

Diheng Zhang, M.A.

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Updated: August 31, 2020

Research Interests

- Cognitive biases/deficits in mood and anxiety disorders and related neural mechanisms
- Bio/behavioral markers of mood and anxiety disorders
- Computational modeling of brain functions/dysfunctions and predicting symptom/markers

Summary of Professional Experience

Graduate Assistant

Psychophysiology Lab, **University of Arizona**
Supervisor: John J.B. Allen, Ph.D.

Aug. 2018 – Present

Tucson, AZ

Visiting Researcher

Penn Computational Cognitive Neuroscience Lab, **University of Pennsylvania**
Supervisor: Anna Schapiro, Ph.D.

Jun. 2019 – Aug. 2019

Philadelphia, PA

Research projects dedicated to develop neural network model for memory reconsolidation during sleep to simulate process of emotional memories.

Project Coordinator

Program for Anxiety, Cognition, and Treatment (PACT) Lab, **University of Virginia**
Supervisor: Bethany Teachman, Ph.D.

Jun. 2015 – Jul. 2018

Charlottesville, VA

Research projects dedicated to developing, evaluating and disseminating novel interventions for mood and anxiety disorders.

Research Assistant

Langone Medical Center, **New York University & Bellevue Hospital Center**
Supervisors: Isaac Robert Galatzer-Levy, Ph.D. & Uzma Samadani, M.D., Ph.D.

Jan. 2013 – Jun. 2014

New York, NY

Research project for establishing for a neural model for predicting early stage brain trauma.

Research Assistant: Summer Intern

CEDAR Clinic, **Beth Israel Deaconess Medical Center**
Supervisor: Kristen Woodberry, M.S.W., Ph.D.

Jun. 2013 – Aug. 2013

Boston, MA

Research project for understanding the prodromal phase of early onset schizophrenia.

Research Assistant: Summer Intern

Department of Psychology, **Harvard University**
Supervisors: Jill Hooley, D.Phil. & Kenneth Allen, Ph.D.

May 2013 – Aug. 2013

Cambridge, MA

Research project for underpinning relationship between cognitive deficits and Non Suicidal Self Injury.

Education

Ph.D. Student in Clinical Psychology, University of Arizona

School of Mind, Brain, and Behavior

Tucson, AZ

Aug. 2018 - Present

M.A. Clinical Psychology, Columbia University in the City of New York

Teachers College, GPA: 3.84/4.00

New York, NY

Aug. 2012 - May 2014

B.Sc. Applied Psychology, Nanjing University

School of Social and Behavioral Science, GPA: 3.80/4.00

Nanjing, China

Sep. 2009 - Jul. 2012

Presentations

- Eberle, J.W., Boukhechba, M.O., Sun, J., **Zhang, D.**, Funk, D.H., Barnes, L.E. & Teachman, B.A. (2019, November). *Online Cognitive Bias Modification to Shift Negative Prospection: A Randomized Controlled Trial Using Technology to Extend Reach*. Poster to be presented at Association for Behavioral and Cognitive Therapies' 2019 convention in Atlanta, GA.
- Zhang, D.**, Allen, J.J. (2019, September). *A Comparison of Nomothetic and Individualized Alpha Frequency Approaches to Measuring Frontal EEG Alpha Asymmetry*. Poster presented at Society for Psychophysiological Research's 2019 convention in Washington D.C..
- Zhang, D.**, Shi, Y., Wang, H. & Teachman, B.A. (2017, November). *Predictors of Attrition in a Public Online Interpretation Training Program for Anxiety*. Poster presented at Association for Behavioral and Cognitive Therapies' 2017 convention in San Diego, CA.
- Werntz, A.J., **Zhang, D.**, Geyer, E. & Teachman, B. A. (2017, November). *Am I anxious?: Implicit and explicit self-concepts of anxiety predict symptom acknowledgement*. Poster presented at Association for Behavioral and Cognitive Therapies' 2017 convention in San Diego, CA.
- Calicho-Mamani, C., **Zhang, D.**, Blaisdell, K.N., Friedmann, C.I., Werntz, A.J. & Teachman, B.A. (2017, November). *Gender and Age Differences in Social Media Advertising Reception: Using Facebook to Promote Free, Web-Based Interventions*. Poster presented at Diversifying Scholarship at UVA Interdisciplinary Conference in Charlottesville, VA.
- Calicho-Mamani, C., **Zhang, D.**, & Teachman, B.A. (2017, August). *Responding and Flexibility: Relationship between Variability on Interpretation Bias Measures and Anxiety and Depressive Symptoms*. Poster presented at University of Virginia Summer Research Symposium in Charlottesville, VA.
- Bacon, G., Teachman, B.A., **Zhang, D.** (2017, August). *The Impact of Education Level on Drinking Identity*. Poster presented at University of Virginia Summer Research Symposium in Charlottesville, VA.
- Matsuba, M., **Zhang, D.**, Graham, A., Hong, J., Dorfman, M. & Chen, X. (2014, August). *Analysis of Universal and Culture-Specific Negative Coping in Chinese Immigrants with Schizophrenia*. Poster presented at American Psychological Association's 2014 convention in Washington, D.C..
- Zhang, D.**, Luguya, C., Chhuon, R., Wang, L. & Matsuba, M. (2013, August). *'Excessive Thinking' as a Cultural Idiom Used by Chinese to Explain Relatives' Psychiatric Etiology*. Poster presented at American Psychological Association's 2013 convention in Honolulu, HI.
- Zhang, D.** (2012, November). *Chinese Adolescence Depression and Identity Formation*. Poster presented at International Education Week at Teachers College, Columbia University, New York, NY.

