# Natural Sciences

# Position #1; *Brian Ackley*

**Mentor name:** Brian Ackley, Molecular Biosciences

**Job/project title:** Genetic risk factors for tauopathies

**Project description:**

The Ackley lab is interested in understanding how mutations in genes in different individuals might alter their risk for developing neurological disorders later in life. To do this we are using a genetically tractable system, C. elegans. By expressing disease-associated variants of the human gene tau we can induce progressive synaptic loss. We can accelerate that degeneration when we introduce mutations in a C. elegans gene that is similar to a human risk factor for Alzheimer's Disease. There are more than 20 known genetic risk factors for AD, and most of those genes have orthologs in C. elegans. We are currently working to combine the C. elegans with mutations in those genes with our lines expressing the tau variants. Students will contribute to the generation of these new strains of C. elegans.

**Potential student tasks and responsibilities:** Tasks and responsibilities will include preparation of media for nematode growth and conducting genetic crosses to establish the new lines of C. elegans for our tauopathy model. C. elegans are simple to maintain and have a short generation time, and therefore, this work is well within the capabilities of a student who has never done genetic work before. Over the long term, the project may expand to learning how to do confocal microscopy and synapse analysis in the newly created strains.

**Student qualifications and characteristics:** Students should be well organized and attentive to detail. No previous experience with C. elegans is required. Curiosity about neural development and neurological disorders or a professional interest in biomedical research is preferred. The lab work is done using shared resources in the lab, and therefore students should be thoughtful and willing to maintain workspaces as they find them.

# Position #2; *James Blakemore*

**Mentor name:** James Blakemore, Chemistry

**Job/project title:** Technician in Chemistry for Clean Energy and Sustainability

**Project description:**

Our laboratory focuses on addressing challenges in development of clean energy sources. We use the tools of contemporary inorganic chemistry and surface science to carry out our projects. Broadly speaking, a student that joins our group will prepare inorganic compounds and materials that are pure--purity is important because we must understand what happens to our compounds during experiments. Tools to accomplish this work include a solvent purification system, sublimators, and chromatography.

**Potential student tasks and responsibilities:** Potential student tasks include drying common solvents, preparing and purifying organic and inorganic compounds, preparing custom glassware for experimentation, and use of inert-atmosphere gloveboxes. Prior to beginning work, the student will undergo a thorough safety training and introduction to the work in our laboratory.

**Student qualifications and characteristics:** A student will be qualified for this position if they are interested in experimental chemistry research and working in a chemical laboratory. Our group values safety in the laboratory and therefore the student should be prepared to understand and follow all safety regulations--these include university, chemistry department, Blakemore laboratory, and project-specific procedures. In order to carry out the research tasks, the student should be ready to learn about new apparatus on a weekly-to-monthly basis and be detail oriented. Much of our equipment is custom-built and rather specialized, so care is needed when carrying out specific tasks. Presentations at our weekly group meetings are generally a requirement of every member of our group, although this may be optional depending on schedule and student preference.

# Position #3; *Amy Burgin*

**Mentor name:** Amy Burgin, Kansas Biological Survey, Environmental Studies and Ecology and Evolutionary Biology

**Job/project title:** Environmental Science Field and Lab Technician

**Project description:**

The Burgin Lab focuses on understanding current environmental issues affecting aquatic ecosystems, including nutrient pollution and associated algal blooms (water quality), carbon storage and global warming in wetlands and how microbes drive ecosystem processes. Students working in the lab gain exposure to a wide variety of projects, while focusing their skills on a particular area of interest. More information can be found at: https://burginlab.wordpress.com/

Project Overview: We seek assistance from a student in developing a project to measure greenhouse gases and water quality in soils and wetlands. We rely on field sample collection and lab analysis, but also emphasize technologically advanced monitoring options, including sensors (to measure temperature or water quality) and unmanned aerial vehicles (drones) to collect water. We use these methods to understand how water and soil chemistry vary in space and time.

**Potential student tasks and responsibilities:** Tasks and Responsibilities: The student will partly work at the KU Field Station collecting water samples from Cross Reservoir for chemical analysis. The student will also assist with analyzing soils from restored wetlands (in KS and OH). Students will also assist with deploying and managing environmental sensors for recording water quality. The student will assist in developing protocols and training materials for analyses.

**Student qualifications and characteristics:** Qualifications and Characteristics: Curiosity in the environment and interest in learning cutting-edge analytical skills. Ability to communicate clearly and follow instructions; attention to detail, particularly for keeping lab and field notes. Interest in spending time outdoors and collecting water and soil samples. Students interested in combining scientific training with video and website production are particularly encouraged to apply. While not required for working in the lab, please highlight any skills you have pertaining to lifeguarding, boating or outdoor recreation. Please also note any skills related to technology, including video or

audio production, website development or computer programming. Must be available for at least a 3 hour block within the 8-5 window.

**Additional comments:** Dr. Burgin is a first-generation college graduate who entered environmental science from an undergraduate research experience.

# Position #4; *Josephine Chandler*

**Mentor name:** Josephine Chandler, Molecular Biosciences

**Job/project title:** Laboratory Research Assistant

**Project description:**

The Chandler lab seeks to understand how complex behaviors like communication and cooperation evolve in bacteria. Such behaviors are considered social and studying these behaviors is part of an emerging field called 'sociomicrobiology.' Many bacteria communicate with dedicated chemical or peptide signaling molecules. These communications systems are widespread and found not only in bacteria but in animals, plants and even insects. Our lab is particularly interested in a type of communication called quorum sensing. These systems enable cell density-dependent changes in behavior (hence the term 'quorum sensing'). We study quorum sensing and how it benefits bacteria in different environments such as soil, interspecies competition, and infections. We also study how quorum sensing systems evolve in these environments.

The position is for a student to assist with general lab duties and research-related activities in the Chandler laboratory. This position will begin broadly so that the student can learn basic skills applicable to all projects from routine lab maintenance (e.g. washing dishes) to microbiological and molecular biological skills (e.g. growing bacteria, working with DNA). It is expected that, over time, the student will master these basic skills and be able to take on more responsibility and independence. It is also expected that the student will engage in the research going on in the lab and eventually transition to a more research-focused role in the lab that will be determined based on interests of the student and project availability.

**Potential student tasks and responsibilities:** The position would help support general lab activities by assisting with routine lab maintenance, such as washing dishes (automated dishwasher is available), making buffers, media and other lab reagents, autoclaving and disposing of lab waste, and general lab cleanup. As the position transitions to a more research-focused position, it would also involve learning and applying basic microbiological methods (growing bacterial cultures using aseptic technique), molecular methods (isolating and manipulating DNA), and other techniques specific to the particular research project.

**Student qualifications and characteristics:** We seek students that are interested and engaged in learning and the scientific process

1. is interested in molecular biology/microbiology

2. is available for ~2 hrs blocks several times a week (can be flexible), and available to stop by at other times briefly too.

3. will be committed and reliable with the agreed-upon schedule, and communicate changes as needed

4. is careful and detail oriented

5. is engaged and excited to learn, and comfortable asking for help

6. Is a good communicator and team player

# Position #5; *Dan Dixon*

**Mentor name:** Dan Dixon, Molecular Biosciences

**Job/project title:** Laboratory Research Assistant

**Project description:**

The Dixon Laboratory (https://molecularbiosciences.ku.edu/dan-dixon) investigates gene regulation in cancer. Commonly observed in tumors is overexpression of many oncogenic and inflammation-associated genes, that allow the tumor cell to proliferate, promote angiogenesis, escape apoptosis, and metastasize.. Our work focuses on understanding why these genes are overexpressed and finding new approaches to target their expression. The Dixon Lab incorporated aspects of Molecular, Cell, and Tumor Biology to gain a better understanding of this important process in Cancer Biology. The position is for a student to assist with general lab duties and activities in the Dixon Laboratory. Students will develop essential skills that will allow them to perform independent research and learn the fundamentals of Cancer Biology.

**Potential student tasks and responsibilities:** The position would help support general lab activities involving:

1. Laboratory maintenance and reagent preparation.

2. Animal genotyping by PCR.

3. Mammalian cell culture.

4. Assisting with experimental assays.

Students work closely with lab personnel, keep good records and participate in lab group meetings.

**Student qualifications and characteristics:** 1. Great work ethic and communication skills; ability to work in a team/group setting.

2. Desire to learn research techniques and activities.

3. Interest in cancer research and/or molecular biology.

# Position #6; *Hume Feldman*

**Mentor name:** Hume Feldman, Physics & Astronomy

**Job/project title:** Research Assistant

**Project description:**

Study the distribution, dynamics and morphologies of galaxies in cosmological simulations

**Potential student tasks and responsibilities:** The job entails programing (mainly in python). The student will learn how to find cosmological simulations of the universe online, download the data and use the results of the simulations to study the large-scale-structure of the universe. Students will learn how to use the python programming language to create mock surveys from the simulations and develop statistical and analyses skills to study cosmological models and compare them to real data from astronomical surveys.

**Student qualifications and characteristics:** Students should be self motivated and willing to work hard to learn programming as well as new concepts in astrophysics and cosmology. There is no need to have advanced computing skills, some background in computing or at least a willingness to learn how to program is necessary.

# Position #7; *Jennifer Gleason*

**Mentor name:** Jennifer Gleason, Ecology and Evolutionary Biology

**Job/project title:** Reproductive Biology of an Invasive Species

**Project description:**

Zaprionus indianus, a fruit fly native to India and Africa, has invaded the United States, first arriving in Kansas in 2012. The species is a pest of figs, causing economic losses. Very little is known about its reproductive biology, but our preliminary data indicate that the species has unusual courtship behaviors and egg laying patterns, at least in comparison to its closely related Drosophila species. In this project, we will investigate the courtship behaviors that affect male and female reproductive success. The results will have implications for both the evolution of the species and control of the pest.

**Potential student tasks and responsibilities:** To investigate the behavioral biology and the reproductive output of the flies, the student will maintain cultures of the flies, sort flies for experiments, and perform experiments. All experiments will involve manipulation of the flies or environmental variables. The student will be completely trained in the lab by lab personnel that have extensive experience raising the flies, thus no prior experience is needed. As the student becomes familiar with the flies and how they behave, there will be opportunities for the student to develop new hypotheses and then design and execute the experiments to test the hypotheses. In addition to specific experiments, the student will be expected to contribute to basic lab maintenance (such as making fly food) as all lab members are required to do.

**Student qualifications and characteristics:** The ideal student for this project is excited to learn about evolutionary biology and animal behavior. The student will need to have a set schedule each week, though the exact schedule is flexible. The student must be available during regular working hours for at least three two-hour blocks a week, but fewer, longer blocks are good as well. The student must have attention to detail, be organized and be willing to ask questions. The student will need to do some problem solving and troubleshooting because the experiments to be done have never done before. The experiments are not technically difficult, but may require some thought, as well as trial and error, to be executed properly. The student will need to be persistent and not easily discouraged. The student will need to communicate when roadblocks are encountered with all members of the lab so that the group can help troubleshoot experimental issues.

This project does not require any field specific knowledge or experience. All that is needed is a willingness to try, the ability to communicate with others, and the ability to plan weeks in advance.

# Position #8; *Richard Glor*

**Mentor name:** Richard Glor, Ecology and Evolutionary Biology/Biodiversity Institute

**Job/project title:** Research Assistant

**Project description:**

The University of Kansas is an internationally recognized leader in research on reptiles and amphibians. The KU Herpetology Division is home to the 4th largest collection of reptile and amphibian specimens in the United States and a diverse group of more than a dozen active researchers. KU Herpetology conducts research on global reptile and amphibian diversity through a combination of field work and specimen-based research on the KU campus. Numerous distinct projects related to systematics, evolution, biogeography, genetics, morphology, conservation, ecology, or behavior of reptiles and amphibians will be available to undergraduate researchers. The work required for these projects could range from cataloging biodiversity specimens to acquisition and analysis of genomic sequence data. The student and their potential mentor will work together to choose a project that is most appropriate given the students interests and prior experience.

