psychology,** Department of Child and Adolescent Psychiatry, Psychiatric University Hospital, University of Zürich, Zürich, Switzerland. (defended April 2017, degree awarded Oct 2017)
- Sept 2008 – **Lic. phil. Psychology (Major in Neuropsychology).** University of Zürich, Zürich, Switzerland.
- Oct 2004 – **Studies of Psychology.** Minor in Philosophy. Otto-Friedrich University, Bamberg, Germany.
- Sept 2003 – **Instructional Design.** Albert-Ludwigs-Universität Freiburg, Germany.

## Third-Party Funding

- Apr 2024** **Foundation of Hope Advance Seed Grant (FoH):** Novel Paradigm for Modulating Emotion Regulation with Non-invasive Brain Stimulation in Generalized Anxiety Disorder, \$103,931, Competitive grant, function as sole PI.
- Aug 2022** **LEAD Intramural Research Funding:** Meta-awareness of mind wandering. Eberhard-Karls University, Tübingen, Germany, €6,924., Competitive grant, function as sole PI.
- Mar 2022** **Interdisziplinäres Zentrum für Klinische Forschung (IZKF) Junior Research Group Grant,** *Project Title: Real-time tracking of sustained attention: evidence from brain stimulation*, €250,000.  
Highly competitive grant, function as sole PI.
- Sept 2018** **Swiss National Science Foundation (SNF) Postdoc Mobility Grant,** *Project Title: Harnessing the wandering mind in ADHD - On the association between the awareness and control of one's own wakefulness*, \$80,000.  
Competitive grant.

**Total amount in role as sole PI:** \$373,520.56

## Honors and Awards

- June 2018** **Joe Kamyia First-Person Science Award,** *Brain Master Technologies*, \$1000
- Apr. 2017** **Travel Grant,** *Multilevel modeling of neurofeedback EEG-learning in children and adolescents with ADHD*, 6th World Congress on ADHD, Vancouver, Canada, \$1000
- Oct. 2015** **Best research presentation,** *Burghölzli Psychiatry meeting*, Zürich, Switzerland, \$300.

## Academic Supervision

**Nanni-Zepeda, M.** (Jan 2021 - Jul 2024) Doctoral thesis, University of Tübingen.

**Giron, A.** (May 2022 - Jan 2024) Doctoral thesis, University of Tübingen.

**Krimmelbein, S.** (2017). Event-related EEG desynchronization during EEG-Neurofeedback training. Master's thesis, University of Zürich.

**Ngo, T.** (2017). Relating microstates in EEG-Neurofeedback training to the performance in a classification task of spontaneous arousal. Master's thesis, University of Zürich.

**Riz a Porta, R.** (2016). Electrophysiological indicators of learning and effort during slow cortical potential neurofeedback training in healthy adults: Analysis of inter- and intra-sessional courses and its relationship with performance and effort in a continuous performance test. Master's thesis, University of Zürich.

**Meier, P.** (2016). Analysis of the specific efficacy of neurofeedback training in ADHD children and adolescents. Master's thesis, University of Zürich

**Hromkovic, P.** (2016). Computer based cognitive training for children and adolescents suffering from ADHD. Master's thesis, University of Zürich.

**Nadig, M.** (2016). Optimierung des Neurofeedback-Trainings und des kognitiven Trainings: Förderung des Transfers für Kinder mit ADHS. Master's thesis, University of Zürich.

## Teaching

- Feb 2024** Cognitive Psychology of Attention Functioning. Seminar lecturer substitute. Bachelor's level. Department of Psychiatry, University of North Carolina, Chapel Hill, USA.
- Oct 2022 – Jan 2024** Psychiatry Research Colloquium. Department of Psychiatry and Psychotherapy, University Hospital Tübingen, Tübingen, Germany.
- Dec 2020** Attention Deficit Hyperactivity Disorder: A Clinical Introduction. Seminar series lecturer. Graduate level. Department of Medicine, Friedrich-Schiller University Jena, Jena, Germany.
- May 2019** Modeling Inter- and Intra-Individual Variability in Longitudinal Designs. Seminar series lecturer. Graduate and postgraduate level. VA Boston Healthcare System, Jamaica Plain Campus, Boston, USA.
- Nov 2018** Introduction to Linear and Generalized Mixed-Effects Modeling. Seminar series lecturer. Graduate and postgraduate level. VA Boston Healthcare System, Jamaica Plain Campus, Boston, USA.
- Jan 2017** Neurofeedback as a Therapeutical Instrument. Theoretical introduction and practical workshop. Lecturer. Educational course for clinicians. Pluspunkt Zentrum für Prävention, Therapie und Weiterbildung, Jona, Switzerland.
- Jan 2016** Theory and Practical Implications of Neurofeedback as a Therapeutic Instrument. Seminar lecturer substitute. Bachelor's level. Department of Child and Adolescent Psychiatry, University Hospital, University of Zürich, Zürich, Switzerland.
- Sep 2015** Neuropsychology of ADHD. Seminar lecturer substitute. Bachelor's level. Institute of Psychology, University of Zürich, Zürich, Switzerland.
- Aug 2014** Neuropsychology of ADHD. Seminar lecturer substitute. Bachelor's level. Institute of Psychology, University of Zürich, Zürich, Switzerland.

