

# **PSYCH 199 Reacher Assistant Postings FALL 2017**

## **Coding Emotional Expressions in Dementia Patients and Caregivers**

Robert Levenson

Supervisor's name and email address: Alice Hua (ahua@berkeley.edu)

Location: On-campus: Tolman Hall

Website: <http://socrates.berkeley.edu/~ucbpl/>

### Description of Research:

Dementia, particularly frontotemporal dementia, can lead to impairments in social and emotional functioning; such changes are often misunderstood and accurate diagnosis can be difficult, particularly in the early stages of the illness. Using a wide array of dynamic stimuli, we apply a fine-grained socioemotional assessment to identify domains of loss and preservation in frontotemporal dementia and related illnesses, such as Alzheimer's disease. Measures include behavioral, autonomic, and experiential indicators, during tasks that cover a spectrum of functioning, from basic emotional reactivity, to empathy and emotion regulation, to complex social interactions. In addition, we examine relationships between these lab-based measures and biological markers. Through this multi-method, interdisciplinary work that spans psychology, neurology, and affective neuroscience, we aim to contribute to improvements in clinical diagnosis and care, as well as to basic understanding of socioemotional functioning and aging.

Caring for a loved one with dementia is a meaningful part of family life, but can also create a significant burden for caregivers. Dementia caregivers are at a heightened risk for physical and psychological problems. Thus, using the same measures mentioned above, we have begun a new project to study the role that emotion plays in understanding the relationships among patient deficits, caregiver burden, and caregiver health in caregiver spouses of patients with neurodegenerative disease. With this work, we hope to a) determine how specific patient deficits influence caregiver burden and the emotional quality of the caregiver-patient relationship; b) understand how the emotional quality of the caregiver-patient relationship links caregiver burden with caregiver health problems; and c) understand how caregivers' level of emotional functioning and genetic polymorphisms influence their vulnerability and resilience to caregiver burden and the associated health problems.

### Description of Student Responsibilities:

Research assistants (RAs) will be required to attend weekly 1-1.5 hour meetings starting mid to late Fall 2017 semester to learn how to code facial behavior using the Emotional Expressive Behavior System (EEB). RAs will be expected to complete homework assignments in addition to meetings to practice coding facial behavior. RAs will be signing up for a maximum of 10 hours of lab work per week.

All RAs will be considered on a "work trial" for their first 3-6 months. Because coding facial behavior requires high reliability between coders, coders who do not improve in their coding during the first 3-6 months will not be part of the coding team. Given that it takes several months to learn this highly detail-oriented skill, research assistants will be expected to be in the lab for at least one year (preferably two years). We are looking for highly motivated, detail-oriented, and conscientious RAs. It is also preferred that RAs understand the confidentiality requirements associated with working with patient data.

Learning how to code facial behaviors is an incredibly unique skill. RAs who join the coding team will be eligible for letters of recommendation, particularly for jobs that inquire about research skills. RAs can also continue to pick up additional responsibilities if discussed with the graduate student. While learning how to code, there are many opportunities to learn about the types of research questions that these data contribute to.

### Application process:

Please submit a resume and brief cover letter. If selected from this initial phase, you will meet with the graduate student who will be leading the facial coding training team for a brief interview, and meet with the lab manager for a brief interview. If selected to be an RA in the lab, you will meet with the lab manager for a brief orientation.

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Modeling working memory and reward-based learning**

Supervisor's name and email address: Anne Collins (annecollins@berkeley.edu)

Main Contact email address: saah.master@berkeley.edu

Location: On-campus: Tolman Hall 5308

Website: <https://www.ocf.berkeley.edu/~acollins/>

#### Description of Research:

Over the course of our lives we learn to make the choices that will maximize reward. As a young adult, you have probably figured out that eating a donut is more rewarding than eating a plain piece of bread. As such, you are more likely to choose to eat the donut. You have also learned more complex behaviors for maximizing reward, like the long-term strategies involved in earning good grades or the praise of your professors. Our question is: How do we learn those complex strategies? How do we generalize our previous knowledge to adapt quickly to new environments? Which brain systems contribute to learning from reward, and how do they interact to produce those behaviors?

The proposed research plans to investigate learning and decision making in healthy young adults. We use computerized tasks to probe how multiple systems contribute to let us learn efficiently in different situations; and how these different systems interact with each other. In this particular project, we investigate how rewarding outcomes influence how we act.