Manuscripts and Publications

- Zhang, D.**, & Allen, J.J. (In Prep). *A Comparison of Nomothetic and Individualized Alpha Frequency Approaches to Measuring Frontal EEG Alpha Asymmetry*.
- Eberle, J. W., Boukhechba, M., Sun, J., **Zhang, D.**, Funk, D., Barnes, L., & Teachman, B. (2020). *Shifting Episodic Prediction With Online Cognitive Bias Modification: A Randomized Controlled Trial*.
- Ji, L. J., Baee, S., **Zhang, D.**, Meyers, J., Funk, D., Portnow, S., Barnes, L., & Teachman, B. (Submitted). *Multi-session online interpretation bias training for anxiety in a community sample*.
- Steinman, S. A., Portnow, S., Billingsley, A. L., **Zhang, D.**, & Teachman, B. A. (2019). *Threat and benign interpretation bias might not be a unidimensional construct*. *Cognition and Emotion*, 1-10.
- Chow, P.I., Portnow, S., **Zhang, D.**, Salemin, E., Wiers, R.W., & Teachman, B.A. (2018). *Comorbid Interpretation and Expectancy Bias in Social Anxiety and Alcohol Use*. *Anxiety, Stress, and Coping*
- Geng, L., Zhang, L., & **Zhang, D.** (2011). *Improving spatial abilities through mindfulness: Effects on the mental rotation task*. *Consciousness and Cognition*, 20(3), 801 - 806. doi: <http://dx.doi.org/10.1016/j.concog.2011.02.004>

Honors and Awards

GPSC Research and Project Grants University of Arizona, Graduate & Professional Student Council (GPSC)	Fall 2019
GPSC Travel Grants University of Arizona, GPSC	Summer 2019
Departmental Scholarship University of Arizona, Department of Psychology	Spring 2019
Flexibility Fund Awards Academy of Psychological Clinical Science	Dec. 2018
Graduate Student Fellowship University of Arizona, Department of Psychology	Aug. 2018 - Present

Research Experience

Graduate Assistant Aug. 2018 – Present
Psychophysiology Lab, **University of Arizona** Tucson, AZ
Supervisors: John J.B. Allen, Ph.D.

- Under training of psychophysiology research methods and data analysis techniques, including EEG signal preprocessing and alpha power asymmetry analysis.

Visiting Researcher Jun. 2019 – Sept. 2019
Penn Computational Cognitive Neuroscience Lab, **University of Pennsylvania** Philadelphia, PA
Supervisors: Anna Schapiro, Ph.D.

- Developed and extended previous neural network models for mimicking memory reconsolidation during sleep to include emotional valence representation.
- Used the developed model to simulate memory reconsolidation process of emotional materials for both “depressive” and “normal” conditions as hypothesis testing for etiology theories of depression.

Project Coordinator Jun. 2015 – Jul. 2018
Program for Anxiety, Cognition, and Treatment (PACT) Lab, **University of Virginia** Charlottesville, VA
Supervisor: Bethany Teachman, Ph.D.

- Developed and managed the MindTrails Project, an online platform for testing and delivering novel Cognitive Bias Modification (CBM) interventions for anxiety disorders, with a reach over 2,500 participants.
- Developed programs and packages in Python and R to automatize data management, data cleaning, and analyses for multiple research studies to ensure data integrity and streamlining data preparation. (See [Github](#)).
- Recruited participants, analyzed research data and facilitated grant writings for multiple grant applications which resulted in a R01 grant.
- Programmed and managed online studies with Project Implicit and Amazon Mechanical Turk to assist graduate students’ research projects.
- Recruited, trained and supervised research assistants for daily lab tasks, including participant recruitment, data management, data cleaning, and programming.
- Administrated study IRBs, dataset codebooks, experiment documentations, and lab supplies to enable smooth lab functioning.

