Psychological Wellness and Health

Faculty: Dr. Iris Mauss
Supervisor: Helena Rose Karnilowicz
Main Contact email: hkarnilowicz@gmail.com
Location: BWW
Position Dates: January 2019-December 2019

Description of Research
This study aims to understand how people achieve psychological wellness and health. We are particular interested in four factors: emotional, social, cognitive, and biological. This assistantship would be a good fit for individuals who wish to gain experience in social/personality research methods. This experience would also help develop research skills necessary for applying graduate school.

Position Commitment: minimum of 10 hours a week

Description of Student Responsibilities:
Depending on the applicant’s interests and the lab’s needs, responsibilities may include:
- Coding behavior from videotapes
- Coding written responses
- Learning and processing psychophysiological data
- Reading relevant literature and preparing literature reviews

Application Process
To apply for the position, please email the following to hkarnilowicz@gmail.com
1. Curriculum Vitae/Resume
2. A cover letter of why you want to be part of this lab and what you hope to gain from this experience. Also indicate, in your cover letter, your regular weekly availability for the Spring semester.
Mental Health and Behavior Study (Approach Project)

**Faculty:** Sheri Johnson  
**Supervisor:** Amelia Dev, Kiana Mondavi  
**Main Contact email:** calmprogram@gmail.com  
**Location:** On Campus  
**Position Dates:** Spring 2019, Summer 2019  
**Website:** [http://calmprogram.wixsite.com/calmania](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), data collection (running participants through experimental sessions), managing quantitative data (e.g. spreadsheets, data files), and other administrative tasks (e.g., literature searches) as needed. The goal is for research assistants to learn about the process of clinical research, gain experience running experimental sessions, and learn about the relationships between cognition, emotion, and impulsivity. We are hoping to recruit team members who could stay with us through summer and/or Fall.

**Application Process**  
To apply for this position, please submit a CV and a cover letter to calmprogram@gmail.com. Your e-mail should be titled "Approach Project RA Application". In your CV, we would particularly like to hear about the transferable skills you’ll be able to use in this position and, more broadly, why you are interested in getting involved in clinical research. Of course, feel free to expand beyond those topics if you want to share other information that will aid us in considering your application.

**Application Deadline**  
Open until filled
Psych 199 Research Assistant Postings – Spring 2019

A Qualitative Study of Attitudes Towards Evidence-based Mental Health Treatment

Faculty: Allison Harvey
Supervisor: Niki Gumport
Main Contact email: ngumport@berkeley.edu
Location: Berkeley Way West
Position Dates: Spring 2019
Website: https://www.ocf.berkeley.edu/~ahsleep/

Description of Research
Research is broadly focused on improving treatments for severe mental illness delivered within community mental health settings. Research assistants will contribute primarily to two research projects. The first project focuses on adults with severe mental illness’ memory for the contents of therapy while the second project examines community therapist attitudes towards a sleep intervention and towards evidence-based mental health treatments. The opportunity to contribute to other projects related to treatment development and the implementation of evidence-based mental health treatments may be possible.

Description of Student Responsibilities
- Assist with the development of a qualitative coding manual and code qualitative data examining community therapist attitudes towards evidence-based mental health treatment
- Code qualitative data examining memory for psychotherapy in a sample of adults with severe mental illness
- Participate in weekly meetings
- Assist with literature searches
- Other tasks as needed and based on performance and interest

Application Process
Email Niki Gumport (ngumport@berkeley.edu) (1) your resume/CV, (2) transcript -- unofficial is fine, and (3) a brief statement elaborating on why you are interested in joining the Golden Bear Sleep and Mood Research Clinic as a research assistant

Application Deadline
Open until filled
Depression Treatment Study, Parent-Teen Sleep Improvement Study, and Transdiagnostic Sleep Intervention Study

Faculty: Allison Harvey  
Supervisor: Heather Hilmoe  
Main Contact email: heatherhilmo@berkeley.edu  
Location: Berkeley Way West  
Position Dates: Spring 2019, Summer 2019  
Website: https://www.ocf.berkeley.edu/~ahsleep/