This research project is going to focus heavily on data analytics and computational modeling. Using both new and existing data sets, the students are going to work with the mentor on producing mathematical models of decision-making. Undergraduates will also spend time analyzing and processing neural data, like that obtained through EEG.

#### Description of Student Responsibilities:

First, the student will be involved in experimental design and the writing of experimental code in Matlab/Psychtoolbox, or in Javascript for online testing in Amazon Mechanical Turk. They may also be responsible for the recruitment and testing of human subjects. The undergraduate researcher will be involved in building and testing mathematical models of reinforcement learning and working memory. Additionally, the undergraduate will be involved in analyzing behavioral data.

#### Application process:

Applicants should have a strong background in a quantitative field, such as mathematics or computer science. Knowledge of neuroscience or cognitive science is not necessary, but interest in either topic is required. Students who have previously worked in or taken a class on computational modeling are encouraged to apply, though any students with a basic understanding of modeling and/or programming are welcome to. Students must be motivated, organized, and reliable.

Applicants who meet these criteria are encouraged to apply through Anne Collins's URAP project entitled "Modeling working memory and reward-based learning."

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Team Chemistry and Reputation in Major League Baseball (MLB)**

Dacher Keltner

Supervisor's name and Email Address: Hooria Jazaieri (Hooria@berkeley.edu)

Location: On-campus and remotely

Position Available: Fall 2017, Spring 2018, Summer 2018

Description of Research:

The proposed research will examine personal reputation and team chemistry within major league baseball (MLB) players and teams. The central goal is to understand the processes that underlie the formation and maintenance of personal reputation and team chemistry/team cohesion through a series of studies that implement a multi-method approach. Study designs include qualitative data collection, gathering video and narrative accounts (and subsequent qualitative data coding), watching interviews and games and coding based on set coding procedures, etc.

Description of Student Responsibilities:

Research assistants will be involved in several stages of this research including:

1. Reading empirical articles and performing literature searches and reviews to aid in study design and provide substantive background for designing studies and manuscript preparation.
2. Gathering video and narrative accounts of players and teams of interest.
3. Watching video clips and coding based on a detailed coding manual.
4. Assisting with the organization and management of data.

Application process:

Interested research assistants should email their CV, availability, and interest in baseball to hooria@berkeley.edu

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Approach Motivation and Cognitive Control**

Dr. Sheri Johnson

Supervisor's name and email address: Kiana Modavi (kmodavi@berkeley.edu)

Location: On-campus: Tolman Hall

Website: <http://calmprogram.wixsite.com/calmania>

#### Description of Research:

We are examining the transdiagnostic effects of extremes in subconstructs of two domains of functioning. The first, approach motivation, examines how much individuals value reward and how much effort they will exert to attain reward. The second is cognitive control, more specifically, response inhibition. These functions have distinct neural, cognitive, and behavioral signatures. These functions also have profound deficits in various psychopathologies. Much current work looks at one of these 2 functional dimensions at a time. We will examine these 2 dimensions simultaneously across self-report, behavioral, and fMRI measurements.

#### Description of Student Responsibilities:

Assisting senior team members with recruitment (e.g. distributing study flyers, screening participants), participant communication (phone screenings, scheduling, reminders), data collection (running participants through experimental sessions), data coding and management, and other administrative tasks (e.g., literature searches) as needed.

We are seeking students with class schedules to accommodate session scheduled throughout the week. Punctuality, professionalism, and a careful and conscientious demeanor are imperative. Because this project may involve working with participants with mental health diagnoses, strong interpersonal skills and comfort with interacting with research participants is required.

#### Application process:

Please email your resume and cover letter to [calmprogram@gmail.com](mailto:calmprogram@gmail.com), and mention which project you are interested in through our lab.

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Anger Intervention Study**

Dr. Sheri Johnson

Supervisor's name and email address: Mackenzie Zisser (mzisser@berkeley.edu)

Location: On-campus: Tolman Hall

Website: <http://calmprogram.wixsite.com/calmania>

#### Description of Research:

This study is testing an anger intervention targeting people with verbal or physical aggression difficulties and high levels of impulsivity. The purpose of this study is to teach various techniques to identify and reduce aggressive tendencies.

This intervention uses online treatment sessions, a mobile device app, and (in a smaller sample) wristband tracking devices to collect self-report data, experience sampling (daily journaling) data, and physiological data.

#### Description of Student Responsibilities:

Assisting senior team members with participant communication (recruitment, phone screenings, scheduling), data management, and data coding and analyses.