**Potential student tasks and responsibilities:** Entry level students will generally be expected to assist with inventory, cataloguing and maintenance of biodiversity specimens and associated databases. Students who are successfully trained in these areas will move on to receive training in advanced morphological methods, molecular genetics and related areas.

**Student qualifications and characteristics:** Students must be available for at least two significant (3+ hour) blocks of time during business hours each week. This position will involve work in a laboratory environment, and therefore requires attention to detail and the ability to learn and follow laboratory safety protocols. Students should also have a strong interest in biology or biodiversity science with an interest in potentially pursuing a career in these fields.

# Position #9; *Victor Gonzalez*

**Mentor name:** Victor Gonzalez, Undergraduate Biology Program

**Job/project title:** Biology and diversity of native pollinators

**Project description:**

Insects are the most common group of animals on the planet and some are beneficial to our health and economy. For example, we have about 4000 species of native bees in North America (four times the number of bird species!), and they not only make honey, but also increase the yield of our crops via pollination. Despite the importance of bees, the biology of most of them is unknown and many species are rapidly disappearing due to pesticides and other environmental factors. Thus, this project investigates several aspects of the anatomy, behavior, and biology of our native bees.

**Potential student tasks and responsibilities:** You will have the opportunity to:

- Learn how to recognize native bees
- Learn how to record, organize, and analyze scientific data
- Learn how to use statistical software
- Learn how to use online research platforms
- Learn how to use state-of-the-art imaging systems and digital editing software
- Develop communication skills throughout professional writing and illustration

**Student qualifications and characteristics:** Interest in learning as well as in developing curiosity and creativity

# Position #*10; Lynn Hancock*

**Mentor name:** Lynn Hancock, Molecular Biosciences

**Job/project title:** Laboratory Research Assistant

**Project description:**

The Hancock Laboratory studies the opportunistic pathogen Enterococcus faecalis. Nearly all land animals, including humans, harbor enterococci in their digestive tract. In healthcare settings, particularly intensive care units, enterococci are able to transition to a pathogenic state when introduced into extraintestinal sites, They are leading causes of catheter-associated urinary tract infections, bloodstream infections, and surgical site infections. The growing emergence of antibiotic-resistance exacerbates the challenge of treating patients with an enterococcal infection. The laboratory investigates how enterococci establish infection and we study cell-cell communication in the context of biofilm formation. We are also interested in identifying bacterial factors that assist in nutrient acquisition during infection.

**Potential student tasks and responsibilities:** We are looking for a student with an interest in Microbiology, Molecular Biology or Biochemistry. As the scholar joins our research team they will initially assist with general lab duties and maintenance, including preparing growth media for growing bacteria in the laboratory, making chemicals used by laboratory scientists and assisting with a variety of ongoing projects in the lab. Lab maintenance involves washing glassware (loading and unloading dishwasher), restocking disposable consumables, handling lab waste disposal by autoclaving and assisting senior laboratory personnel in day to day operations. As the scholar develops proficiency in performing routine laboratory duties, they will transition to an independent research project.

**Student qualifications and characteristics:** 1) Desire to learn about the scientific enterprise; 2) Highly dependable and willingness to commit to a consistent work schedule (ideally we are looking for a student that can commit to a minimum of 2 hour blocks on work days); 3) Ability to receive and follow instructions from senior laboratory members; 4) Be a contributing member of an interactive team of laboratory scientists.

# Position #*11*; *Ted Harris*

**Mentor name:** Ted Harris, Kansas Biological Survey

**Job/project title:** Lake and Reservoir Research Technician

**Project description:**

The Harris lab is seeking a student to assist with bathymetric surveys and the aggregation of historical Harmful Algal Bloom (HAB) data from reservoirs in Kansas. Bathymetry – the mapping of lake bottom contours - determines reservoir water storage capacity, how much water capacity has been lost due to accumulated sediment since reservoir impoundment, and how quickly a reservoir is infilling with sediment. Thus, bathymetric maps allow researchers to determine the quantity of water a reservoir could hold during droughts and floods.

Harmful Algal Blooms (HABs) degrade the water quality of reservoirs in Kansas. HABs pose a serious threat to human and animal health due to the production of potent toxins. Additionally, HABs produce taste-and-odor compounds that are difficult to remove in drinking water treatment, and ultimately increase drinking water costs. Collected bathymetric and HAB data and will ultimately be used to help determine water supply storage and mitigation strategies for harmful “blue-green” algal blooms in Kansas.

**Potential student tasks and responsibilities:** The student will learn how to (1) calibrate and operate bathymetric hydro-acoustic equipment, (2) analyze bathymetric data using Biosonics software, and (3) aggregate historical Harmful Algal Bloom and associated water quality data from multiple state and federal agencies. The student may also learn how to aggregate harmful algal bloom data into the Global Microcystin Aggregation project through the Global Lakes Ecological Observatory Network (see http://gleon.org/research/projects/global-microcystin-aggregation-gma). Skills learned within the position are applicable to skills needed for academic, government, or private consulting employment opportunities.

**Student qualifications and characteristics:** An interest in learning applied environmental research skills, the basics of the computer language R, and being outdoors. Applicants are required to have the following skills: clear communication, superb time-management and work ethic, and the ability to follow instructions. Although not required, please note any lifeguarding, boating, or computer programming skills.

# Position #*12; Scott Hefty*

**Mentor name:** Scott Hefty, Molecular Biosciences

**Job/project title:** Laboratory Research Assistant

**Project description:**

The Hefty Laboratory (http://hefty.faculty.ku.edu/) investigates the obligate intracellular bacteria, Chlamydia trachomatis. Infections by these bacteria inflict an immense impact on public health as the most common cause of preventable blindness worldwide and sexually transmitted bacterial infections. Despite this immense public health impact, there is much about the basic biology and pathogenesis that is poorly understood. The Hefty Lab incorporates aspects of Microbiology, Biochemistry, and Cell Biology to gain a better understanding of this unique and critical bacteria.

The position is for a student to assist with general lab duties and activities in the Hefty laboratory. In learning and assisting in these activities, it is expected the student will develop essential skill sets that will enable their future desire to perform independent research. Additionally, it is expected that they will also learn about the scientific projects that are ongoing in the Hefty laboratory so that the student transitions into performing research on a project of interest.

**Potential student tasks and responsibilities:** The position would help support general lab activities

1) Glassware – Clean appropriately (automated dishwasher for most items) and place back on shelves.

2) Buffers – Replenish when necessary.

3) Waste – Autoclave biohazard, place in black garbage bags, take to outside dumpster.

4) Reagent area – Clean as needed (wipe off balances, replace bench paper, etc).

5) Pipette tips – Refill boxes, autoclave, and stack on shelves.

6) Packing material removal - Breakdown cardboard boxes and take to recycling and remove insulation boxes (Biostore will take most).

7) General autoclaving – autoclave glassware and/or reagents as needed (usually placed in tubs on the cart near the front lab door).

8) Bacterial media/plates – as needed, make LB broth and agar plates.

9) Electrophoresis gels – as needed, make agarose and acrylamide gels.

**Student qualifications and characteristics:** 1) Great work ethic, 2) desire to learn research techniques and activities, 3) interest in molecular biology and/or microbiology, and 4) considerate and constructive interactions within a team/group setting.

# Position #*13*; *Lena Hileman*

**Mentor name:** Lena Hileman, Ecology and Evolutionary Biology

**Job/project title:** Genetic studies of flower diversity

**Project description:**

Flowers that are adapted to specific types of pollinators (bees, birds, moths, wind) exhibit pollinator specific floral traits. For example, flowers adapted to hummingbird pollination tend to have long, tubular, red/orange flowers producing a large nectar reward, whereas flowers adapted to bee pollination often have short, tubular, blue/purple flowers producing a small nectar reward.

In the Hileman lab, we are studying closely related pairs of species where one species in the pair is adapted to bee pollination while the other species in the pair is adapted to hummingbird pollination. We are using genetic studies in these species pairs to understand how adaptation to hummingbird pollination evolves. For example, what types of genetic changes are important for flowers to adapt to hummingbirds as a pollinator? Do many genes have to change in function? Do some single genes that change function have a corresponding effect on multiple floral traits? As we gain insight into the answers to these questions, we will have a deeper understanding of how and why some evolutionary changes in nature happen so frequently and apparently so easily - for example, evolutionary transitions from bee to hummingbird pollinated flowers.

The open position is for an undergraduate to work on a large, ongoing project with a postdoctoral researcher and graduate student in the Hileman lab. The project is focused on a very large number (100s) of plants that are the offspring of crosses between bee adapted and hummingbird adapted parental species. The undergraduate will contribute to both general plant care and to characterizing specific floral traits found in this hybrid population. This characterization includes taking careful measurements of specific floral organs, and harvesting tissues for later genetic and developmental analyses. The student will work closely with the postdoctoral researcher and graduate student on these task, but will be able to gain independence. This independence will be in the tasks described above, as well as in opportunities for more independent research on flower development and plant genetics depending on the student's level of interest and motivation.

**Potential student tasks and responsibilities:** General plant care will include transplanting, watering, fertilizing, pruning, monitoring for insect herbivores, and herbivore remediation as necessary.

Characterization of floral traits across 100s of plants derived from a cross between bee adapted and hummingbird adapted species. This will include harvesting flowers on the day they open, dissecting flowers to photograph (with calibration) specific floral organs, measuring nectar volume, and placing

correct tissues into correct solutions or freezing for later genetic and cellular analyses. We have a very specific protocol to follow for data collection.

Depending on student interest and level of commitment, characterization of floral traits may also include using morphometric software to collect measurement data from photo-documented flower traits, mounting floral tissue onto microscopy slides, and using a different set of morphometric software, coupled with microscopy, collect measurement data on individual cell size across floral tissues.

**Student qualifications and characteristics:** The ideal student for this position:

1. is interested in plant genetics and/or flower diversification

2. is available multiple (2-3) mornings each week (1-2 hours between 9am-noon) for plant care and floral measurements/documentation; additional microscopy and/or computer-based data collection can be done other times during the day.

3. will be committed and reliable with the agreed-upon schedule

4. is careful and detail oriented

5. is eager to learn, comfortable asking for help/clarification, and generally enthusiastic about asking technical and/or scientific questions whenever clarification or curiosity requires

# Position #*14; Julien Kimmig*

**Mentor name:** Julien Kimmig, Biodiversity Institute

**Job/project title:** Examination of the Diversity and Function of Early Animal Fossils

**Project description:**

Cambrian (~520 – 500 million years old) arthropods represent some of the earliest representatives of modern animals and comprise an extraordinary range of types and forms. In fact, several early arthropod groups hit the acme of their diversity in the Cambrian, relatively soon after they evolved. This project will focus on bivalved arthropod fossils from the Cambrian of Utah; these are enigmatic organisms that seem to represent early branching forms in arthropod evolution. Thus, enhancing understanding of these may provide key insights into the early evolution of the most diverse group of marine organisms alive today. Actual fossil specimens will be examined, and these are housed in the Division of Invertebrate Paleontology in the University of Kansas Biodiversity Institute (KUMIP), which happens to possess one of the largest collections of these fossils in the world.

In some cases, the two valves (which in overall shape somewhat resemble clam shells, although their structure and function was very different from these) are found associated with and surrounding the soft tissues of arthropods, such that their functions can be better interpreted. However, in many cases distinct valves are preserved without the arthropod that bore them. This complicates interpretation of function. It has been suggested that in some species these valves could be closed, and also allowed for swimming. Similar behaviors are seen in some modern crustacean groups. As of yet, however, this has not been tested in any detail.