## Conference Presentations

- Apr. 2024** **Zuberer, A.**, Nanni-Zepeda, M., Frohlich, F., Liebe, T., Vavra, P., Kaufmann, J., Zaehle, T., Esterman, M., *Subjective and Pupillometric Markers of Arousal during Movie Viewing*, Poster presentation at the Annual Meeting - Cognitive Neuroscience Society, Toronto, Canada
- Apr. 2024** Nanni-Zepeda, M., Evans, T., Jagger-Rickels, A., Raz, G., Hendler, T., Frohlich, F., Fan, Y., Grimm, S., Walter, M., Esterman, M., **Zuberer, A.**, *Neural Signatures of Dynamic Emotional Engagement and Disengagement Generalize across Negative Narratives*, Poster presentation at the Annual Meeting - Cognitive Neuroscience Society, Toronto, Canada
- Jul. 2023** Nanni-Zepeda, M., van der Meer, J., Raz, G., Barrios-Alvarez, F., Grimm, S., Walter, M., Esterman, M., & **Zuberer, A.**, *Subjective and Pupillometric Markers of Arousal during Movie Viewing Reveal Common Patterns of Brain Activation*, Poster presentation at the Annual Meeting - Organization for Human Brain Mapping, Montreal, Canada
- Jun. 2023** **Zuberer, A.**, *Subjective and Pupillometric Markers of Movie Experiencing*, Paper talk at the International Organization of Psychophysiology, Geneva, Switzerland.
- Jun. 2023** Nanni-Zepeda, M., van der Meer, J., Raz, G., Barrios-Alvarez, F., Grimm, S., Walter, M., Esterman, M., & **Zuberer, A.**, *Subjective and pupillometric markers of arousal during movie viewing reveal common brain patterns*, Paper talk at the International Organization of Psychophysiology, Geneva, Switzerland.
- Mar. 2023** Giron, A. P., Wu, C. M., Esterman, M., & **Zuberer, A.**, *Sustained Attention Is Enhanced by Disrupted Inter-Regional Frontal Theta Phase Coupling*, Brain Stimulation: Basic, Translational, and Clinical Research in Neuromodulation, Lisbon, Portugal.
- Oct. 2023** **Zuberer, A.**, *Tracking Engagement and Disengagement During Movie Viewing with fMRI, Subjective Annotations and Pupillometry.*, Symposium talk at *Emotions*, Tilburg, Netherlands.

- Jun. 2022** Nanni-Zepeda, M., DeGutis, J., Rothlein, D., Wu, MC, Grimm, S., Walter, M., Esterman, M., & **Zuberer, A.**, *Engaging and Disengaging from Sad Emotions During Movie Watching: An Idiosyncratic fMRI Study*, Poster presentation at the Annual Meeting - Organization for Human Brain Mapping, Glasgow, Scotland.
- Apr. 2019** **Zuberer, A.**, Valera M.E., Kucyi, A., Rothlein, D., Esterman, M., *Signal Complexity of the Whole Brain Connectome Is Related to Fluctuations in Attention*, Poster presentation at the Annual Meeting - Poster presentation at the Cognitive Neuroscience Society, San Francisco, USA.
- Apr. 2017** **Zuberer, A.**, Drechsler, R., Minder, F., Brandeis, D., *Multilevel Modeling of Neurofeedback EEG-Learning in Children and Adolescents with ADHD*, Poster presentation at the 6th World Congress on ADHD, Vancouver, Canada.
- Oct. 2016** **Zuberer, A.**, Brandeis, D., Drechsler, R., *Knowing and Changing Mental States: What Can Be Learned from Performance on a Self-Appraisal Task*, Poster presentation at the EUNTEHYDIS International Conference on ADHD, Berlin, Germany.
- Mar. 2016** **Zuberer, A.**, Brandeis, D., Drechsler, R., *Self-Regulated Brain Activity During Neurofeedback Training in Children with ADHD*, Poster presentation at the Mind, Brain and Body Symposium, Berlin, Germany.
- Oct. 2015** **Zuberer, A.**, Brandeis, D., Drechsler, R., *Neurofeedback – Different Measures for Training Performance*, Poster presentation at the Burghölzli Psychiatry Meeting, Zürich, Switzerland.
- Oct. 2015** **Zuberer, A.**, Brandeis, D., Drechsler, R., *Learning to Regulate Slow Cortical Potentials: A Study on the Diversity of Learning Patterns and Possible Mediator Variables in Neurofeedback Training in Children with ADHD*, Poster presentation at the EUNTEHYDIS International Conference on ADHD, Stockholm, Sweden.
- Mar. 2015** **Zuberer, A.**, Brandeis, D., Drechsler, R., *Knowing and Changing Mental States: New Insights from a Self Appraisal Task of Spontaneous Arousal*, Poster presentation at the Neurizons 2015: Notes of an Orchestrated Brain. Max Planck Institute for Biophysical Chemistry, Göttingen, Germany.

