

Diheng Zhang, M.A.

Email: dihengzhang@email.arizona.edu

Profile: <https://diheng.github.io/>

Updated: October 15, 2021

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

Visiting Researcher *Jun. 2019 – Aug. 2019*
Penn Computational Cognitive Neuroscience Lab, **University of Pennsylvania** Philadelphia, PA
Supervisor: Anna Schapiro, Ph.D.
Research projects dedicated to develop neural network model for memory reconsolidation during sleep to simulate process of emotional memories.

Project Coordinator *Jun. 2015 – Jul. 2018*
Program for Anxiety, Cognition, and Treatment (PACT) Lab, **University of Virginia** Charlottesville, VA
Supervisor: Bethany Teachman, Ph.D.
Research projects dedicated to developing, evaluating and disseminating novel interventions for mood and anxiety disorders.

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 for a neural model for predicting early stage brain trauma.

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 the prodromal phase of early onset schizophrenia.

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.

Education

Ph.D. Student in Clinical Psychology, University of Arizona **Tucson, AZ**
School of Mind, Brain, and Behavior *Aug. 2018 - Present*

M.A. Clinical Psychology, Columbia University in the City of New York **New York, NY**
Teachers College, GPA: 3.84/4.00 *Aug. 2012 - May 2014*

B.Sc. Applied Psychology, Nanjing University **Nanjing, China**
School of Social and Behavioral Science, GPA: 3.80/4.00 *Sep. 2009 - Jul. 2012*

Manuscripts and Publications

- Zhang, D.**, Lane, R. D., & Allen, J.J. (In Prep). Computational modeling of Post-traumatic stress disorder: A Review of theoretical developments and clinical application.
- Zhang, D.**, & Allen, J.J. (Submitted). A Comparison of Nomothetic and Individualized Alpha Frequency Approaches to Measuring Frontal EEG Alpha Asymmetry.
- Ji, L. J., Bae, S., **Zhang, D.**, Meyers, J., Funk, D., Portnow, S., Barnes, L., & Teachman, B. A. (2021). Multi-session online interpretation bias training for anxiety in a community sample. *Behaviour Research and Therapy*, 103864.
- 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.
- 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*
- Zhang, D.** (2014). *Identity formation as a mediator between early separation from parents and adolescence mental health issues*. Unpublished manuscript
- 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>

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.

Honors and Awards

Departmental Scholarship University of Arizona, Department of Psychology	Spring 2021
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

Jul. 2021 - Present

EPICenter, Banner Health

Tucson, AZ

Supervisor: Cristian Garcia, Ph.D.; Gustavo Perez, Ph.D.

Severe mental health outpatient clinic for early psychosis intervention

- Provided Evidence Based Treatments (including Cognitive Behavioral Therapy and Acceptance and Commitment Therapy) via individual therapy to improve client's psychosis symptoms and life quality.
- Provided group therapy for clients to implement social skill training and CBT for psychosis to facilitate clients' recovery.

Clinical Assessment Trainee

Jan. 2019 - Present

Department of Psychology, University of Arizona

Tucson, AZ

Supervisor: John J.B. Allen, Ph.D.

Suicidal risk assessment for Psy 150 mental health screening.

- Assessed suicidal risk for freshmen who were identified as high risk at the Psy 150 mental health screening to promote campus mental health.

Therapist Trainee

Sept. 2018 - Aug. 2021

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.

Group facilitator trainee

Jan. 2020 - May 2020

Pima County Juvenile Court Center

Tucson, AZ

Supervisor: Caroline Shanholtz, M.A.; Erika Lawrence, Ph.D.

BREAK: an ACT-based Intervention Program

- Facilitate ACT-based intervention group for youths in probation to provide psycho-education and life coping skills.

Clinical Neuropsychology trainee

Sept. 2019 - Dec. 2019

Watermark Retirement Communities

Tucson, AZ

Supervisor: Johnny Vanuk, M.A.; Matthew Grilli, Ph.D.

Clinical Neuropsychology Assessment Training Program

- Administered, scored neuropsychological assessments (Trail Making Test, Rey Auditory Verbal Learning Test, etc.) and provided report and feedback for elders in a retirement community.