The work proposed here aims to remedy that and expand our understanding of the life habits and behavior of these enigmatic bivalved organisms that lived during a key time period in the history of animal life. A student will be employed to measure the geometries of the Cambrian fossil valves, and thereby perform analyses to compare these with modern valves. Then in turn the student can ascertain in which species valves remained open in life position and also in which species could they

be fully closed. Further, they can determine whether the valves could have functioned as antipredator

devices, and also the extent to which they show geometries compatible with what we see

in modern bivalved crustaceans that swim.

Valves will be photographed and then a series of statistical analyses can be employed on the resulting valve outlines. Valves of modern crustacea will also be photographed for the purposes of statistical analysis and comparison. This work could result in a publication. The student will also assign longitude, latitude and error radius to the collection localities from where the bivalve fossils come from, in order to potentially identify patterns in their geographic distribution.

The results of this project will extend knowledge of the distribution and lifestyle of these distinctive Cambrian bivalved arthropods. Further, depending on the student interest, there is the possibility to extend the research such that specimens from other institutions beyond the KUMIP will be considered. Depending on progress and results, the student might be able to give a presentation at the KU Undergraduate Research Symposium and possibly the Geological Society of America Annual Meeting.

**Potential student tasks and responsibilities:** • Taking high quality photographs of specimens that can be used for statistical analysis and

publication

- Use various photo editing tools such as Adobe Photoshop and Illustrator
- Georeferencing fossil locations
- Possible taxonomic identification of Cambrian arthropod fossils
- Data entry
- Library research

**Student qualifications and characteristics:** • Interest in Paleontology, Biology, or Geology

- Keen eye for details
- Self-motivated
- Interest in working in museum collections

# Position #*39*; *Sarah LeGresley Rush*

**Mentor name:** Sarah LeGresley Rush, Physics and Astronomy

**Job/project title:** Redesigning physics courses: how do we improve student learning?

**Project description:**

Recently there has been a push to redesign courses and the focus has primarily been on the delivery of the curriculum (course content). Students are increasingly being required to take a more active role in their learning. For example, in our introductory physics courses, instead of sitting and watching (or in many cases not watching) a lecture during class, students are required to read or watch videos before class. This allows the class time to be focused on solving problems (typically in a group environment) which is where students tend to struggle the most. Having already redesigned the delivery in many of our introductory courses, this project will focus on how redesigning the curriculum (specifically the reordering of the topics covered in courses) will impact student learning.

**Potential student tasks and responsibilities:**

a. reading relevant articles related to the research (some articles will be provided and additional articles of interest can be chosen by the scholar)

b. after reading the articles, try and determine what changes have been applied to the ordering of the physics topics

c. determine if the changes have improved the grades, and/or attitudes and if so how was that measured (pre and post tests, student surveys, grades in courses, etc.)

d. look at and analyze the data that we are collecting and work to find ways to present the data (presentation style might be similar to that found in the research articles)

**Student qualifications and characteristics:** Most important qualifications and characteristics are a willingness to work and a desire to learn! You don't necessarily need to be good in physics or interested in education. That would likely make the job more interesting and fun but is not required and training of the skills required will be provided. There will be a mandatory 1 hour meeting each week.

**Additional comments:** Here's your chance to get paid to think about how people learn and what approaches work best.

# Position #*15*; *Erik Lundquist*

**Mentor name:** Erik Lundquist, Molecular Biosciences

**Job/project title:** Molecular Genetics Laboratory Work

**Project description:**

The goal is to teach the student the techniques and responsibilities involved in maintaining an active research lab in molecular genetics.

**Potential student tasks and responsibilities:** Learning to make solutions of various molar concentrations and pH.

Learning to make nematode growth medium plates for C. elegans genetics.

Learning sterile technique.

General lab tasks such as autoclaving, glassware cleaning and sterilization, and lab organization.

**Student qualifications and characteristics:** Dependability and reliability are a must.

Ability to work on and follow schedule.

Promptness and attentiveness to detail.

# Position #*16; Joanna Slusky*

**Mentor name:** Joanna Slusky, Molecular Biosciences

**Job/project title:** help with scientific research to combat superbugs

**Project description:**

Bacterial resistance is an increasingly dire global health challenge. Efflux pump inhibition would stop bacteria from being able to shuttle out existing antibiotics, thereby preventing a return of the pre-antibiotic era. Our lab designs outer membrane proteins to disable efflux pumps and potentiate antibiotics. Students are needed to assist with our research enterprise.

**Potential student tasks and responsibilities:** Students will start with reagent preparation, molecular cloning, and assisting with keeping the laboratory clean and well stocked. The student will learn to use sterile technique. As the student develops mastery of tasks they are given they will be given more independence with the ultimate goal of having the student conduct original scientific experimentation.

**Student qualifications and characteristics:** A strong interest in biochemical scientific research is essential.

Curiosity, detail-oriented task management, and willingness to work with others are also important.

Student must be available to complete their work during normal business hours.

# Position #17; *Lisa Timmons*

**Mentor name:** Lisa Timmons, Molecular Biosciences

**Job/project title:** Genetic and molecular analysis of RNA silencing mechanisms

**Project description:**

How genes are expressed and how DNA and chromosomes are protected from environmental assault are ongoing research interests of the lab. The laboratory utilizes the genetically tractable organism Caenorhabditis elegans as a vehicle of discovery to identify and analyze cellular components that are involved in RNA-directed gene silencing mechanisms. Students may assist in a number of ongoing projects, some examples include: genetic analysis of RNAi mechanisms, protein over-expression and biochemical assay development, or cell biological analysis of protein localization and function, for example.

**Potential student tasks and responsibilities:** The level of responsibility and involvement will depend on the interests/goals of the student, from roles as a research assistant all the way up to performing experiments independently and testing hypotheses as part of a research project that could lead to Honors in Biology. Short, introductory training sessions will focus on media preparation, sterile technique, and preparation of laboratory supplies and reagents. Students should progress and master tasks and scientific techniques of increasing complexity, such as PCR, plasmid cloning and molecular biology techniques, DNA sequence analysis and related techniques associated with DNA and RNA analysis, genetics and genotyping, microscopy, protein expression and analysis, transgenesis, and/or immunofluorescence techniques.

**Student qualifications and characteristics:** Previous experience is not required as students will receive extensive on-the-job training. We can accommodate students who lack advanced courses in biology and may not be able to comprehend our research goals at the outset. A successful student will be responsible, careful, dependable, communicative, will learn quickly, and will get along well with the rest of the group. The work schedule can be flexible; however, at the outset, the student will not be allowed to work alone; work hours must coincide with those of other lab members.

**Additional comments:** We have mentored freshmen and work study students, including non-biologists, and can mentor students with programming expertise.

# Position #18; *George Tsoflias*

**Mentor name:** George Tsoflias, Geology

**Job/project title:** Kansas Earthquakes

**Project description:**

When we think of earthquakes we think of California. However, in the last five years we have seen a large increase in the number of earthquakes occurring in Kansas and Oklahoma. We believe that injection of wastewater in deep wells underground can cause earthquakes. In this project we use a network of seismic sensors installed at Wellington (south central Kansas) to detect earthquakes, pinpoint their location and measure their magnitude.

Understanding better how those earthquakes occur can help us manage the potential for damages caused to property and danger to Kansans.

**Potential student tasks and responsibilities:** No prior knowledge in earthquake research is needed. The student will work in a team with undergraduate and graduate students (2 or 3) and will learn the methods we use to analyze data for detection of earthquakes. The data is in digital form and it is handled by computer. Typical tasks involve downloading data from the network, reformatting data and reading it into the software for analysis, visual observation of the data, identification of earthquakes, analysis of earthquakes for determination of location and magnitude. In addition, we conduct monthly visits to the network at Wellington KS for routine maintenance. The student applicant will be involved in all aspects of the research as the other team members. Students spend most of their time at Slawson Hall, in the new Earth Energy and Environment center.

**Student qualifications and characteristics:** Interest in physical sciences and curiosity on how natural processes work and affect our lives. Detail oriented and organized. Ability to work well with others. This is a team project and our work depends on the work of others. Reliable, responsible and able to complete tasks within the timeframe agreed. Work hours are flexible, but overlap with other students is essential for communication and training.

# Position #*19*; *Robert Ward*

**Mentor name:** Robert Ward, Molecular Biosciences

**Job/project title:** Research Assistant

**Project description:**

In most animals, organs and tissues grow at different rates relative to each other (think for example of how the size of the head compared to the body changes in a human from infancy to adulthood), which suggest that there must be tissue-specific mechanisms to control their differential growth. Surprisingly, we know little about these mechanisms. One way to understand these mechanisms is through the characterization of mutations that specifically alter growth in a single organ in a genetically tractable model system. We have been studying these mechanisms using the larval trachea of Drosophila melanogaster. The larval trachea is an excellent model system for studying tissue-specific growth. Not only is the larval trachea a well-studied tubular organ that expands in size and complexity in response to the increasing oxygen demands of a developing animal, it also can be easily visualized and measured in living animals. In a genetic screen we identified mutations in eight genes that show altered growth specifically in the larval trachea. The detailed characterization of these mutations provides a unique opportunity to uncover the genetic mechanisms of larval tracheal-specific growth regulation, and are likely to shed light on similar growth pathways in other organs and tissues in a wide range of organisms. The main focus of this project is to identify the genes that are affected by these mutations and characterize their role in growth regulation. This will be accomplished by a combination of genetic and cell biological analyses including antibody staining and microscopy.

**Potential student tasks and responsibilities:** The student will be trained in fly husbandry, immunohistochemistry and microscopy. The student will maintain a collection of fly stocks, complete complementation analyses with mutations in candidate genes, conduct RNA interference experiments to test candidate genes, isolate and sequence genomic DNA from mutant flies, and perform antibody stains to examine the expression and localization of critical proteins in wild type and mutant tissues.

**Student qualifications and characteristics:** The student does not need any experience with genetics or fruit flies, as we will provide all the training necessary. The genetic analysis requires morning hours (sometime between 9-11) two to three days a week. The ideal student will have good record keeping and organization skills, and a good eye for detail.

# Position #*20; Malgorzata (Maggie) Witek*

**Mentor name:** Malgorzata (Maggie) Witek, Chemistry

**Job/project title:** Biological Cells Immuno-phenotyping and Analysis in Cancer Diagnostics.

**Project description:**

Our laboratory is evaluating the process of rare biological cell isolation using microfluidic devices and the identification of cancer cells via immunostaining. The work aims at the development of assays for detecting cancer cells in blood for disease diagnostics. The work will involve the characterization of the process of transferring released cells from a microfluidic chip to a glass slide, utilizing different architecture transfer devices.

**Potential student tasks and responsibilities:** The candidate will learn how to (i) grow mammalian cell cultures in the lab, (ii) isolate cancer cells in microfluidics, (iii) stain and (iv) count biological cells using tools frequently used in biology, pathology, and bioengineering laboratories. These tools will include manual and automated staining systems and fluorescence microscopy. The student is encouraged (if time permits) to attend research group meetings and help analyze and interpret the results. Successful completion of the project may result in publication.

**Student qualifications and characteristics:** Experience is welcomed but not necessary; however, this position requires attention to detail, good organization, and the ability to follow instructions with great care. This position will involve work in a laboratory environment and requires ability to learn and follow laboratory safety protocols. The student must be available for at least a 3-4 hour block once per week (preferentially twice a week) within the 8 am-6 pm window.

# Position #*21*; *Chi Zhang*

**Mentor name:** Chi Zhang, Geology

**Job/project title:** Geoscience lab assistant

**Project description:**

This student will work in the research laboratory of Dr. Chi Zhang at the KU Lawrence campus. Dr. Zhang's research program involves the development of innovative geophysical monitoring approaches sensitive to alterations of physicochemical properties in different porous media. The student's duties will include but are not limited to: assisting in bench-scale and pilot-scale geophysical experiments using nuclear magnetic resonance and geoelectrics, reviewing the pertinent literature, designing and conducting experiments involving rock and fluid characterization using geophysical methods, analyzing acquired experimental data, performing necessary chemical and image analysis, maintaining excellent written and electronic data records, preparing and present routine summaries and presentations (oral and written), and helping prepare scientific manuscript for publication.

