

Alana Irene Darcher

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ACADEMIC EXPERIENCE

| | | |
|---------|--------|--|
| Current | Ph.D. | University of Bonn/University of Tübingen Joint project between the groups of Prof. Dr. Florian Mormann and Prof. Dr. Jakob Macke |
| 2020 | M.Sc. | Graduate School of Systemic Neurosciences, Ludwig-Maximilians-University, Munich, Germany Thesis: Computational models of neural dynamics during human visual memory |
| 2016 | B.Sc. | Emory University, Atlanta, Georgia, USA Neuroscience & Behavioral Biology, Philosophy |
| 2012 | A.A.S. | Clatsop Community College, Astoria, Oregon, USA General Science, Physics and Calculus concentration Graduated with high honors <i>Concurrent with high school enrollment</i> |

PEER-REVIEWED PUBLICATIONS

Mascaro, J.S., Wehrmeyer, K., Mahathre, V., **Darcher, A.** A Longitudinal, Randomized and Controlled Study of App-delivered Mindfulness in the Workplace. *Journal of Wellness*. 2(1), 4. DOI: 10.18297/jwellness/vol2/iss1/4

Evans, A. P., Mascaro, J. S., Kohn, J. N., Dobrusin, A., **Darcher, A.**, Starr, S. D., Craighead, L., Negi, L. T. (2019). Compassion Meditation Training for Emotional Numbing Symptoms Among Veterans with Post-Traumatic Stress Disorder. *The Journal of Alternative and Complementary Medicine*, 25(4), 441–443. DOI: 10.1089/acm.2018.0425 [[PubMed](#)]

Mascaro, J. S., Rentscher, K. E., Hackett, P. D., Lori, A., **Darcher, A.**, Rilling, J. K., & Mehl, M. R. (2018). Preliminary evidence that androgen signaling is correlated with men's everyday language. *American Journal of Human Biology*, 30(4). DOI: 10.1002/ajhb.23136 [[PubMed](#)]

Mascaro, J. S., Kelley, S., **Darcher, A.**, Negi, L. T., Worthman, C., Miller, A., & Raison, C. (2016). Meditation buffers medical student compassion from the deleterious effects of depression. *The Journal of Positive Psychology*, 13(2), 133–142. DOI: 10.1080/17439760.2016.1233348 [[Link](#)]

Mascaro, J. S., **Darcher, A.**, Negi, L. T., & Raison, C. L. (2015). The neural mediators of kindness-based meditation: a theoretical model. *Frontiers in Psychology*, 6. DOI: 10.3389/fpsyg.2015.00109 [[PubMed](#)]

HONORS AND AWARDS

2018-2019 Bernstein Network of Computational Neuroscience SMARTSTART 1 Fellowship [[Link](#)]
- Funded mentorship and training program to promote young researchers in Computational Neuroscience studying in Germany

2015-2016 W.C. McWhorter Family Grant
 2012-2016 Emory College Grant
 2014-2016 Phi Sigma Tau Philosophy Honor Society Member, Emory University
 2014 Collegiate Water Polo Association Scholar-Athlete Award
 2012 All-Oregon Academic Team Member
 2012 Coca-Cola Community College Academic Award and Scholarship
 2012 All-USA Academic Team Member
 2012 Phi Theta Kappa Honor Society Member, Clatsop Community College, Oregon, USA
 2010-2012 Dean's List & Honor Roll, Clatsop Community College, Oregon, USA
 2012 Valedictorian, Naselle Grays River High School, Washington, USA

CONFERENCE PRESENTATIONS, REPORTS, AND TALKS

Darcher, A., Müller, T.T., Mormann, F., Macke, J.H. (2020, Sept.) Epiphyte: a Python toolkit for high-dimensional neural data recorded during naturalistic, continuous stimuli. Bernstein Conference on Computational Neuroscience, Berlin, Germany.

Darcher, A. (2019, April). "Meditation as Medicine: Clinical Applications of Mindfulness Training." Invited speaker, Healthy Academia Lecture Series. Ludwig-Maximilians-University, Munich, Germany. Length: 45 min.