## Professional Service

**Board of Directors** The Foundation for Neurofeedback and Neuromodulation Research. (Mar 2017 - Jan 2020).

**Ad-hoc Reviewer for** Biological Psychiatry: Global Open Science, Biological Psychiatry CNI, Imaging Neuroscience, Neuroimage, eNeuro, Cerebral Cortex, Scientific Reports, Biological Psychology, Neuropsychologia, Cognitive Therapy and Research, Journal of Abnormal Psychology, International Journal of General Medicine & Research in Developmental Disabilities.

## Publications

### Preprints, Submitted, and In Preparation

Park, J., Ross, G., Siekierski, P., Radtke-Schuller, S., **Zuberer, A.**, Frohlich, F. Optogenetic Stimulation Reveals Frequency Tuned Communication between the Claustrum and Premotor Cortex in Ferrets. *Available at SSRN 4951841*.

Nanni-Zepeda, M., Evans, T. C., Jagger-Rickels, A., Raz, G., Hendler, T., Fan, Y., Grimm, S., Walter, M., Esterman, M., **Zuberer, A.**. Generalizable neural models of emotional engagement and disengagement. *bioRxiv*, 2024-02.

Camenzind, M., Saxena-Beem, S., Lee, Y. Z., Trujillo, A., Huamani, R., **Zuberer, A.**, Frohlich, F.\*, &

Sheikh, S. Z.\* (under review). Exploring the feasibility and efficacy of alpha transcranial alternating current stimulation (tACS) in lupus-associated depression.

Nanni-Zepeda, M., Sakaki, M., Zaehle, T., Kaufmann, J., Vavra, P., Liebe, T., Martinez-Soto, J., Barrios-Alvarez, F., Raz, G., Hendler, T., Fan, Y., Grimm, S., van der Meer, J., Esterman, M., Frohlich, F., **Zuberer, A.** (in prep.). Reactivity and Recovery During Emotional Episodes Reflect Dissociable Neural Responses.

Camenzind, M., Nanni-Zepeda, M., Giron, A., McCauley, E., Dapper, K., Esterman, M., Frohlich, F., **Zuberer, A.** (in prep.). Neural oscillatory markers of objective and subjective arousal during movie viewing.

#### Peer reviewed publications

Ross, G., Huang, W. A., Reiling, J., Zhang, M., Park, J., Radtke-Schuller, S., Hopfinger, J., **Zuberer, A.**, Frohlich, F. (2025). Switching state to engage and sustain attention: dynamic synchronization of the frontoparietal network. *Progress in Neurobiology*

**Zuberer, A.** (2025). Neural Signature of Reappraisal: Tendency Versus Capacity. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, **10**(1), 5–6.

Evans, T. C., Carlson, J., **Zuberer, A.**, Fry, R., Agnoli, S., Britton, J. C., DeGutis, J., Esterman, M. (2024). A preliminary characterization of the psychometric properties and generalizability of a novel social approach-avoidance paradigm. *Motivation and Emotion*, 1–17, Springer.

Nanni-Zepeda, M., DeGutis, J., Wu, C., Rothlein, D., Fan, Y., Grimm, S., Walter, M., Esterman, M., **Zuberer, A.** (2024). Neural signatures of shared subjective affective engagement and disengagement during movie viewing. *Human Brain Mapping*, 45(4), e26622, Wiley Online Library.