**Potential student tasks and responsibilities:** This position will entail lab work associated with the near-surface geophysics lab to perform geophysical measurements and analyses of porous media. The location is in Ritchie Hall G264A. The student will be responsible for collection, analysis, and demonstration of geophysical data. The student may also assist with the development of Matlab GUI that has a simple user interface for geoelectric measurements. Opportunities for field research trips may be made available depending upon amenable schedules.

**Student qualifications and characteristics:** The qualified student will need to demonstrate the ability to communicate effectively, follow instructions, and problem solve independently. Attention to detail, with respect to maintaining accurate lab notes and database structure, is required. The student will need to have a set schedule each week, though the exact schedule is flexible. Data processing skills using Excel or Matlab experience is required.

# *Engineering*

# Position #22; *Remy Lequesne*

**Mentor name:** Remy Lequesne, Civil, Environmental, and Architectural Engineering

**Job/project title:** Engineering Research on Reinforced Concrete Structures

**Project description:**

Our laboratory is interested in how reinforced concrete (RC) structures respond to a variety of loads. We study ways to make RC structures safer and more efficient. Much of our work is experimental, which means we build structural components (pieces of buildings like beams and walls) and then load them until failure. By studying the failure, we learn a lot about how to improve the design.

An idea for a project you could take the lead on is a focused study of the effect of reinforcing steel type on the behavior of reinforced concrete in tension. It would involve conducting several small tension tests and, depending on the results, may lead to changes in what types of steel are allowed in practice.

I'm open to other ideas also if you have other interests.

**Potential student tasks and responsibilities:** As a member of our team, you would be mostly working in the laboratory with other undergraduate and graduate students. Your responsibilities would include helping to build the formwork, tie reinforcement, and cast concrete, as well as setting up for and helping test the specimens. You could attend our group meetings and help interpret the results.

**Student qualifications and characteristics:** We are looking for students thinking about studying Civil or Architectural Engineering or that have an interest in structural engineering. Given the type of research we do, experience with construction or tools is great - but absolutely not required. We teach you what you need to know to contribute while also being safe.

# Position #23; *Joshua Roundy*

**Mentor name:** Joshua Roundy, Civil Engineering

**Job/project title:** Research in Hydrologic Modeling

**Project description:**

Meaningful predictions of the amount of water in rivers and streams is necessary to ensure societies resilience to extreme events such as droughts and floods. Extreme events from the past, present and future can be quantified using hydrologic models. These models rely on mathematical formulas to mimic the key processes that drive the movement of water over the land surface. The goal of our research is to improve society's resilience to extreme events through prediction of the water cycle.

**Potential student tasks and responsibilities:** The student will participate in research that is focused on analyzing existing hydrologic models to assess the ability of models to make meaningful predictions of drought and flood events. This includes analyzing the weaknesses and strengths of the models as well as improving upon existing modeling methods through data analysis.

**Student qualifications and characteristics:** This position requires an interest in the natural environment and applied mathematics and necessitates the use of computer programming. Although previous experience with programming would be beneficial, the student does not need to have previous programming experience.

# Position #*24*; *Elaina Sutley*

**Mentor name:** Elaina Sutley, Civil, Environmental and Architectural Engineering

**Job/project title:** Disaster Resilience Glossary

**Project description:**

The National Institute of Standards and Technology, through allocations from the Department of Commerce, funded a $20,000,000 Center of Excellence for Risk-Based Community Resilience Planning. The Center's primary output will be a web-based application that researchers and communities can use to upload detailed city-specific data (on buildings, transportation, water, power, communication networks, and population data) and run natural hazard simulations (earthquakes, tornadoes, hurricanes, tsunamis) to measure their current resilience to these hazards. The web-based application, called IN-CORE, will allow users to explore structural and non-structural mitigation and other types of decisions that could improve their resilience score. IN-CORE needs a User's Manual, and as part of that User's Manual, it needs a glossary. This Emerging Scholar's research project will focus on the development of a disaster resilience glossary for the IN-CORE User's Manual. Emerging Scholars will have the opportunity to collaborate with students and faculty at partnering institutions, including Iowa State University and the University of Colorado in Boulder, through this work.

**Potential student tasks and responsibilities:** The Emerging Scholar will: (1) read literature to understand the context in which specific terms are used; (2) synthesize literature to develop a definition, or extract an explicit definition from the literature, while documenting a full citation; (3) present their research at the Undergraduate Research Symposium. Depending on progress, the student might have the opportunity to present their work in Fort Collins, Colorado at a Center of Excellence project meeting or in Broomfield, Colorado at the Natural Hazards Workshop.

**Student qualifications and characteristics:** Preferred qualifications: interest and passion for disaster resilience, positive attitude, basic knowledge in Microsoft Excel, and availability for one-hour weekly or bi-weekly meetings. All majors are welcome!

# Position #*60*; *John Symons*

**Mentor name:** John Symons, Philosophy

**Job/project title:** Science of Security Project

**Project description:**

Do you like listening to podcasts? Are you interested in learning about cybersecurity policy and theory? Do you put tape over your laptop camera? This is the job for you! Come join the science of security project team and you will gain exposure to the fascinating and exciting foundational research at the University of Kansas on cyber-defense strategies and challenges.

**Potential student tasks and responsibilities:** Your task will be to work with a faculty mentor (Professor John Symons) and a graduate student researcher to track new developments in cyber-security. You will listen to podcasts or read news articles online, record your findings on a spreadsheet, and meet once every two weeks with the team to talk about what you've learned.

**Student qualifications and characteristics:** No prior experience is necessary.

# Social Sciences

# Position #25; *Glenn Adams*

**Mentor name:** Glenn Adams, Psychology

**Job/project title:** Cultural Psychology Research Group: Comparing Constructions of Relationality in West African and North American Settings

**Project description:**

The Cultural Psychology Research Group is a collection of researchers who are interested in the study of "mind in context": the idea that the foundation of mind is not limited to brain architecture, but also extends to structures for mental experience in everyday human ecology. Members of the CPRG conduct research on many topics: the relationship between historical knowledge and policy support, the experience of personal relationship in West African settings, and conceptions of family in Guatemala and China, to name only a few. Although interested students can work on any of these projects, the particular project that we are advertising for the 2018-2019 academic year is a multi-method study under the day-to-day supervision of Ph.D. student Darlingtina Atakare that compares conceptions of care, well-being, and obligation to a elder parent in West African and North American settings.

**Potential student tasks and responsibilities:** Students can select among two studies associated with the project. One option is an interview study in which students will ask Kansas participants questions concerning conceptions of care and obligation. They will then participate in analyses that compare of interview responses of Kansas participants with responses that we have collected from Ghanaian participants. The other option is an experiment in which we (a) expose U.S. participants (or not) to treatments that induce the experience of independence from social context or embeddedness in social context and the (b) observe effects on prioritization of care to elderly parents relative to other relational obligations. Students will gain experience on all aspects of the research: design, implementation, and analyses of results.

**Student qualifications and characteristics:** The position requires no specific qualifications or characteristics beyond intellectual curiosity and a passion for learning how to do social science research. Interest or experience in African Studies is desirable but not a requirement.

# Position #26; *Kimberly Bruns*

**Mentor name:** Kimberly Bruns, Institute for Health and Disability Policy Studies: Kansas Disability & Health Program

**Job/project title:** Student Researcher

**Project description:**

The Kansas Disability and Health Program (DHP) at the University of Kansas is funded by the Centers for Disease Control and Prevention (CDC). The focus of the program is to improve the health and quality of life among people in Kansas with mobility limitations and intellectual or developmental disabilities (IDD). We are adapting and implementing programs and testing their effectiveness. We work to improve access to and knowledge in three areas for people with disabilities: physical health, oral health, and nutrition. An emerging scholar would be an important member of our team and would gain experience in working on a research project that is improving health for people with disabilities.

**Potential student tasks and responsibilities:**

- Create project focused Facebook postings
- Create project focused Twitter postings
- Create project informational flyers
- Assist with finding opportunities and presenting at conferences
- Interact with people with disabilities and health professionals
- Assist with preparing materials for interventions
- Other tasks that spark the student's interest

**Student qualifications and characteristics:**

- Experience in Facebook and Twitter postings
- Experience or willing to learn about managing a web page
- Interest in creating project informational documents
- Ability to work independently

**Additional comments:** Dr. Jean Hall would be the mentor and Kimberly Bruns would be the immediate supervisor.

# Position #27; *Hayley Burghart*

**Mentor name:** Hayley Burghart, Research and Training Center on Independent Living

**Job/project title:** Undergraduate Research Assistant

**Project description:**

The Research and Training Center on Independent Living is currently engaged in two ongoing studies about improving community participation for people with mobility limitations. One study focuses on overcoming barriers in a person's home. Imagine having difficulty getting in and out of your shower in the morning to get ready for your day, and by the time you're ready you don't have the energy to go out! The Home Usability Program teaches consumers, or people with disabilities, how to assess their home and identify solutions to the barriers they encounter. We know that the more usable your space is, the less time and effort you'll spend navigating it and preparing for your day, and the more opportunities you'll have to get out of your home and into your community. The second study, Out and About, teaches consumers goal setting and goal tracking skills and works with consumers on practicing these skills to achieve goals that help them get out into their community, and be part of it. To determine whether these programs are successful in increasing the community engagement of people with disabilities we are collecting various forms of data including paper and electronic surveys, Ecological Momentary Assessment device (which are similar to smart phones) surveys, and Activity Tracker data. The Undergraduate Research Assistant will have opportunities to engage in various aspects of data collection, program preparation and reporting of findings.

**Potential student tasks and responsibilities:** Along with being introduced to the independent living and disability rights movements and the programs in place to support community living for people with disabilities, the Undergraduate Research Assistant may participate in the following activities:

1. Entering paper survey data and managing electronic survey data
2. Managing data collection on Ecological Momentary Assessment (smartphone) devices, activity tracking devices, and preparing devices for study participants
3. Transcribing qualitative interviews
4. Preparing materials in accessible formats (such as large print) for both Home Usability, and Out and About programs
5. Identifying potential resources for inclusion in the Out and About program based on consumer and staff input

6. Assisting with additional projects including the development and testing of a Home Safety Guide and collection of photo images of people with disabilities participating in their communities

7. Assisting in the preparation of reports, conference presentations, and other products

8. Participating in research team meetings

### Student qualifications and characteristics:

1. An interest in, and a willingness to learn about people with disabilities and their right to community living

2. Student must be available in blocks of at least two hours within regular office hours, weekdays 8:00 am – 5:00 pm

3. A keen attention to detail

4. Student should be comfortable working independently with supervision as well as on a team

5. Experience with Microsoft Office including Word, PowerPoint, Excel, and Outlook

# Position #*28*; *Kelly Chong*

**Mentor name:** Kelly Chong, Sociology

**Job/project title:** Exploring Cross-Racial Minority Solidarity and Identity-Formation Through Racial Minority Intermarriages

**Project description:**

I am starting a project that specifically investigates the development of cross-racial minority solidarity/connections involving Asian-Americans, through the lens of Asian American - racial minority couplings. Studies of Asian/non-white unions and Asian-American identification with other minorities have surprisingly received little attention. In this qualitative project, I seek to further our understanding of racial relations and racial identity/boundary-formation in the U.S. by exploring the motivations behind minority-minority pairings and how they negotiate their identities/cultures within their marriages and family-making. What constitutes a shared minority-minority connection? Does it stem from a shared sense of marginalization and negative racial experiences? Do such pairings reflect the growing development of minority-minority solidarity? What kinds of identities/cultures are crafted within such unions? How do such pairings differ in inter-cultural negotiation and cultural/ethnic transmission from that of white/Asian-ethnic pairings? I will also be investigating the identity development and choices of mixed-race individuals resulting from such unions.