Description of Research
The Golden Bear Sleep and Mood Research Clinic is currently working on three studies. While treatments for depression have improved over the years, a need exists to improve treatments for Major Depressive Disorder (MDD) because a proportion of patients do not respond to existing treatments. Of those who do, the majority relapse. Meta-analyses confirm Cognitive Therapy (CT) as a frontline treatment, with patients less likely to relapse than those on antidepressant medications alone. Despite these impressive outcomes, there is room for improvement, as only one third of all patients respond to treatment and last a year without relapse. The purpose of our Depression Treatment Study is to improve treatment in order to provide lasting benefits for people with depression. Our Parent-Teen Sleep Improvement study is focused on improving teen sleep behaviors with the help of their parents. Poor sleep is a public health concern for our adolescent population, impacting educational and recreational performance as well as relationships, health, and mood. The purpose of this study is to augment a transdiagnostic treatment for teen sleep behaviors to provide long-term benefits for adolescents. Our 'TranS-C' study is testing the efficacy of a transdiagnostic sleep intervention for adults with severe mental illness in community mental health clinics throughout Alameda County. This study investigates an intervention to improve sleep and seeks to ensure that the findings are generalizable to the real world.

Description of Student Responsibilities
Students will be assigned to various lab crews based on interest and demonstrated skills. There may be opportunities in the future to be involved in more advanced projects with direct clinical exposure. Students must be able to commit to around 10 hours of work per week for a minimum of one school year. Some weeks will be lighter than others, but having the flexibility to work 10 hours a week is required.

Application Process
If you are interested in potentially working with the lab, please email a CV or resume along with a cover letter to Heather Hilmo at heatherhilmo@berkeley.edu

Application Deadline  
Open until filled
Basics of Object Recognition and Perceptual Stability

Faculty: David Whitney  
Supervisor: William Prinzmetal  
Main Contact email: wprinz@berkeley.edu  
Location: Berkeley Way West  
Position Dates: Spring 2019  
Website: https://whitneylab.berkeley.edu

Description of Research
Our research focuses on two important topics in visual neuroscience. First, Object Recognition. How do we recognize the world around us? Recognition is a significant challenge for the visual system because natural scenes are cluttered and crowded. Our lab studies two sides of this challenge: how clutter impairs object recognition, and how the clutter itself is perceived as an ensemble. Second, Perceptual Stability. We perceive objects and scenes as having stable, continuous identities despite changes in lighting, viewpoint, discontinuities, and noise. How does our visual system achieve a stable visual input? Our recent work demonstrates the existence of a continuity field, a mechanism that promotes the perception of object stability.

Description of Student Responsibilities
Research assistants will be asked to assist in running behavioral experiments on human visual perception. In addition, they may be asked to analyze data, and prepare future experiments using software such as Matlab, Python, Daz3d, depending on the RA’s skills. Depending on the RA’s motivation, there are great opportunities to increase skills’ set. Students are expected to work 6 scheduled hours a week minimum. Additionally, research assistants are expected to attend Professor Whitney’s lab meetings, and other lab functions, if compatible with classes and other duties. All the experiments are under the general supervision of Professor David Whitney, but the RA will be working directly and closely with Professor Prinzmetal (retired Berkeley professor) and Dr. Mauro Manassi (postdoctoral fellow). Although the research assistant will be working very closely (1 on 1) with to these two researchers, he/she will hopefully be part of a larger research community.

Application Process
Fill out for that will be sent to Student Services and return it by email as instructed by Tuesday January 22. Alternatively, write for form to wprinz@berkeley.edu with "Research Assistant" in subject line and return it as instructed on form by January 22. We will have interviews January 24 and 25 at times that we can accommodate most of applicants.

Application Deadline
January 22, 2019
Description of Research
Objective 1: In this project, we are investigating relationships between sleep, cognition, and health in older adults. Older adult subjects will spend an experimental night sleeping in our lab at Berkeley. Using fMRI, EEG, and cognitive testing, we will examine the effects of sleep on cardiovascular health, learning and memory, and perception of pain. The broad goal of the project is to better understand sleep’s role in the complex age-related changes that occur in the brain. Objective 2: This study seeks to investigate the ways in which sleep (and lack thereof) impacts emotional processing, theory of mind, and decision making. Young adults will first spend an experimental night undergoing sleep deprivation at our lab or sleeping at home and then complete various behavioral tasks as well as an MRI scan the following morning. EEG and fMRI will be used to examine objective measures of changes in brain activity as a result of sleep deprivation.