Babb, J. A., **Zuberer, A.**, Heinrichs, Stephen, Rumbika, Kendra K, Alfiler, Lauren, Lakis, Gabrielle A, Leite-Morris, Kimberly A and Kaplan, Gary B (2023). Disturbances in fear extinction learning after mild traumatic brain injury in mice are accompanied by alterations in dendritic plasticity in the medial prefrontal cortex and basolateral nucleus of the amygdala. *Brain Research Bulletin*.

Agnoli, S., **Zuberer, A.**, Nanni-Zepeda, M., McGlinchey, R. E., Milberg, W. P., Esterman, M., and DeGutis, J. (2023). Depressive Symptoms are Associated with More Negative Global Metacognitive Biases in Combat Veterans, and Biases Covary with Symptom Changes over Time. *Depression and Anxiety*.

Hillmann, B., **Zuberer, A.**, Schwarz, L., Erb, M., Scheffler, M., Nieratschker, V., & Ethofer, T. (2022). ADHD patients with DIRAS-2 risk allele need more thalamic activation during emotional face-voice recognition. *Psychiatry Research*.

Jagger-Rickels, A., Stumps, A., Rothlein, D., Park, H., Fortenbaugh, F., **Zuberer, A.**, Fonda, J., Fortier, C., DeGutis, J., Milberg, W. & Esterman, M. (2022). Impaired executive function exacerbates neural markers of PTSD. *Psychological Medicine*.

**Zuberer, A.**, Kucyi, A., Yamashita, A., Wu, C., Walter, M., Valera, E. & Esterman, M. (2021). Integration and segregation across large-scale intrinsic brain networks as a marker of sustained attention and task-unrelated thought. *Neuroimage*.

**Zuberer, A.\***, Jamalabadi, H.\*, Kumar, V., Li, M., Alizadeh, S., Moradi, A. , Esterman, M. & Walter, M. (2020). The missing role of gray matter in brain controllability. *Network Neuroscience*.

**Zuberer, A.**, Schwarz, L., Kreitfeldts, B., Wildgruber, D., Erb, M., Fallgatter, A., Scheffler, K. & Ethofer, T. (2020). Neural basis of impaired emotion recognition in adult attention deficit hyperactivity disorder. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.

Minder, F., **Zuberer, A.**, Brandeis, D. & Drechsler, R. (2019). Specific Effects of Individualized Cognitive Training in Children with Attention-Deficit/Hyperactivity Disorder (ADHD): The Role of Pre-Training Cognitive Impairment and Individual Training Performance. *Developmental Neurorehabilitation*.

**Zuberer, A.**, Minder, F., Brandeis, D. & Drechsler, R. (2018). Mixed-effects modeling of neurofeedback self-regulation performance: moderators for learning in children with ADHD. *Neural Plasticity*.

Minder, F., **Zuberer, A.**, Brandeis & D., Drechsler, R. (2018). Informant-related effects of Neurofeedback and cognitive training in children with ADHD including a waiting control phase: a randomized-controlled trial. *European child & adolescent psychiatry*.

Minder, F., **Zuberer, A.**, Brandeis, D. & Drechsler, R. (2018). A review of the clinical utility of systematic behavioral observations in Attention Deficit Hyperactivity Disorder (ADHD) *Child Psychiatry & Human Development*.

**Zuberer, A.**, Minder, F., Brandeis, D. & Drechsler, R. (2015). Are treatment effects of neurofeedback training in children with ADHD related to the successful regulation of brain activity? A review on the learning of regulation of brain activity and a contribution to the discussion on specificity. *Frontiers of human neuroscience*.

[\* equal contribution]

#### Book chapters

**Zuberer, A.**, Ilieva I. & Drechsler, R. (2018), Review of Test of planning ability in primary school children, in Schellig, D., Heinemann, D., Schächtele, B., Sturm, W. (ed.) *Handbook of Neuropsychological Tests*. Hogrefe.

#### Skills

- |                       |  |
|-----------------------|--|
| Languages             | English (C2), German (mother tongue), Polish (B2), French (B1), Italian (A1), & Mandarin (A1).   |
| Programming Languages | Proficient in MATLAB, R, Python, and L <sup>A</sup> T <sub>E</sub> X.  |
| Tutoring              | Tutoring students in statistics. Teaching German as a foreign language for children, adolescents & adults with and without a migration background (Sep 2003 – Oct 2014.) |