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
 New York, NY

Hamilton Madison House

Supervisor: Angela Yeung, Psy. D.

Personalized Recover-Orientated Services (PROS) Program

- Designed and co-lead 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

PSY 450: *Drugs and the Brain*

PSY 450: *Drugs and the Brain*

PSY 430: *Advanced Psychological Measurement and Statistics*

Jan. 2020 - Jul. 2020

Winter 2021

Summer 2020

Spring 2020

Teaching Assistant

PSY 230: *Psychological Measurement & Statistics*

PSY 450: *Drugs and the Brain*

PSY 326: *Human Memory*

PSY 480: *Forensic Psychology*

PSY 381: *Abnormal Psychology*

PSY 352 : *Personality*

PSY 150A: *Structure of Mind & Behavior*

Aug. 2018 - Present

Fall 2021

Summer 2021

Spring 2021

Fall 2020

Fall 2019

Spring 2019

Fall 2018

Workshops

Data Management and Analysis with R - a Five Sessions Bootcamp

Summer 2017

Mentoring

Undergraduate Research Assistant

Chloe Susannah Mei Cobb, *University of Arizona*

Cecelia Guthrie, *University of Arizona*

Erin Lessie, *University of Arizona*

Marissa Luna, *University of Arizona*

Valentina Andrea Correa Castillo , *University of Arizona*

Qihan Hu, *University of Arizona*

Yeuk Hei Ng, *University of Arizona*

Hualiang Qin, *University of Arizona*

Maryam Farooqui, B.S., *University of Virginia Class of 2017*

Kaitlin Wray, B.S., *University of Virginia Class of 2017*

Kellyn Blaisdell, B.S., *Princeton University Class of 2016*

Casey Michelle Baker, *University of Virginia Class of 2018*

Claudia Patricia Calicho-Mamani, *University of Virginia Class of 2018*

Imani Nichols, B.S., *University of Virginia Class of 2017*

Sept. 2021 - Present

Jan. 2020 - May 2021

Jan. 2020 - May 2021

Jan. 2020 - Sept. 202

Jan. 2020 - May 2020

Aug. 2019 - May 2020

Aug. 2019 - Dec. 2020

Aug. 2019 - May 2020

Aug. 2017 - May 2018

Aug. 2017 - May 2018

Aug. 2017 - May 2018

Jun. 2017 - May 2018

Jun. 2017 - May 2018

Sep. 2016 - May 2018

Graduate Research Assistant

Anyi Zhang, M. Eng, *Graduate School of Engineering, University of Virginia*

Jan. - Jun. 2017

Committee/Departmental Leadership

Member, Psychology Departmental Research Committee, University of Arizona

Sept. 2021 - Present

Member, Psychology Colloquium Committee, University of Arizona

Sept. 2021 - Present

Conference Attendance

Computational Psychiatry Course Zurich 2021 in Zurich, Switzerland (Online)

Oct. 2021

Society for Psychophysiological Research's 2019 convention in Washington, DC

Nov. 2019

Association for Behavioral and Cognitive Therapies' 2017 convention in San Diego, CA

Nov. 2017

Association for Behavioral and Cognitive Therapies' 2016 convention in New York, NY

Oct. 2016

Social & Affective Neuroscience Society Annual Meeting 2016 in New York, NY

Apr. 2016

Association for Behavioral and Cognitive Therapies' 2015 convention in Chicago, IL

Nov. 2015

Social & Affective Neuroscience Society Annual Meeting 2015 in Boston, MA

Apr. 2015

American Psychological Association's 2014 convention in Washington, D.C.

Aug. 2014

Depression Among Asian Americans Conference in Edison, NJ

Apr. 2013

The 30th Annual Teachers College Winter Roundtable Conference in New York, NY

Feb. 2013

Professional Associations

Member, Society for Psychophysiological Research

Sept. 2019 – Sept. 2020

Member, Association for Behavioral and Cognitive Therapies

Oct. 2015 – Oct. 2018

Member, The Social and Affective Neuroscience Society

Apr. 2015 – Apr. 2017

Member, Psi Chi National Honor Society in Psychology

Mar. 2013 – May 2014

Vice President, International Students' Psychology Association at Columbia University

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