#### Application process:

Please email your resume and cover letter to [calmprogram@gmail.com](mailto:calmprogram@gmail.com), and mention which of our projects you are interested in.

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Changes in Cognition and Viewpoint**

Ozlem Ayduk

Supervisor's name and email address: Jessica Jones (jessjones12@berkeley.edu)

Location: On-campus: Tolman Hall

Description of Research:

Recent research suggests that the language people use to refer to the self during introspection influences the narratives they construct about the self, and as a consequence, how they think, feel, and behave under stress (Kross, Bruehlman-Senecal, Park, Burson, Dougherty, Moser & Ayduk, 2014). More specifically, using non first person pronouns such as you/he/she and one's own name (i.e., third-person talk) rather than first-person pronouns such as "I" or me (i.e., first person talk) during introspection enhances self-distancing, which in turn, leads people to construe upcoming stressors in less threatening terms, experience less negative affect and perform better during the stressful situation. Drawing from these findings, the current research aims to understand the intrapersonal mechanisms that underlie third-person self-talk.

Description of Student Responsibilities:

Research assistants will be primarily responsible for running participants through each of the studies. RAs will schedule participants, send reminder emails the night before, and arrive at the experiment room at least 10 minutes prior to subjects to prep the room. Once participants have arrived, RAs will obtain written consent and acquaint the participants with each study. During the study, RAs will monitor subject progression and provide instruction. After each subject session has finished, RAs will be responsible for reliably removing subject response data from the computers and saving to an alternate location. RAs will also be responsible for coding subject responses for appraisal themes.

RAs may also be asked to perform relevant literature searches if needed, which will build a foundation of knowledge for current and future projects. Although not required, RAs will be given the opportunity to assist in stimulus presentation design and prepare data for statistical analysis, and may have the opportunity to learn applied statistical methods for behavioral research.

Application process:

Please complete the following survey:

[http://ucbpsych.qualtrics.com/jfe/form/SV\\_0k5WZGP3SU1RYpL](http://ucbpsych.qualtrics.com/jfe/form/SV_0k5WZGP3SU1RYpL)

After I've received your completed response, I will review it and get back to you within 2 weeks. Thank you for your interest in our project!

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Improving Cross-group Relationships in the Digital Age**

Dr. Rodolfo Mendoza-Denton

Supervisor's name and email address: Amanda D. Perez-Ceballos (adpc@berkeley.edu)

Location: On-campus: Tolman Hall

Website: <https://rascl.berkeley.edu/people.html>

#### **Description of Research:**

The current research seeks to examine the potential role that the internet can play in facilitating cross-group contact and friendships. This project will focus on studying the underlying mechanisms of the formation of positive online cross-group friendships. For the project, closeness inductions will be implemented into interventions. The overarching goal of the project is to see whether a closeness manipulation will be effective in decreasing anxiety and in turn improving cross-group relations.

#### **Description of Student Responsibilities:**

Research assistants will be taught to use Amazon Mechanical Turk to recruit participants online for the sessions as well as the Qualtrics survey platform to distribute the experiment. The two main responsibilities are recruiting participants online and running online sessions. Research assistants will also attend lab meetings with the supervisor of the project in order to check in on how sessions are going. Research assistants will be given the opportunity to work with data and gain experience with data analysis in R and R Studio. No prior research experience is required.

#### **Application process:**

Download and fill out the following application packet and email to adpc@berkeley.edu.  
<https://berkeley.box.com/s/f7jw49n3v6iqacwma315nxgiffi79m6r>

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **The Effect of Oxytocin on Cohesion and Teambuilding**

Dacher Keltner

Supervisor's name and email address: Craig L Anderson (clanderson@berkeley.edu)

Location: On-campus

Description of Research:

The goal of this project is to investigate how the administration of the neuropeptide oxytocin affects team cooperation and cohesion in small groups of three. Under research assistant supervision, groups will participate in state-of the art computer simulations designed by cognitive scientists designed to objectively assess cooperation and team performance.

Description of Student Responsibilities:

Experience on this project will be ideal for students interested in pursuing graduate-level studies or medical school. This research will involve running college-aged participants through a series of computer tasks, properly administering oxytocin using a nasal spray device, collecting physiological data (e.g. ECG), entering data into computer databases, and cleaning data in preparation for analysis. Successful candidates may also have the opportunity to assist in data analysis and help in the preparation of scientific presentations.