**Potential student tasks and responsibilities:** The student's primary responsibility will be to conduct database and library research on the topic of racial-minority relations in general and those involving Asian-Americans in particular. The responsibility will also involve researching in the areas of mixed-race studies. The student will also work with me on my current and upcoming writing projects related to these studies, helping to develop bibliographies, literature review (including pulling information out of research articles), and assist in editing manuscripts, and other research-related work.

**Student qualifications and characteristics:** The ideal student will have an interest in race and ethnic relations (being interested in mixed-race studies and Asian-American studies is a plus) and be interested in conducting library and data base researches. I am looking for an assistant who is self-directed, responsible and follows directions well, and be highly accurate in her or his work. The student must be someone who does not mind doing detail-oriented work, meets deadlines well, and also likes writing and qualitative projects.

# Position #*29*; *Cindy Colwell*

**Mentor name:** Cindy Colwell, School of Music-Music Therapy

**Job/project title:** Modifying Attitudes toward Individuals with Disabilities through Simulations or Interviews of Music Professionals

**Project description:**

The purpose of this research study is to compare disability simulations with observation of interviews with master teachers/therapists on the attitudes of preservice music educators and student music therapists toward working with individuals with disabilities. There are two treatment interventions and participants are assigned to one of the two interventions as intact classes as convenience samples. The two treatment interventions are: Simulation Experience and Interview Experience.

Following completion of a Mainstreaming/Inclusion Questionnaire, participants in the Simulation Experience treatment intervention simulate one assigned disability in a public venue and includes lower-limb paralysis in a wheelchair, one-arm amputation, hearing impairment, or visual impairment. Participants are put in pairs to function as an aid and as an observer in the simulation environment and asked to each facilitate the simulation for 45 minutes. After the specific disability is assigned, participants are instructed to list pros and cons of simulating a disability. Participants are given two weeks to complete this assignment during which specific information about disabilities will not be addressed in class. Participants simulating paralysis are provided a wheelchair to use as the primary source of mobility. Students simulating one-arm amputations choose either the dominant or non-dominant hand and told to put that hand behind their back and to hook the hand in their waistband, covering it with loose fitting clothing. Students simulating hearing impairments are asked to use various styles of earplugs while students simulating visual impairments wear one eye patch, lightly taped their eyes closed behind dark sunglasses or wear purposefully distorted lens.

Following completion of the Questionnaire, participants in the Interview Experience treatment intervention are assigned a series of interview to watch by master teachers/therapists (appropriate to the participants major). These master interviewees are asked a series of questions designed to express their attitudes toward working with children and youth with disabilities. For music education majors, five interviews include: a high school choral director, a high school instrumental director, a middle school choir director, a middle school band director, and an elementary general music director. The five interviews are edited to a comprehensive presentation of approximately one and a half hour duration. For music therapy majors, five interviews include: a music therapist in the public schools, a music therapist in an adolescent mental health facility, a music therapist in a pediatric hospital, a music therapist who works in early intervention, and a music therapist who has children in private practice.

After the treatment intervention, participants in the Simulation Experience are asked to reflect on five prompts in writing:

1) personal reaction to the simulation experience
2) reaction as the aid to the simulation experience
3) observation of reactions of individuals around them
4) difficulties that were encountered during the simulation
5) issues they thought would be difficult but weren't.

After the treatment intervention, participants in the Interview Experience are asked to reflect on five prompts in writing.

1) personal reaction to the interview experience
2) summarize positive experiences of the music professionals
3) summarize challenges of the music professionals
4) summarize how working with children with disabilities has impacted their planning
5) choose and retell one .

### Potential student tasks and responsibilities:

1. Preparing materials for research study: simulation props, information statements, questionnaire in survey monkey

2. Scheduling materials for research participants for simulations

3. Filing, organizing information, printing, copying

4. Data Entry of information obtained from surveys and written prompts

5. Gathering literature sources for comprehensive review of literature on strategies for impacting attitudes toward individuals with disabilities, and disability simulations

### Student qualifications and characteristics:

1. Positive attitude toward and interest in research focusing on individuals with disabilities

2. Experience with Microsoft Office including Word, PowerPoint, Excel, and Outlook (or willingness to be trained)

3. Punctual, organized, and detail-oriented

4. Experience video recording and doing basic editing (helpful but not essential)

# Position #*30; Bartholomew Dean*

**Mentor name:** Bartholomew Dean, Anthropology

**Job/project title:** Information Officer-Upper Amazon Project

**Project description:**

Assist Prof. Dean's work Directing the Museum of Anthropology at Peru's National University of San Martin (Tarapoto, UNSM). This will involve assisting him with Web page development and social media coverage of his current field research projects in the the anthropology of the Upper Amazon, This includes updates on the Field Research Station where he directs, as well as updates on political anthropology and current research on migration and health in indigenous Amazonia. Students will assist Prof. Dean implement the annual strategic plan for the Museo Regional-Universidad Nacional de San Martín, Tarapoto, San Martín, Peru.

**Potential student tasks and responsibilities:** Web development, coordinate social media presence, administrative work, translation, archival research, photography, human rights advocacy, community outreach.

**Student qualifications and characteristics:** Bilingual (Spanish-English, Portuguese also preferred and/or Quechua), Intellectual curiosity, IT experience & demonstrated communication skills (written/oral).

**Additional comments:** Well-organized & willing to learn about Social Anthropology & Amazonia

# Position #*31*; *Alesha Doan*

**Mentor name:** Alesha Doan, School of Public Affairs & Administration and Political Science

**Job/project title:** Project Diane

**Project description:**

Male– dominated professions and organizations have become increasingly gender integrated both voluntarily and with cultural, legal, and political pressure. In the U.S., limited gender integration into combat units in the US military has already started, and more is on its way. This represents a significant departure from traditional military policy, which is the basis of our research. Here we analyze barriers and potential benefits to gender integration in the U.S. Army Special Forces. Along with co-author Shannon Portillo, I am in the process of analyzing 24 focus groups with 198 men in Special Forces and women in Special Operations, and a large-scale survey. This project has already resulted in an academic publication as well as engaged scholarship. During the 2018-2019 academic year we will be working on a book project from these data.

**Potential student tasks and responsibilities:** Students will assist with reference management for the book project. All participating students will be trained on reference management software. Students will also assist with basic data management, and may be asked to review coded data.

**Student qualifications and characteristics:** Students must have strong communication and organization skills, but do not need prior experience with

research. Our research team meets weekly or bi-weekly throughout the

academic year. Meetings function as time to check in (we work around group

schedules), so students must be able to work independently.

# Position #52; *Brian Donovan*

**Mentor name:** Brian Donovan, Sociology

**Job/project title:** Cultural Studies of the Gold Digger Stereotype

**Project description:**

I am writing a book about the "gold digger" stereotype in American culture and law. I am interested in the development of the gold digger from its beginnings as early twentieth century chorus girl slang to its incarnations in the late twentieth century. I am interested in working with a student to find and analyze material that pertains to the conclusion of my book. In particular, I am seeking material about the gold digger stereotype in African American "urban fiction" or "street lit." I am also interested in other manifestations of gold digger discourse in the late twentieth and early twenty-first centuries, including music and journalistic coverage of same-sex relationships.

**Potential student tasks and responsibilities:** The student will read six or seven urban novels and take detailed notes on them. We will develop and deploy a flexible template in order to create an inventory of the novels' contents pertaining to the major themes of my book: gender, law, and stereotypes. We will meet to discuss the books in general, including how they reference ideas about social inequality and support or undermine the gold digger stereotype. As the student progresses with this task, there also may be a potential to expand to other cultural forms (like music) and other decades ("gold digger" novels from the 1960s and 1970s).

**Student qualifications and characteristics:** This job requires a love of reading and an appreciation of popular fiction. Interest in gender, law, and/or sociology will also be very helpful because we will be analyzing fiction as a reflection of large social trends. We will meet regularly to discuss your findings and progress.

# Position #*32*; *Abbey Dvorak*

**Mentor name:** Abbey Dvorak, Music Therapy

**Job/project title:** Research Assistant: Music Therapy in Mental Health

**Project description:**

The Music Therapy in Mental Health (MTMH) Lab, directed by Music Therapy faculty member Abbey Dvorak, conducts research on various applications of music therapy in mental health with a particular focus on (a) music therapy student development and (b) music intervention research to support and enhance mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness skills. Current projects address the following research questions:

" What are the implications and best practices for inclusion of course-based research experiences in music therapy education and training?

" How can music interventions support and enhance skill areas of mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness?

" What is the effect of a school mindfulness-based music and movement intervention on elementary students' self-regulation and mindfulness?

**Potential student tasks and responsibilities:** The position may include the following student tasks and responsibilities:

" Calculating participant scores from data collection tools

" Screening titles and abstracts of journal articles for relevance

" Obtaining full-text papers of relevant articles from the library

" Gathering information from research studies using a checklist

" Entering numbers data into a spreadsheet for analysis

" Photocopying and assembling recruitment and data collection materials

" Listening to interviews and typing participant responses

" Coding participant interview responses into different categories

**Student qualifications and characteristics:** A student working in this position must be:

- Highly motivated, independent, and curious
- A team player with a collaborative spirit
- Highly organized with a strong attention to detail
- Reliable, responsible, and task-oriented
- Able to work 2-3 hour blocks at a time
- Able to attend a weekly research meeting
- Knowledgeable of Microsoft Word and Excel
- Willing to learn and use data analysis software

# Position #33; *Arienne M. Dwyer*

**Mentor name:** Arienne M. Dwyer, Anthropology

**Job/project title:** Development of Medicine along the Silk Road

**Project description:**

In eastern Central Asia, in what is now Chinese Turkestan, the practice of healing is derived from many medical traditions: Persian, Greek, Chinese, Indian, and shamanistic traditions. We would like to understand the transmission of medical knowledge across Eurasia. We do this by looking at how historical treatments for different illnesses overlap, and which treatments originate in which medical traditions (for example, a Persian herb is probably associated with Persian medicine).

Our sources are late 19th and early 20th century Turkestani medical handbooks, amulets, and formula that we've translated into English. We identify illnesses, treatments, and substances and use digital humanities tools and network analysis to map their relationships.

**Potential student tasks and responsibilities:** Students will familiarize themselves with traditional medicines from Eurasia (e.g. Persian, Chinese, Indian), participate in project team meetings, where these medical traditions will be discussed; they will be trained in coding transcribed texts for medical terms using open-source software, and will assist in the preparation of key terms (treatments and remedies) for network analysis, collecting and analyzing data, and assist in the presentation of the findings.

**Student qualifications and characteristics:** Students should have: a 2-3 hour time block available at least once a week, careful attention to detail, good organizational skills, basic experience with computers and data management, and an interest in intellectual and healing traditions in different languages and cultures. Knowledge of Persian or other relevant languages would be a plus.

# Position #*34*; *Paula Fite*

**Mentor name:** Paula Fite, clinical child psychology (psychology and applied behavior science)

**Job/project title:** Peer relationships in schools research assistant

**Project description:**

There are many problems youth face at school, including bullying and victimization. The purpose of this project is to gather data on youth's thoughts and behaviors on a host of issues youth face, including bullying, victimization, and substance use, in order to develop effective prevention and intervention strategies. This project helps to identify risk and protective factors for youth in elementary, middle, and high school. Data collection occurs within the classrooms at each school and youth complete developmentally appropriate surveys measuring the behaviors of interest. Teachers also complete surveys regarding child behavior and issues at school. Data collection for this project started with one elementary school in 2012 and this project now includes a number of elementary schools in addition to middle and high schools. Undergraduate research assistants are involved with all aspects of this project, from preparation to completion of each wave of data collection.