Description of Student Responsibilities
Students are expected to assist with data collection as a first priority. This will include various training prerequisites. Your research mentor and other members of the lab will teach standard sleep EEG setup, techniques for physiological monitoring and behavioral methodologies. In addition, students are expected to assist with sleep EEG overnight monitoring and morning fMRI scanning. Further along in the semester, as more data is collected, there will be additional opportunities for students to assist with data entry and analysis. This will include the various questionnaires, behavioral, and physiological data collected throughout the study. Qualifications Required: excellent communication and writing skills, highly self-motivated, sensitivity and professionalism to work with specific subject populations such as older adults, excellent organizational skills, ability to work independently or in a group, ability to work evenings or weekends, interest in psychological and neuroscientific research, willing to commit at least 3 hours per week. Preferred: experience and proficiency with programming or data analysis in python, Matlab, and/or R, desire to pursue a graduate degree in psychology or neuroscience.

Application Process
In order to apply, please send an email to arossi@berkeley.edu stating your name, which of the study objectives you are most interested in, and a brief cover letter with your resume or CV attached as a PDF.

Application Deadline
Open until filled
Psych 199 Research Assistant Postings – Spring 2019

Research on Infants' and Children's Cognitive Development

Faculty: Fei Xu
Supervisor: Harmonie Strohl
Main Contact email: babylab@berkeley.edu
Location: Berkeley Way West, Off Campus (Testing)
Position Dates: Spring 2019
Website: babylab.berkeley.edu

Description of Research
The Berkeley Early Learning Lab, under the direction of Professor Fei Xu, researches statistical inference, categorization development, social cognition, information search, decision-making and language acquisition in infants and children aged 4 months to 10 years. Children participate in our studies at our Berkeley Way West lab, at preschools, and at local children’s museums. Our lab conducts studies using a variety of exciting developmental and psychological methods, including violation of expectation, behavioral measures, verbal tasks, choice paradigms, iPad games and eye tracking. Becoming a research assistant in the Berkeley Early Learning Lab offers students the opportunity to learn more about child development research and the research process, as well as gain first-hand experience interacting with participants in a highly productive research lab.

Description of Student Responsibilities
Research assistants in the Berkeley Early Learning Lab are essential to our research in that they represent our lab to parents and children and ensure that research activities run as smoothly as possible. Research assistants will attend lab meetings, and will participate in a monthly reading group on relevant research literature. After 1-2 semesters of exceptional work in our lab, passionate research assistants may be offered the opportunity to work closely with a post-doctoral researcher or graduate student on a particular research project. These opportunities may involve assisting researchers with data collection and analysis, or collaborating with researchers on designing and implementing new research projects. Typical tasks of first-semester research assistants in our lab are: - Greeting and escorting parents and child participants to our lab - Preparing and processing consent documents - Stimuli production - Maintaining stimuli/toys and lab testing spaces - Assisting with infant participant recruitment - Off-site participant recruitment - Assisting with eye tracking calibration - Assisting the experimental sessions - Behavioral and statistical coding

Application Process
Qualifications: Required: Experience working with children and parents; At least 9 hours of availability each week; Weekend availability; Proficiency in English, committing for more than a semester Not required, but desirable: Programming skills (R, Python, MatLab, etc.) Please email the lab manager at babylab@berkeley.edu with a CV and Cover Letter describing why you would be a good fit for the Berkeley Early Learning Lab.

Application Deadline
Open until filled
Habituation to Emotional Stimuli; Attachment and Emotional Regulation; Neural Functioning During Social Communication (3 Separate Projects)

Faculty: Ozlem Ayduk
Supervisor: Liza Yartsev
Main Contact email: lyartsev@berkeley.edu
Location: Berkeley Way West
Position Dates: Spring 2019

Description of Research
The first two projects are at the stage of data collection. We plan to collect the data during the spring semester. The third project is at the stage of IRB protocol submission and literature review. Later, it will involve data collection using EEG method to record the electrical activity of the brain during communication.