Applicant Qualifications:

1. Applicants are expected to be able to dedicate at least 10 hours to the lab per week consisting of at least two 4-hour blocks, and to commit for the entire 2016/17 academic year. It is possible to gain course credit for working on this project.
2. Excellent communication and organizational skills.
3. The ability to actively contribute as a team player, manage details, track participant progress, think creatively, work independently, and meet deadlines.
4. Previous research experience is preferred, but not required.

Application Process:

Applicants should email a resume and a short statement of purpose to Dr. Craig Anderson at [clanderson@berkeley.edu](mailto:clanderson@berkeley.edu).

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Emotion Regulation and Social Interaction**

Ozlem Ayduk

Supervisor's name and email address: Craig L Anderson (clanderson@berkeley.edu)

Location: On-campus

Description of Research:

This study examines how different emotion regulation strategies impact social interactions that people have. During sessions, research assistants will obtain informed consent from participants, guide them through a survey, and then engage in a social interaction with the participants.

Description of Student Responsibilities:

No previous research experience is required for this project. High levels of organization, punctuality, and professionalism are required as research assistants will be responsible for scheduling participants, and running participants in the protocol. A minimum of 5 hours of availability each week is required for this project.

As a key feature of the study involves engaging in a social interaction with participants, research assistants must be comfortable having conversations in English with other people about experiences that elicit strong emotions.

Application process:

To begin the applications process, applicants should email Dr. Craig Anderson (clanderson@berkeley.edu) with a statement of purpose and resume with "Social interaction project" in the subject.

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Neural Mechanisms of Working Memory**

Mark D'Esposito

Supervisor's name and email address: Jason Scimeca (jason\_scimeca@berkeley.edu)

Location: On-campus: Giannini Hall

Website: <http://despolab.berkeley.edu/main/pages/history>

Description of Research:

Short-term working memory (WM) is essential for our ability to maintain information about stimuli that are no longer present in the environment. This ability is instrumental to cognitive success, and is widely associated with academic learning, reasoning, and general intelligence. There is a severe limit, however, on the quantity and quality of information that WM can store, and this limit has been considered a primary constraint on human cognition. Likewise, lower WM capacity is associated with clinical conditions like schizophrenia, ADHD, and traumatic brain injury. Although WM is essential to so many facets of cognition, there is little consensus on the psychological and neural mechanisms that support successful memory.

Previous research has shown, for instance, that the prefrontal cortex is involved in maintaining WM information during distraction, while the superior parietal cortex is sensitive to the amount of information that is maintained. We don't, however, know the precise causal contributions that these regions make to the temporary maintenance of internal information. The goals of this project are to identify 1) how brain networks configure and interact for memory maintenance using functional magnetic resonance imaging (fMRI), and 2) how particular network nodes are causally involved in those processes using noninvasive magnetic brain stimulation (TMS).

Description of Student Responsibilities:

The student will be responsible for training participants on a memory task, collecting data for computer-based behavioral experiments, assisting with fMRI and TMS data collection, and performing basic analyses and quality control assessment of the MRI data. The student will be trained in basic neuroimaging (fMRI) and brain stimulation (TMS) techniques. In addition, the student will be encouraged to learn and contribute to the development of Matlab analysis scripts to investigate participants' patterns of behavioral responses in the memory task. The student will gain experience with fMRI and TMS research, and develop an understanding of how current neuroimaging methods can be used to investigate questions about human memory. In addition, the student will be encouraged to attend weekly lab meetings, as well as bi-weekly working memory journal club meetings, where they will have the opportunity to interact with Dr. D'Esposito and other lab members. Day-to-day work in the lab will be supervised by a post-doc or graduate student involved in this project.

Application process:

Interested students should email [jason\\_scimeca@berkeley.edu](mailto:jason_scimeca@berkeley.edu) with your name, major (or intended major), and expected graduation date. We will reply to all emails with a short questionnaire to collect additional details about your availability, relevant coursework/experience, research interests, etc.

A strong interest in psychology and cognitive neuroscience is necessary. There is a preference for students that have completed (or will be simultaneously taking) psychology, biopsychology and/or cognitive neuroscience courses. Strong organizational skills and conscientiousness are essential. Basic programming skills are preferred but not required. At least three blocks of 2-3 hours a week are required to apply for this project.