**Potential student tasks and responsibilities:** Given the amount of data that will be collected across the schools, preparation for data collection is very important. This process might include pilot testing surveys, assembling and labeling survey packets, and double-checking spreadsheets. Once the preparation stage of data collection is complete, all lab members must attend a group training session, which will provide detailed information about all data collection procedures. No previous data collection experience is necessary. On data collection days, teams of graduate and undergraduate students are assigned to each classroom. As a member of these teams, undergraduate research assistants are typically responsible for reading survey items aloud to youth and answering any questions that youth may have. Following data collection, undergraduate research assistants assist with data entry into appropriate databases. Training and supervision of data entry procedures will be provided.

**Student qualifications and characteristics:** Undergraduate research assistants are an essential part of our team as we count on them to support and contribute to our research. As a result, you must be dependable, motivated, detail-oriented, able to work independently and as part of a team, hardworking, and have an interest in and/or curiosity about research. Although doing so is not required, there are many opportunities to work on independent research projects.

You will need to attend mandatory lab meetings, date and time to be determined. We also require that research assistants commit to a set schedule of times they will be present in the lab to complete assigned tasks. These lab hours are set by the research assistant based on their class schedule, etc. However, the lab hours need to be scheduled Monday through Friday, between 8 AM and 5 PM.

# Position #35; *Anna Gorczyca*

**Mentor name:** Anna Gorczyca, Life Span Institute/HSES

**Job/project title:** Obesity and Physical Activity

**Project description:**

Overweight and obesity are associated with poor health. Individuals living in rural areas have a higher prevalence of obesity compared their urban counterparts. The goal of the Energy Balance Laboratory is to conduct studies on weight management and physical activity in multiple populations across the life span. Students will work on a variety of projects looking at the impact of obesity and weight management in rural communities, physical activity and obesity prior to conception, and weight management in adults.

**Potential student tasks and responsibilities:** -Data Entry

-Overview of the research process

-Outcome testing

-Survey development

-Database (REDCap) development and management

-Statistical analysis

-Literature review

-Weight management intervention delivery

-Development of recruitment materials

-Other duties as assigned

**Student qualifications and characteristics:** -Organized

-Outgoing

-Attention to detail

-Takes initiative

-Independent

-Interest in diet and exercise

If a student is willing and has transportation, there is a possibility that the student could travel to the University of Kansas Medical Center to conduct research.

# Position #*36*; *Jeffrey Hall*

**Mentor name:** Jeffrey Hall, COMS

**Job/project title:** Researcher on Adolescent Digital Stress

**Project description:**

The use of social media (e.g., Instagram, SnapChat) and mobile media (e.g., texting, WhatsAp) by American youth have grown dramatically in the past 10 years. Two researchers in Communication Studies and Clinical Child Development are working on a project to try to measure digital stress that comes from using those media.

**Potential student tasks and responsibilities:** Student research assistants will practice reading original research articles in communication and psychology. Will identify important parts of studies using a rubric provided by the two faculty members. Will work with a graduate student to transcribe and identify themes in focus groups of adolescents. Students will work with DropBox or Endnote to upload new articles (training will be provided). The primary work will take place in libraries or laboratory space provided by faculty.

**Student qualifications and characteristics:** We are looking for research assistants who can work independently, has an attention to detail, show curiosity about digital stress, are familiar with new mobile aps and uses of texting.

# Position #37; *Deanna Hanson-Abromeit*

**Mentor name:** Deanna Hanson-Abromeit, School of Music

**Job/project title:** Infant Music Intervention Research Assistant

**Project description:**

The Emerging Scholars research assistant will contribute to a variety of related projects from the Music, At-Risk Infants and Families (MARIF) Research Lab. The purpose of the MARIF research lab is to develop and study music interventions to improve developmental outcomes for at-risk infants and their families. At-risk infants include those born premature or medically diagnosis, live in poverty, or with an developmental exceptionality. The MARIF Research Lab strives to deepen our understanding of how music creates change in developmental outcomes and infant-parent or caregiver relationships, and to promote advances in science, health outcomes and policies. The MARIF Research Lab fosters research experiences at the undergraduate, masters and doctoral levels in order to develop future agents of change in music intervention research and practice. Our growing team of undergraduate, graduate and faculty researchers is engaged in multiple projects.

**Potential student tasks and responsibilities:** Students will have the opportunity to be a contributing member of a project(s) team for various projects related to music, early intervention, infants, and families. Tasks are varied based on the needs of a particular project, but may include conducting library data base searches of relevant literature, reading and summarizing content of articles, reporting summaries to the project team, and coding of video and/or audio recordings of clinical music therapy services. Other responsibilities may include making copies, organizing materials and other administrative tasks. Past Emerging Scholars have been active contributors to the project team, engaging in conversations to understand and interpret the information we are learning from the research project. Students will be required to complete human subjects training prior to involvement with clinical data. Research assistants should be able to attend and participate in weekly research lab meetings throughout the academic year (Thursdays 4:00-5:00), as well as occasional project team meetings scheduled at a mutually convenient time for the project team.

**Student qualifications and characteristics:** Curiosity, attention to detail, reliability, and the ability to work independently are essential characteristics for research assistants in the MARIF lab. In addition, the student should be trustworthy, be able to communicate clearly, and maintain confidentiality of sensitive information. Interests in music, music therapy, medicine or other related fields are preferred. The ability to commit to a consistent schedule of 4-7 hours per week is desired.

Project tasks can be individualized to your availability and scheduled work hours; however, students must be available for the weekly research lab meetings on Thursdays from 4:00-5:00, weekly mentor meetings with the faculty mentor, and occasional project team meetings scheduled at times convenient for the specific project teams.

**Additional comments:** Emerging Scholars have enjoyed the variety of tasks, opportunity to follow a project at various stages and making contributions to larger projects.

# Position #*38*; *Allard Jongman*

**Mentor name:** Allard Jongman, Linguistics

**Job/project title:** Investigating the distribution of acoustic information across consonants in the English lexicon

**Project description:**

KUPPL members (KU Phonetics and Psycholinguistics Laboratory) conduct experimental research on speech and language, including its production, perception, and acquisition. Primary research areas are acoustic and auditory phonetics as well as spoken word recognition, all across a variety of languages.

We are looking for a student to help on a current project investigating the distribution of acoustic information across consonants in the English lexicon. The current database being used for this research (approximately 26,000 words spoken by a single speaker in a controlled environment) is the largest of its kind, and therefore poses unique analytical challenges that both necessitate an expansion of the research team and provide a promising opportunity for the student to get involved in cutting-edge research in the area of big data. One of the primary responsibilities will be speech segmentation (dividing the continuous speech signal into individual consonants and vowels), but the student will also be involved in general data management, as well as some computer programming tasks.

**Potential student tasks and responsibilities:** The student will be assigned a variety of tasks for different phases of data collection:

1. Assisting project coordinator and graduate research assistant in speech segmentation. The student will receive training and will gradually become more independent in this process.

2. Assisting project coordinator and graduate research assistant with the organization of collected data.

3. Measuring various characteristics of the acoustic signal, both manually (at first) and programmatically. The student will receive training on these skills at the start of the project.

**Student qualifications and characteristics:** We are looking for a student who

1. Is highly organized with strong attention to detail

2. Has basic knowledge of Microsoft Word and Excel

**Additional comments:** Though a programming background is not required, a student who has this background or is interested in developing programming skills is preferred.

# Position #*39*; *Sarah LeGresley Rush*

**Mentor name:** Sarah LeGresley Rush, Physics and Astronomy

**Job/project title:** Redesigning physics courses: how do we improve student learning?

**Project description:**

Recently there has been a push to redesign courses and the focus has primarily been on the delivery of the curriculum (course content). Students are increasingly being required to take a more active role in their learning. For example, in our introductory physics courses, instead of sitting and watching (or in many cases not watching) a lecture during class, students are required to read or watch videos before class. This allows the class time to be focused on solving problems (typically in a group environment) which is where students tend to struggle the most. Having already redesigned the delivery in many of our introductory courses, this project will focus on how redesigning the curriculum (specifically the reordering of the topics covered in courses) will impact student learning.

**Potential student tasks and responsibilities:**

a. reading relevant articles related to the research (some articles will be provided and additional articles of interest can be chosen by the scholar)

b. after reading the articles, try and determine what changes have been applied to the ordering of the physics topics

c. determine if the changes have improved the grades, and/or attitudes and if so how was that measured (pre and post tests, student surveys, grades in courses, etc.)

d. look at and analyze the data that we are collecting and work to find ways to present the data (presentation style might be similar to that found in the research articles)

**Student qualifications and characteristics:** Most important qualifications and characteristics are a willingness to work and a desire to learn! You don't necessarily need to be good in physics or interested in education. That would likely make the job more interesting and fun but is not required and training of the skills required will be provided. There will be a mandatory 1 hour meeting each week.

**Additional comments:** Here's your chance to get paid to think about how people learn and what approaches work best.

# Position #*40; Ward Lyles*

**Mentor name:** Ward Lyles, Urban Planning - School of Public Affairs and Administration

**Job/project title:** Sustainable and Compassionate Communities: Reducing Risks from Natural Hazards and Climate Change

**Project description:**

Our team researches how to create more sustainable and compassionate communities. We specifically focus on reducing risks from natural hazards and climate change impacts, like floods, heat waves, droughts and hurricanes. People from marginalized communities - low income populations and people of color especially - suffer disproportionately from these types of risks.

This work is part of a 5-year National Science Foundation CAREER award project. Our task is to improve our understanding of how people on the ground work together to proactively plan to make their communities more environmentally, economically, and socially sustainable in the face of natural hazards. A cool part of the project is that it involves traditional research activities (e.g. interviews, surveys, mapping, statistics, etc.) AND developing new courses for students aimed at cultivating compassion AND conducting an ongoing seminar that brings together academics, practitioners, and policy makers to identify and solve problems together. This research projects aims to have positive impacts on real lives, as well as on scholarship.

**Potential student tasks and responsibilities:** Students tasks will be determined on a collaborative basis with the faculty sponsor and the team of doctoral and masters students. Because the project involves a wide variety of tasks, there will be opportunities to customize tasks to student interests. Potential responsibilities could include any of the following: assisting in review of the research literature, developing data collection instruments (e.g. survey questionnaires), downloading and processing secondary data (e.g. mapping Census data using Geographic Information Systems), coordinating meetings, helping design course materials, and more.

**Student qualifications and characteristics:** A student with a strong fit for this position will possess the following qualifications and characteristics:

- passion for promoting social justice and/or environmental conservation

- curiosity about public service and applied research that impacts communities

- willingness to work as a part of a team, including attending periodic meetings with the faculty and graduate students

- ability to work independently and in groups

- well organized with close attention to detail

**Additional comments:** I, Ward, and my graduate students are extremely excited about this research project!

# Position #*41*; *Brittany Melton*

**Mentor name:** Brittany Melton, Pharmacy Practice

**Job/project title:** Use of Technology in Healthcare

**Project description:**

This program involves a set of independent research projects that examine the use of technology in healthcare, such as electronic health records and medication alerts, and how these technologies impact patient care both from a patient and provider perspective, and how healthcare providers approach patient care when using new technologies. A student would be a welcomed study member, assisting in all aspects of research, including data collection/analysis, literature synthesis, and scholarly writing.

**Potential student tasks and responsibilities:** A student would have a multitude of administrative and scholarly responsibilities that include data collection and chart reviews, data collection and analysis, literature review and synthesis, and development of new grants and publications. The student is not required to have prior experience with any of the listed activities, and has the possibility of being included as an author on presentations and publications produced, if interested.

**Student qualifications and characteristics:** The student needs to have Microsoft Office (primarily Word and Excel) and organizational skills, be responsible and accountable with data and equipment, be self-motivated to complete tasks, be detail-oriented, able to work independently when given clear instructions, and able to maintain confidentiality. The student will be required to complete training on ethical conduct of research and protection of patient data upon joining the study team. While unlikely, a trip to the University of Kansas Medical Center is possible. Some exposure to healthcare is desirable but not required. This project would be a good experience for someone interested in or curious about healthcare professions, the role of technology in healthcare, or data management.