Description of Student Responsibilities
We are looking for a trustworthy and responsible individual, that will be able to help with the research process, depending on the stage of the research project. It will involve study preparation on qualtrics, to be available when we run our study in XLab (usually 3 to 4 sessions of an hour and a half).

Application Process
Please email me to schedule an interview at lyartsev@berkeley.edu

Application Deadline
Open until filled
Personalizing Psychotherapy for Anxiety and Depression - A Psychophysiological Perspective

Faculty: Aaron Fisher  
Supervisor: Esther Howe  
Main Contact email: esther_howe@berkeley.edu  
Location: Berkeley Way West  
Position Dates: Spring 2019  
Website: http://www.dynamicpsychlab.com/

Description of Research  
We recently finished a personalized psychotherapy study for anxiety and depression in which we collected physiological measurements (Heart Rate Variability, Impedance Cardiography, Skin Conductance) at multiple time points. We need to organize this physiological data, clean it, and conduct analyses examining relationships between physiological signals and emotions, thoughts, and behaviors. If you’re interested to learn more, you can check out some of Dr. Aaron Fisher's work on his Research Gate page: https://www.researchgate.net/profile/Aaron_Fisher

Description of Student Responsibilities  
Level I: Organize and clean the physiological data  
Level II: Conduct literature reviews  
Level III: Assist with analyses  
RAs will be brought on at Level I and may progress based on performance and interest.  
Requirements:  
- Strong interest in clinical science research and physiology in particular  
- Self-directed  
- Curious about or committed to pursuing graduate studies in psychology

Application Process  
Email your CV or resume to esther_howe@berkeley.edu with the subject line "Spring 2019 Psychophys RA". Please include a brief paragraph outlining your interest in the role as well as any relevant experience.

Application Deadline  
1/28/19
Validity of Mobile Psychophysiological Assessment

Faculty: Robert Levenson  
Supervisor: Nnamdi Pole  
Main Contact email: npole@smith.edu  
Location: Berkeley Way West  
Position Dates: Spring 2019

Description of Research
Wearable psychophysiological assessment devices such as the FitBit or AppleWatch are now widely available and very popular. Yet, little is known about how closely these devices match calibrated laboratory measures. Though wearable physiological assessment holds much promise for early detection of health problems and real-time stress monitoring, these goals will only be achieved if the devices are also accurate. This study will compare wearable assessment with standard laboratory equipment.

Description of Student Responsibilities
The primary student role will be to attach standard laboratory measures and wearable measures to the volunteer participants. This will involve completing training in sophisticated psychophysiological assessment techniques. The student will also be involved in physiological data acquisition and scoring. In the process, the student will learn how to use such measures for common psychological assessments. The student may also have a role in scheduling volunteer participants to visit the lab.

Application Process
Interested students should simply send an e-mail expressing interest to Dr. Nnamdi Pole, Visiting Scholar: npole@smith.edu. Following an in-person, on campus interview, decisions will be made. Successful applicants will be awarded with academic credit and a letter of recommendation for excellent work.

Application Deadline
Open until filled
Human Driver Eye Movement Study and Applications in Self-Driving Cars

Faculty: David Whitney  
Supervisor: Ye Xia  
Main Contact email: yexia@berkeley.edu  
Location: Berkeley Way West  
Position Dates: Spring 2019  
Website: https://github.com/pascalxia/driver_attention_prediction

Description of Research
There has been great progress in autonomous driving recently with the application of Deep Learning methods. However, how to make artificial machines able to perceive the visual scene as human drivers do remains a big challenge. This project uses eye-tracking technology to study where human drivers attend in real driving situations. The insights and data will be used to make Deep Learning models that can perceive the visual driving scene more intelligently to help achieve autonomous driving.

Description of Student Responsibilities
Learn how to use an eye-tracker Collect human drivers’ eye movements while they are watching driving videos in lab Analyze driving videos and identify interesting scenarios Manuscript proofreading

Application Process
Please send your CV and a short introduction of your motivation to yexia@berkeley. Interviews may be needed.

Application Deadline
Open until filled