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Mitigating the Double Bind in Computer Science: A Sociocultural Narrative Intervention**

Victoria Plaut

Supervisor's name and email address: Lyndsey Wallace (lwallace@berkeley.edu)

Main Contact Email: vplaut@law.berkeley.edu

Location: On-campus: Boalt Hall

Website: <https://www.law.berkeley.edu/culture-diversity-intergroup-relations-lab/>

#### Description of Research:

Dominant stories exist about who is a computer scientist and who is not; however, girls of color do not figure as protagonists of these stories despite the fact that many are involved in science. Additionally, society has historically made it difficult for girls of color to embrace multiple identities simultaneously (Purdie-Vaughns & Eibach, 2008), such as their self-concept as girls of color and as scientists. This project involves a social psychological intervention for increasing the participation of girls of color in computer science and STEM more generally. The researchers partnered with a STEM summer program for kids of color that has succeeded in increasing computer science engagement but with lower rates among female alumni of the program. The intervention implemented within the program uses personal storytelling to alter the structural realities, cultural narratives and psychological processes of girls of color in order to reduce this gender gap. The intervention combines research on value affirmation (Cohen et al., 2006), cultural narrative (Thompson, 2014) and ambient belonging (Cheryan, Plaut, Davies, & Steele, 2009). Encompassing this research, the intervention encourages girls to engage in dynamic discussion integrating science and culture, and allows them to create objects that will be used to signal belonging within STEM and computer science domains. Effects of the intervention on engagement, belonging, and performance will be examined. This project has applications for education, business (e.g., tech), and social science.

#### Description of Student Responsibilities:

Undergraduate research apprentices will facilitate the coding and transcribing of qualitative data gathered through different mediums, as well as participate in project meetings.

#### Specific qualifications students should have...

Undergraduate research apprentices are expected to have excellent skills in organization and time management, be detail-oriented, reliable, and able to work well with others. Commitment to the lab for more than one semester is desirable. Time commitment per week is approximately 9-12 hours but can be negotiated.

#### Application process:

To apply for this position please send a cover letter and CV to the CDIR lab manager Lyndsey Wallace at lwallace@berkeley.edu.

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Emotions and the Self**

Dacher Keltner

Supervisor: Yang Bai

Main Contact Email: [kxl@berkeley.edu](mailto:kxl@berkeley.edu)

Location: On campus

Website: <http://socrates.berkeley.edu/~keltner/>

#### Description of research:

Emotions are ubiquitous and consequential. Emotions are defined as the brief multi-component responses to challenges or opportunities that are important to the individual's goals, particularly social ones. In recent decades, research has begun to focus on the interrelation between emotions and the self. An emerging line of research shines light onto the significance of emotions in orienting the individual to self-relevant challenges and the opportunities in the social context, such as sources of peril, injustice, or affection, thus enabling appropriate courses of action. In our lab, we focus on specific emotions, such as awe, contentment, and envy, in untangling their unique interactions with different self-relevant processes.

#### Description of student responsibilities:

Responsibilities for research assistants will include: reviewing and writing literature reviews; editing and practicing academic writing; learning and contributing to research design; and scheduling and running experiments. We require commitments of 4-6 hours per week. Perfect addition to Resumes.

#### Application process:

If you are interested, please send along your CV and the following information:

- 1) Major and year in school
- 2) Completed coursework in Psychology/other Social Sciences (e.g., English, History, Philosophy, Sociology) and GPA
- 3) Prior research experience (not needed)
- 4) Language skills
- 5) Number of hours available per week.
- 6) Written skill. Please send ONE page writing sample to us.

Qualified applicants will be notified and will be expected to come in for a brief interview.

Application deadline: Open until filled.

## **PSYCH 199 Reacher Assistant Postings FALL 2017**

### **Lab Session Assistants**

Iris Mauss

Supervisor's name and email address: Emily WillrothMain (ecwillroth@berkeley.edu)

Location: On campus: Tolman Hall

Website: <https://eerlab.berkeley.edu/>

Description of research:

This ongoing project is focused on how people regulate their emotions in the face of stress. We are interested in the contexts in which particular strategies are helpful and harmful.

Description of student responsibilities:

Lab session assistants will be trained to collect physiological and behavioral data from undergraduate participants. Training will require attending three or four 1.5 hour sessions per week for 2 or more weeks. After training, students will run their own lab sessions, in which they will interact with female undergraduate participants, apply physiological sensors and monitor physiological data collection, answer participant questions, and debrief participants at the end of the study.

Application process:

To apply, please email Emily at ecwillroth@berkeley.edu with your availability, your interest in the lab, any relevant experience, and a CV or resume if you have one.

Application deadline: Open until filled.