# Position #42; *Utako Minai*

**Mentor name:** Utako Minai, Linguistics

**Job/project title:** How do young children interpret the meaning of 'hard' words?

**Project description:**

The Developmental Psycholinguistics Laboratory, a research laboratory in the Department of Linguistics, is conducting studies on preschool-age children's understanding of 'hard' words (words whose meaning is abstract, such as "every", "some, "no", and "only"). While children's interpretation of such words is known to be often different from that of adults in a number of domains, research to date has suggested that children are able to comprehend 'hard' words in certain circumstances, despite the abstractness of their meaning. Our studies investigate the similarities and differences between children and adults in a range of aspects of meaning comprehension, particularly focusing on the meaning of 'hard' words. This line of research provides a window through which one can view the development of language comprehension abilities, increasing our understanding of how a child becomes a mature native speaker of a language.

**Potential student tasks and responsibilities:**

If you join our project as an undergraduate research assistant, you will be expected to commit to following duties:

1. Assisting in the recruitment of study participants, by contacting local preschools, community institutes and businesses, and making announcements via social media
2. Assisting in scheduling experiments
3. Assisting in data collection, either at off-campus research sites (e.g., local preschools) or at the lab
4. Assisting in data organization (e.g., entering data into a database)
5. Other general duties assisting in lab management/administration, such as printing, photocopying, checking email, and checking office supplies

**Student qualifications and characteristics:** We are seeking a student who is enthusiastic about this type of research. We are particularly looking for a student who:

1. Is able to comfortably and confidently interact with young children (having previous experience in interacting with children, such as volunteer work at child care facilities, would be a plus)

2. Is able to work independently

3. Is responsible and reliable

4. Possesses the basic knowledge of Microsoft Word, Microsoft Excel and some Social Networking Systems (e.g., Facebook)

5. Has access to a car (preferred but not required)

# Position #43; *Sanako Mitsugi*

**Mentor name:** Sanako Mitsugi, East Asian Languages and Cultures

**Job/project title:** Research assistant

**Project description:**

At a dining table, when you hear your friend saying, “Will you pass me...,” you immediately start looking for salt and pepper. Why can we sometimes guess what other people are about to say? The KU East Asian Language Lab conducts research to understand what helps us make predictions in communication. We are interested in finding out whether this predictive ability can be acquired when you learn to use a foreign language. Prospective findings could have applications for language educators and those interested in communication and comprehension. The Emerging Scholar will assist with preparing and conducting language experiments and with scoring and managing the results and data.

**Potential student tasks and responsibilities:**

- Assisting with preparing data collection materials, such as scanning and organizing picture images and editing audio files (i.e., slicing recorded sentences and adjusting timings).

- Assisting with administering language tasks and interviews to KU undergraduate students who are learning an East Asian language.

- Scoring the language tasks and entering data (i.e., typing responses from interviews into a computer file) and coding data (i.e., reviewing the interview responses and categorizing them into types).

- Completing tasks to support a faculty mentor’s work on project-related scholarly articles (e.g., identifying online articles, scanning materials, assisting with the bibliography).

- Possibly learning how to work with an eye-tracking system to collect data in the Spring.

**Student qualifications and characteristics:** The position would be ideal for a student who is interested in the field of cognitive psychology or foreign language learning. We are looking for a student who is able to work in 2–3 hour block at a time. As we deal with millisecond-level timing data, it is crucial that the student be highly organized, with a strong attention to detail. In addition, the student needs to be responsible and to have good communication skills

# Position #44; *Edward Morris*

**Mentor name:** Edward Morris, Applied Behavioral Science

**Job/project title:** Digital Scholarship: Changing th Future of History

**Project description:**

At the University of Kansas, the College of Liberal Arts and Sciences has four divisions, one of them for the Social and Behavioral Sciences. One of this division's departments is Applied Behavioral Science (see http://absc.ku.edu/). Its mission is to understand and improve the human condition through a science of behavior and its application (e.g., autism, truancy, organizations).The name of the science and its application is behavior analysis (see, e.g., abainternational.org).

In 2016, the department established a Center for the History of Behavior Analysis. Its director – Professor Edward K. Morris – was then conducting research on the influence of the first "behaviorist" (J. B. Watson) on the founder of behavior analysis (B. F. Skinner). This required his finding what Skinner wrote about Watson line-by-line in over 250 publications. The task was impossible, but he had an idea: Create a searchable database of Skinner's publications. He wrote a grant to complete four tasks: (a) update Skinner's bibliography; (b) build a hard-copy collection of his publications; (c) digitalize the collection; and (d) make it searchable by keywords (e.g., Watson, biology, humanism, peace). The grant was awarded by the Society for the Experimental Analysis of Behavior (http://jeabjaba.org/) and is underway. The four tasks will be among the students' tasks.

The project is limitless. Once Skinner's database has been created, the Center will put it on a website and charge modest fees for searching it. This will fund the creation of other databases, for instance, of the field's predecessors, significant contributors, and KU faculty members. This will advance the quantity and quality of scholarship in behavior analysis locally and internationally by reducing the time and effort spent hand-searching publications and reducing those searches' errors. This will change the future of history.

**Potential student tasks and responsibilities:** The students' tasks will be to (a) update the bibliographies of historically significant behavior analysts; (b) build hard-copy collections of their publications; (c) digitalize the collections; (d) make the collections searchable by keywords; and (e) put the collections on the Center's website and monitor their use.

**Student qualifications and characteristics:** Students must be organized and resourceful in conducting on-line searches and willing to learn about scholarly databases (e.g., Google Scholar), digital file manipulation (e.g., Photoshop), and website management (but not coding). The work

schedule is flexible: (a) several one- to two-hour bocks of time a week between 9:00 and 5:00, but consistent across weeks; (b) at least one face-to-face meeting a week with the Center's director; and (c) background reading in behavior analysis.

**Additional comments:** The Center's director will support capable students in conducting key-word searches of the databases for their original research

# Position #45; *Meagan Patterson*

**Mentor name:** Meagan Patterson, EPSY

**Job/project title:** Child Development In and Out of School

**Project description:**

The KU Social Development Lab, directed by Educational Psychology faculty member Meagan Patterson, conducts research on various aspects of social development. We are interested in how children develop both in and outside of educational contexts.

General areas of interest include how children and adolescents think about social groups, understanding how experiences with racial and gender diversity influence academic and socio-emotional outcomes, the developmental consequences of prejudice and prejudice awareness, and approaching education and development through a social justice lens. There are typically 3-5 current projects in the lab each semester.

Current projects in the lab address the following research questions:

How do parents talk with their children about race and racism?

What factors impact youths' interest in and knowledge of politics?

What messages about politics are present in popular children's books?

How does teachers' cultural intelligence relate to their classroom practices?

How do children develop an understanding of religion and spirituality?

**Potential student tasks and responsibilities:** This position may include interviewing children, parents, or teachers for a variety of research projects. The position may also include entering data (typing responses from interviews into a computer data file) and coding data (reviewing interview tapes or transcripts and classifying responses into categories).

**Student qualifications and characteristics:** Required qualifications for this position include interest in working with children and strong organizational and communication skills. Preferred qualifications include prior experience working with children and an interest in psychology or education. Research assistants will also be expected to attend monthly meetings with the research team and weekly

meetings with the faculty supervisor. Availability in the late afternoon hours (approximately 3-6 pm) on some weekdays is required. Access to a car is desirable but not required.

# Position #46; *Shannon Portillo*

**Mentor name:** Shannon Portillo, School of Public Affairs & Administration

**Job/project title:** The Sociolegal Justice Project

**Project description:**

The Sociolegal Justice Project started over peanut butter and jelly sandwiches with a senior colleague, Jon Gould, at George Mason University. We were discussing the role of justice in interdisciplinary social science. We quickly realized that there was no shared definition of what justice means among academics, so we did what most academics do in that situation—we wrote a research proposal to study our newly found research question (how do we conceptualize [define] and operationalize [measure] justice in sociolegal scholarship?).

The project was originally funded by the National Science Foundation (SES # 1022712) and brought together thirty academics at various stages in their career to discuss how we conceptualize and measure justice in sociolegal scholarship. As the group grew and scholars and students worked on the project they developed their own research questions and/or branched out onto other research projects led by Dr. Portillo. There are currently four main projects that fit under the Sociolegal Justice Project—Project Diane, Social Equity in Local Government, Latinx Voting, and Collaboration in Local Anti-Human Trafficking Networks.

Project Diane focuses on the integration of women into combat positions in the military. This project is led by Professor Alesha Doan (School of Public Affairs & Administration and Women, Gender & Sexuality Studies Department) along with Professor Portillo. All data are collected and Professors Doan and Portillo are currently working on writing a book, numerous articles, and popular publications. Students have helped with data analysis, reference management, and presentation prep.

Social Equity in local government explores how elected and non-elected government officials shape social justice at the local level. This project is led by PhD student Nicole Humphrey and Professor Portillo. Nicole is in the process of collecting data for her dissertation, and student have assisted with data collection, reference management, interview transcription, and presentation prep.

Latinx voting focuses on the barriers to Hispanic voters in Kansas. This project is led by MPA student Alex Villagran and Professor Portillo. Alex collected interviews from potential voters, political party leaders, and county clerks to get a robust perspective on what barriers Hispanic voters currently face in Southwestern Kansas. Alex is currently in the process of transcribing his interviews, collecting additional data, and writing up his findings.

Collaboration in Local Anti-Human Trafficking Networks is a comparative study of two local anti-human trafficking tasksforces in two different states. This project is led by undergraduate Samiyah Para-Cremer and Professor Portillo. Samiyah collected interviews with people involved with the Tasksforces (attorneys, non-profit workers, survivors, and community members). She is currently analyzing these interviews and will begin writing up her results this coming academic year. Students have helped transcribe interviews and find references.

**Potential student tasks and responsibilities:** The Sociolegal Justice Project (SJP) is a fully collaborative research project. Students get started by helping with some of the basic aspects of research - transcribing interviews, coding qualitative data, managing references, and reviewing literature. As students get familiar with the various projects they have the opportunity to start collecting more data, or propose new research questions or projects.

**Student qualifications and characteristics:** Students do not need prior experience with research to participate in the Sociolegal Justice Project. We prefer students who are collaborative, well organized, and detail oriented. We use a nested mentorship process where all students new to the project are paired with more experienced undergraduate and graduate research assistants to help acclimate them to the project and develop research skills.

# Position #47; *Lauren Ptomey*

**Mentor name:** Lauren Ptomey, LSI/ Energy Balance Lab

**Job/project title:** Weight Management for Adults with Intellectual Disabilities

**Project description:**

The Energy Balance Lab at the University of Kansas is looking for a student to assist with weight management and physical activity research interventions for individuals with intellectual and developmental disabilities, such as Down syndrome. All individuals enrolled in our research interventions are on a 6-month weight loss diet, followed by 12-months of weight maintenance. The interventions are delivered over iPads or in-person, depending on which group the individual is in. We also deliver remote group exercise sessions using Skype to individuals in the program to help them increase their physical activity, these sessions are mostly dancing. The student would be responsible for helping with all aspects of the research process, such as helping the coordinator with recruitment of subjects, setting up iPads, doing data entry, and teaching some of the group exercise sessions.

**Potential student tasks and responsibilities:**

1. Organizing study materials and setting up iPads
2. Data Entry/Filing
3. Helping with literature reviews
4. Assisting with the Weight Management Program
5. Instructing group exercise classes to ~6 participants

**Student qualifications and characteristics:**

1. Interested in health and wellness
2. Organized
3. Energetic
4. Self-motivated
5. Able to work at least 1 night a week (4pm-6pm)

# Position #48; *Emily Riley*

**Mentor name:** Emily Riley, Kansas African Studies Center

**Job/project title:** Digital ethnography in West Africa

**Project description:**

This research project explores activists throughout West Africa that use social media platforms to combat political corruption, engage in democratic elections, and incite youth empowerment through political participation. The student would work with me to research background information, categorize tweets and Facebook posts of research participants and transcribe and organize audio interviews. This will provide the student with an opportunity to learn about ethnographic research methods, how to translate raw primary data into academic writings.