Wehrmeyer, K., Mahathre, V., **Darcher, A.**, Mascaro, J.S. (2017, Nov.) Examining the biopsychosocial predictors of mindfulness meditation practice in a workplace environment, American Public Health Association Annual Meeting & Expo, Atlanta, GA. [\[Link\]](#)

Mascaro, J.S., Haack, C., **Darcher, A.**, Wehrmeyer, K., Mahathre, V. (2017, May) Mindfulness Meditation for Healthcare Professionals, American College of Preventive Medicine Annual Meeting, Washington, DC.

Mascaro, J.S., Kelley, S., **Darcher, A.**, Negi, L.T., Worthman, C., Miller, A., Raison, C. (2016, Feb.) Cognitively-Based Compassion Training (CBCT) for Medical Students: A Pilot Study, Center for Mind, Brain, and Culture Annual Conference, Atlanta, GA. [\[Link\]](#)

Mascaro, J.S., Kelley, S., **Darcher, A.**, Negi, L.T., Worthman, C., Miller, A., Raison, C. (2016, Feb.) The Impact of Compassion Training on Medical Student Well-Being and Immune Function, Center for Mind, Brain, and Culture Annual Conference, Atlanta, GA. [\[Link\]](#)

Darcher, A. (2013). From Entertainment to Enrichment: The Growth of YouTube's Online Scientific Content. Triple Helix Student Journal. Retrieved from [web](#).

Homolac, J., Abing, D., **Darcher, A.**, et al. (2012) *Technical Report: Explorer Class* (Marine Advanced Technology Education Remotely Operated Vehicle Competition). Retrieved from [web](#).

SOFTWARE AND PUBLICALLY AVAILABLE CODE

Darcher, A., Müller, T.T. Epiphyte. (2020) [Online]. Available: [GitHub](#), [Python Package Index \(PyPI\)](#)

RESEARCH EXPERIENCE

Research Positions

Nov. 2018-
 March 2019 Research Assistant, Max-Planck-Institute for Neurobiology, Munich, Germany
 PI: Dr. Nadine Gogolla, [Circuits for Emotion Research Group Leader](#)
Concurrent with Master's studies

- Designed and implemented a pharmacological experiment to interrogate insular role in mouse behavior during an anxiogenic paradigm
- Analyzed fiber photometry data for neural activity predictive of mouse movement

Oct. 2017-
Feb. 2019

Research Assistant, Max-Planck-Institute for Psychiatry, Munich, Germany

PI: Dr. Leonhard Schilbach, [Social Neuroscience Research Group](#)

Concurrent with Master's studies

- Collected and analyzed fMRI and eye-tracking data during a social-cue learning task for use in a Bayesian inference model of socially-relevant signal incorporation in individuals with autism

May 2016-
Aug. 2017

Research Specialist, Emory University School of Medicine, Atlanta, GA, USA

PI: Dr. Jennifer Mascaro, Assistant Professor, [Dept. of Family and Preventive Medicine](#)

- Investigated clinical efficacy of contemplative practices in treating mental health disorders characterized by social isolation symptoms
- Developed novel paradigm for assessing subjective interpretations of emotional salient stimuli

Nov. 2013-
Sept. 2015

Research Technician, Emory University, School of Medicine, Atlanta, GA, USA

PI: Dr. Inyeong Choi, Associate Professor, [Dept. of Physiology](#)

Concurrent with Bachelor's studies

- Extracted and cultured hippocampal tissue from perinatal mice
- Analyzed the role of a specific sodium-bicarbonate transporter in maintaining normal intracellular pH

MSc Internships and Projects

March 2019-
Current

Master's Thesis Student, Technical Universität Munich, Germany

Project: Computational models of neural dynamics in human visual memory

PI: Dr. Jakob Macke, [Computational Neuroengineering](#)

- Analyzed intracranial recordings from human medial temporal lobe during presentation of a commercial film

Oct. 2018-
Nov. 2018

Research Internship, Max-Planck-Institute for Neurobiology, Munich, Germany

PI: Dr. Nadine Gogolla, [Circuits for Emotion Research Group Leader](#)

- Performed two-photon imaging and analysis from mouse insular cortex during fear-based paradigm