Other collaborative projects at UVA:

- Extended the current computational model of the hippocampus, to achieve a higher level of temporal resolution in simulation with Matlab/C++, with Professor William Levy.
- Applied machine learning (ML) algorithms on MindTrails datasets for multiple research topics, including users’ dropout prediction and subgroup classification, with Professor Hongning Wang.

- Modeled participants' mood fluctuations with datasets from an ecological momentary assessment (EMA) study to predict optimized-timing for intervention, with Professor Laura Barnes' group.
- Programmed fMRI studies with PsychoPy to facilitate lab transition from Matlab to Python, with Professor James Coan.

Research Assistant

Jan. 2013 – Jun. 2014

Langone Medical Center, **New York University & Bellevue Hospital Center**

New York, NY

Supervisors: Isaac Robert Galatzer-Levy, Ph.D. & Uzma Samadani, M.D., Ph.D.

Research project for establishing model to predict PTSD in early stage.

- Assessed concussion or other trauma patients in emergency room (ER) to recruit eligible participants for research.
- Operated Eye-tracker to collect research data.
- Reviewed literature and collected trauma-related scales to facilitate experimental design.
- Administered data and case management including data entry, updating research logs, tracking new patients from patient regulation system and arranging further research appointment to assist project operation.

Research Assistant: Summer Intern

Jun. 2013 – Aug. 2013

CEDAR Clinic, **Beth Israel Deaconess Medical Center**

Boston, MA

Supervisor: Kristen Woodberry, M.S.W., Ph.D.

Research project for understanding prodromal phrase of early onset schizophrenia.

- Setup EEG, biofeedback equipments and experiment environment for study data collection.
- Assessed clients with SIPS to recruit participants for research study.
- Organized interview toolkits and salivation and blood collecting kits to support study recruitment.
- Reviewed research articles and feedbacks from reviewers to assist grant application.
- Established online surveys to collect feedback about research outcome to help design future researches.
- Applied administrative tasks including case management, case follow up and data management to support center daily running.

Research Assistant: Summer Intern

May 2013 – Aug. 2013

Department of Psychology, **Harvard University**

Cambridge, MA

Supervisors: Jill Hooley, D.Phil. & Kenneth Allen, Ph.D.

Research project for underpinning relationship between cognitive deficits and Non Suicidal Self Injury.

- Operated portable EEG, delivered assessment (WAIS, etc.) and cognitive tests (Iowa Gambling Test, etc.) to collect experimental data.
- Scored questionnaires with Excel to establish dataset, calculated first-step research outcome and helped generate preliminary conclusion for research project.
- Coded case subjective responses to PANAS questions, discussed and proposed new ideas based on collected data to extend research project with further hypothesis.
- Conducted literature review on neuroimaging researches with fMRI targeting Default Mode Network to facilitate proposal writing.
- Organized case files, entered and cleaned up data to help with data management, storage and prepare for later analysis.

Research Assistant

Oct. 2012 – May 2014

Mailman School of Public Health, **Columbia University in the City of New York**

New York, NY

Supervisor: Lawrence H. Yang, Ph.D.

Research group for investigating stereotypes towards schizophrenia consumers among Chinese immigrants.

- Translated research interviews whose battery included a wide array of tests with Chinese immigrants with psychosis and their family caregivers to prepare for further analysis.
- Coded, and trained lab members to code interview materials according to various coding schemes with Atlas.TI, to extend original stigma model to culture specific immigrant population in U.S..

- Prepared and submitted poster and symposium proposals to national conferences including APA, AAPA, and Teachers College Winter Roundtable to share research outcome. (See **Presentations** for more detail.)

Clinical Experience

Therapist Trainee

Sept. 2018 - Present

Behavioral Health Clinic, University of Arizona

Tucson, AZ

Supervisor: Samantha Reznik, M.A.; Autumn Wiley-Hill, Ph.D.

Clinical Assessment and Therapy Training Program

- Provided Evidence Based Treatments (including Cognitive Behavioral Therapy and Acceptance and Commitment Therapy) via individual therapy to alleviate clients' panic attacks and adjustment issues.

Clinical Assessment Trainee

Jan. 2019 - May 2019

Casa de Vida, La Frontera Center

Tucson, AZ

Supervisor: Kathleen Prouty, Ph.D.