Feb. 2018-
Jan. 2019

Project Assistant, Center for Information and Language Processing, Munich, Germany

PI: Dr. Hinrich Schütze, [Chair of Computational Linguistics](#)

- Optimized inputs for natural language processing sentiment analysis to determine nodes' "preferred" activation in natural text

BSc Internships

May 2015-
Aug. 2015

Summer Research Internship, University of Washington, Seattle, WA, USA

PI: Dr. Sheri Mizumori, Director, [Dept. of Psychology](#)

May 2014-
Sept. 2015

Clinical Research Assistant, Emory University, Atlanta, GA, USA

PI: Dr. Jennifer Mascaro, Center for the Study of Human Health (previous affiliation)

WORK EXPERIENCE

- June 2016-
Aug. 2017 Lead Baker, [Butter & Cream](#), Atlanta, GA, USA
Concurrent with position in Dr. Jennifer Mascaro's lab at Emory University
- May 2015-
Aug. 2015 Assistant Pastry Baker, [Belle Epicurean](#), Seattle, WA, USA
Concurrent with summer internship in Dr. Sheri Mizumori's lab
- March 2014-
Dec. 2014 Assistant Baker, Cakes & Ale, Decatur, GA, USA
Concurrent with Bachelor's studies and position in Dr. Inyeong Choi's lab
- March 2010-
Aug. 2013 Bread Baker, [Blue Scorcher Bakery & Cafe](#), Astoria, OR, USA
Partially concurrent with high school studies and Bachelor's studies
(non-continuous)

TEACHING EXPERIENCE

Graduate Level Courses

- Nov. - Dec. 2020 Instructor, Practical Course in Extracellular Human Electrophysiology
University of Bonn, MSc Neurosciences module
- April 2019 Tutor, "Fundamentals in Neuroscience"
Ludwig-Maximilians-University Munich, MSc Neurosciences module
- April 2019 Tutor, "Sensory Physiology"
Ludwig-Maximilians-University Munich, MSc Neurosciences module

WORKSHOPS, SUMMER SCHOOLS, AND TECHNICAL COMPETITIONS

- Dec. 2019 Science Hack 2019, Technical Universität Munich
[Theme: Sustainability, Team BURDA](#)
- Sept. 2019 Bernstein Conference on Computational Neuroscience, Satellite Workshops
- June 2019 BRANDYSchool in Terzolas, Italy
[Interdisciplinary Research on Brain Network Dynamics](#)
- March 2019 Interdisciplinary College in Günne, Germany
[Out of Your Senses: From Data to Insight](#)
- Sept. 2018 Bernstein Conference on Computational Neuroscience, Satellite Workshops
- June 2012 Marine Advanced Technology Education, Underwater Robotics Competition
Competitor, [Explorer Class](#)

SKILLS

Programming: Advanced: Python, MATLAB/Octave, Git, Visual Basic (E-Prime)

Elementary: HTML, SQL, C++

Python proficiencies: Keras, Tensorflow, JupyterHub, Statsmodels, Matplotlib

Software: AWS, SPSS, Qualtrics, E-Prime, Presentation, SPM for MATLAB, AnyMaze, Blender, LaTeX

Methods: Fiber photometry, EEG, Eyetracking, fMRI, Cell Culturing, Electrophysiology, Neural Tissue Isolation, Histology, Two-photon analysis

Certifications: Bloodborne Pathogens in Research, Biosafety Level I & II, Rodent Surgery Practices, Animal Care and Maintenance, Human Subjects Protection Curriculum, MPI Patient Security Practices

LANGUAGES

English, native speaker
German, fluent
Tibetan, elementary

PROFESSIONAL MEMBERSHIPS

Organization for Computational Neuroscience, USA [\[Link\]](#)
Max-Planck-Institute of Neurobiology Alumni Association, Munich, Germany [\[Link\]](#)
Bernstein Network/Volkswagen SMARTSTART, **Student Representative**, Germany
Bernstein Network for Computational Neuroscience, Germany [\[Link\]](#)
Center for Mind, Brain, and Culture (CMBC), Atlanta, GA [\[Link\]](#)

HOBBIES

[Pastry & bread baking](#), outdoor climbing, illustration.