A substance abuse treatment program

- Administered, scored, and interpreted neuropsychological assessments (WAIS-IV, WMS-V, etc.) and Structured Clinical Interview for inpatient substance abuse clients.

Intern

Sept. 2013 – May 2014

Hamilton Madison House

New York, NY

Supervisor: Angela Yeung, Psy. D.

Personalized Recover-Orientated Services (PROS) Program

- Designed and co-led multiple training groups to assist participants who experiencing Schizophrenia or Schizoaffective disorders to ameliorate their cognitive function and prepare them for returning to the community.
- Facilitated annual assessment for participants, and updated cases and documentation to assist daily operations.
- Shadowed core staffs and sat in multiple skills-enhancement groups to gain clinical experience as a trainee.

Teaching/Mentoring Experience

Instructor

Jan. 2020 - Jul. 2020

PSY 430: *Advanced Psychological Measurement and Statistics*

Spring 2020

PSY 450: *Drugs and the Brain*

Summer 2020

Teaching Assistant

Aug. 2018 - Present

PSY 480: *Forensic Psychology*

Fall 2020

PSY 381: *Abnormal Psychology*

Fall 2019

PSY 352 : *Personality*

Spring 2019

PSY 150A: *Structure of Mind & Behavior*

Fall 2018

Workshops

Data Management and Analysis with R - a Five Sessions Bootcamp

Summer 2017

Mentoring

Undergraduate Research Assistant

Marissa Luna, *University of Arizona*

Jan. 2020 - Present

Cecelia Guthrie, *University of Arizona*

Jan. 2020 - Present

Erin Lessie, *University of Arizona*

Jan. 2020 - Present

Valentina Andrea Correa Castillo , *University of Arizona*

Jan. 2020 - Present

Qihan Hu, <i>University of Arizona</i>	Aug. 2019 - Present
Yeuk Hei Ng, <i>University of Arizona</i>	Aug. 2019 - Present
Hualiang Qin, <i>University of Arizona</i>	Aug. 2019 - May 2020
Maryam Farooqui, B.S., <i>University of Virginia Class of 2017</i>	Aug. 2017 - May 2018
Kaitlin Wray, B.S., <i>University of Virginia Class of 2017</i>	Aug. 2017 - May 2018
Kellyn Blaisdell, B.S., <i>Princeton University Class of 2016</i>	Aug. 2017 - May 2018
Casey Michelle Baker, <i>University of Virginia Class of 2018</i>	Jun. 2017 - May 2018
Claudia Patricia Calicho-Mamani, <i>University of Virginia Class of 2018</i>	Jun. 2017 - May 2018
Imani Nichols, B.S., <i>University of Virginia Class of 2017</i>	Sep. 2016 - May 2018

Graduate Research Assistant

Anyi Zhang, M. Eng, <i>Graduate School of Engineering, University of Virginia</i>	Jan. - Jun. 2017
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Conference Attendance

<i>Society for Psychophysiological Research's 2019 convention in Washington, DC</i>	Nov. 2017
<i>Association for Behavioral and Cognitive Therapies' 2017 convention in San Diego, CA</i>	Nov. 2017
<i>Association for Behavioral and Cognitive Therapies' 2016 convention in New York, NY</i>	Oct. 2016
<i>Social & Affective Neuroscience Society Annual Meeting 2016 in New York, NY</i>	Apr. 2016
<i>Association for Behavioral and Cognitive Therapies' 2015 convention in Chicago, IL</i>	Nov. 2015
<i>Social & Affective Neuroscience Society Annual Meeting 2015 in Boston, MA</i>	Apr. 2015
<i>American Psychological Association's 2014 convention in Washington, D.C.</i>	Aug. 2014
<i>Depression Among Asian Americans Conference in Edison, NJ</i>	Apr. 2013
<i>The 30th Annual Teachers College Winter Roundtable Conference in New York, NY</i>	Feb. 2013

Professional Associations

<i>Member, Society for Psychophysiological Research</i>	Sept. 2019 – Sept. 2020
<i>Member, Association for Behavioral and Cognitive Therapies</i>	Oct. 2015 – Oct. 2018
<i>Member, The Social and Affective Neuroscience Society</i>	Apr. 2015 – Apr. 2017
<i>Member, Psi Chi National Honor Society in Psychology</i>	Mar. 2013 – May 2014
<i>Vice President, International Students' Psychology Association at Columbia University</i>	Aug. 2013 – May 2014

Professional Skills

Experienced Working Environment: Mac OS, MS Windows & Linux

Programming Languages: Python, R, Matlab, Go & \LaTeX

Online Service Package: Amazon Mechanical Turk, Qualtrics & Surveymonkey

References Available Upon Request