**Potential student tasks and responsibilities:** qualitative and quantitative data analysis and coding, transcription, organization of field notes, resource research such as supporting documentation, primary sources such as newspaper and social media posts, research for relevant academic resources.

**Student qualifications and characteristics:** Proficiency in written French as well as comprehension in listening. The student should be able to read French documents and understand audio files of spoken French. No prior experience with research is required. Strong writing skills and good organizational skills. Familiarity with navigating social media sites such as Facebook and Twitter. Must be able to consult with me in person once a week, and via email/text for instructions other times. Work hours are flexible. The student should have an interest and appreciation for social science research and an open mind for new interpretations and analysis of cultural content.

# Position #*58*; *Sarah Robins*

**Mentor name:** Sarah Robins, Philosophy

**Job/project title:** Creating a memory error catalog

**Project description:**

This a project about memory errors. Lots of recent work in psychology and neuroscience shows that our memory can be faulty and in many surprising ways. For this project, we'll be reviewing the extensive scientific research on these errors, with the aim of creating a taxonomy of all of the different kinds of errors that exist. This scientific review is actually part of a project in philosophy (particularly philosophy of mind) where the professor is attempting to give an account of the nature of memory (how it works, what it's good for, etc.). Getting clear on all the ways that memory can go wrong is a very important part of that overall project.

**Potential student tasks and responsibilities:** (With guidance and training), the student would be expected to search scientific databases for relevant research articles and archive articles that meet our criteria using bibliographic software. The student is also expected to read articles and write summaries of interesting findings. Depending on student preferences, much of this work can be done independently and during flexible hours. I expect that the student and I will have regular meetings (a few times a month) to talk about the findings and brainstorm ideas about how to classify the findings of the studies - and possibly even discuss the kinds of studies that should be done in the future to help improve memory error classification.

**Student qualifications and characteristics:** The ideal student for this position would have interest in the cognitive sciences (especially psychology and neuroscience) and also interest in theoretical or philosophical issues. Familiarity with conducting scientific experiments and/or reading scientific articles would be great, but is not required. Curiosity about theories of science or theories of the mind would be a real benefit - and could help to ensure that the student could be engaged with the project long term. Schedule for this position can be flexible, but will require a student who is self-motivated and an independent worker.

# Position #49; *Kathryn Saunders*

**Mentor name:** Kathryn Saunders, Life Span Institute; Applied Behavioral Sciences

**Job/project title:** Helping children learn to read via computerized instruction

**Project description:**

Ever wonder why some children struggle in learning to read, especially learning to sound out words, despite receiving good phonics instruction? In the last few decades, researchers have made tremendous strides in understanding this problem. It is now known that certain skills that a child has before reading instruction begins are absolutely critical to instructional success. As with any scientific advance, it takes time to change practice. The overall goal of the research program is to expedite the translation of research to practice. Our strategy is to develop computerized instruction of critical prereading and early reading skills. An example skill is phonemic awareness--recognizing that spoken words are made up of smaller sounds, and that the same sounds in different combinations form different words.

The procedures are based on state-of-the-science basic research, and data are quite promising. It is fun to watch children learn useful skills right before your eyes! Participants are typically developing nonreading children, and/or children with autism and/or intellectual disabilities.

**Potential student tasks and responsibilities:** Because the procedures are computerized, the student can begin helping to conduct teaching sessions independently after a few days of supervision. As soon as they are able, students will begin learning to use Excell to summarize and graph data. Because we use single-subject research designs, and we are working on an instructional sequence, meaningful data can be generated for individual participants on a weekly basis, and the student will present the data at lab meetings. Opportunities to write are available. We also will read relevant, primary-source articles. If the student participates for the academic year, he/she is very likely to be named as an author on at least one conference- presentation poster.

**Student qualifications and characteristics:** The student should have at least 60-minute blocks of time on at least three weekdays. Lab meetings (about 90 minutes) are scheduled based on the current schedules of lab members.

Attention to detail and an interest in data are critical. Ability to work one-to-one with children is required. The project is an excellent example of translational research, and has both basic research and application components. It could be of interest to students who are interested in

speech/language, cognitive development, education, special education, applied behavior analysis, or the experimental analysis of behavior. (And, of course, reading and learning early in particular.) Dr. Saunders has had over 20 years of federal funding for her research, so the position will should be attractive to students interested in a research-intensive career, as well as to students with primarily clinical interests.

# *Humanities*

# Position #*50; Shawn Alexander*

**Mentor name:** Shawn Alexander, African & African American Studies

**Job/project title:** The Creation of a Movement: The NAACP in the 1930s

**Project description:**

This project will begin the research into the NAACP's activities in the 1930s, the decade that the civil rights organization became the group that is known today. During this decade the Association hired its legal team that would lead the fight to end segregation in education, housing, and lay the foundation for the modern civil rights movement.

**Potential student tasks and responsibilities:** For the preliminary research the student will assist in looking through the organizational papers of the NAACP, collect the articles from the group's magazine, The Crisis and assist in decided what the major themes of the decade are in the Association's activity.

**Student qualifications and characteristics:** Basic computer skills. The other steps/activity I will help develop as we move forward.

An active interest in civil rights history, African American history/studies.

# Position #51; *Genelle Belmas*

**Mentor name:** Genelle Belmas, School of Journalism and Mass Communication

**Job/project title:** Reading legal cases on flag desecration for a legal history research project

**Project description:**

This research is part of a larger project on flag desecration (for example, burning or walking upon a flag) in the United States. My research partner (a professor at Georgia Tech) and I are working on a book, tentatively titled "Star Spangled," that traces the development of American flag law and how we as a country and a society view Old Glory. We are using legal research methods, as well as new methods in rhetorical analysis, to examine cases and events that have happened in which the U.S. flag is involved. We are primarily interested in how the meaning of the flag in the United States has changed in the past century. While we know that the legal standing of the flag has been determined by the Supreme Court of the United States, how do average men and women view the flag and its uses today? What is considered an acceptable use or display, and what is not? How has that changed from how American society has viewed it in the past?

**Potential student tasks and responsibilities:** If you're interested in legal studies, law school, American history, rhetoric and logic, media law, or how the legal system works in the United States, this project is for you. Working with me and my colleague at Georgia Tech, you'll read and brief (create summaries of) historical cases that have been decided by American courts on flag treatment during the Vietnam War. We will start with cases that are straightforward and move into cases that are more involved (and therefore more interesting!). I've identified over 70 cases during the Vietnam era so far that involve use of the flag, and I'd love help with reading, organizing, and looking for big themes within them.

For students considering law school, this is an ideal opportunity to do something you'll have to do there anyway: get comfortable reading actual court cases and understanding what's important about them. You'll learn legal terminology, how cases move up the appeals process, and legal theory regarding the First Amendment to the Constitution. You can, if you're interested, learn legal research as well, although I can provide you with the cases, at least to start. If you find you want to dig into actual legal research, we can do that. I'll teach you the basics of case reading, briefing, and understanding, and together we will create a database of these cases that can be used in a law review or journal as well as in the larger book project. I would love to have you as a co-author on this work!

**Student qualifications and characteristics:** My ideal research partner would be someone who is targeting law school or advanced academic degrees in areas like American studies, U.S. history, journalism, media law, or related areas. In a sense, this project could be like a grad school prep course, because my goal is to guide you through some of the ways in which research is done at a pace that is comfortable for you.

My partner would love reading and thinking about the law, and would be organized and detail-oriented, as well as being excited about the project. We would need to have weekly or bi-weekly progress meetings at first, but most of the work can be done on your own time. Once we've established that you understand the basic process of reading and briefing cases, you can go solo for a while with the list of cases, and then we can meet up again to determine where you would like to go next. I want a student I don't have to micromanage but who can meet deadlines without my nagging – someone who loves to get directions and then take the ball and run with it. Of course, I'm available via email or phone if there are issues, but I'm hoping for someone who likes to work on his/her own and is comfortable doing that as well as reaching out for help if that's needed. I'm a very approachable person, and I love working with students interested in research, particularly in the area of the law I love.

# Position #52; *Brian Donovan*

**Mentor name:** Brian Donovan, Sociology

**Job/project title:** Cultural Studies of the Gold Digger Stereotype

**Project description:**

I am writing a book about the "gold digger" stereotype in American culture and law. I am interested in the development of the gold digger from its beginnings as early twentieth century chorus girl slang to its incarnations in the late twentieth century. I am interested in working with a student to find and analyze material that pertains to the conclusion of my book. In particular, I am seeking material about the gold digger stereotype in African American "urban fiction" or "street lit." I am also interested in other manifestations of gold digger discourse in the late twentieth and early twenty-first centuries, including music and journalistic coverage of same-sex relationships.

**Potential student tasks and responsibilities:** The student will read six or seven urban novels and take detailed notes on them. We will develop and deploy a flexible template in order to create an inventory of the novels' contents pertaining to the major themes of my book: gender, law, and stereotypes. We will meet to discuss the books in general, including how they reference ideas about social inequality and support or undermine the gold digger stereotype. As the student progresses with this task, there also may be a potential to expand to other cultural forms (like music) and other decades ("gold digger" novels from the 1960s and 1970s).

**Student qualifications and characteristics:** This job requires a love of reading and an appreciation of popular fiction. Interest in gender, law, and/or sociology will also be very helpful because we will be analyzing fiction as a reflection of large social trends. We will meet regularly to discuss your findings and progress.

# Position #33; *Arienne M. Dwyer*

**Mentor name:** Arienne M. Dwyer, Anthropology

**Job/project title:** Development of Medicine along the Silk Road

**Project description:**

In eastern Central Asia, in what is now Chinese Turkestan, the practice of healing is derived from many medical traditions: Persian, Greek, Chinese, Indian, and shamanistic traditions. We would like to understand the transmission of medical knowledge across Eurasia. We do this by looking at how historical treatments for different illnesses overlap, and which treatments originate in which medical traditions (for example, a Persian herb is probably associated with Persian medicine).

Our sources are late 19th and early 20th century Turkestani medical handbooks, amulets, and formula that we've translated into English. We identify illnesses, treatments, and substances and use digital humanities tools and network analysis to map their relationships.

**Potential student tasks and responsibilities:** Students will familiarize themselves with traditional medicines from Eurasia (e.g. Persian, Chinese, Indian), participate in project team meetings, where these medical traditions will be discussed; they will be trained in coding transcribed texts for medical terms using open-source software, and will assist in the preparation of key terms (treatments and remedies) for network analysis, collecting and analyzing data, and assist in the presentation of the findings.

**Student qualifications and characteristics:** Students should have: a 2-3 hour time block available at least once a week, careful attention to detail, good organizational skills, basic experience with computers and data management, and an interest in intellectual and healing traditions in different languages and cultures. Knowledge of Persian or other relevant languages would be a plus.

# Position #53; *Maryemma Graham*

**Mentor name:** Maryemma Graham, English

**Job/project title:** Project Assistant

**Project description:**

The Project on the History of Black Writing (HBW), located in the College of Arts and Sciences, has been in the forefront of research and inclusion efforts in higher education since its founding in 1983 at the University of Mississippi, Oxford.

Our goal at HBW is to document, preserve, and to present Black writing and culture from the United States and globally to audiences on and off the KU campus. The staff consists of undergrad and graduate students working with a faculty director on educational events and initiatives pertaining to teaching and researching works by black authors.

**Potential student tasks and responsibilities:** The HBW Undergraduate Program Assistant will be involved in one or more of the following areas: (a) bolstering HBW"s digital and campus visibility through its HBW's social media strategy that works across key platforms including Wordpress, Facebook, Twitter, Instagram and Youtube to help bolster HBW's digital and campus visibility;

(b) developing, promoting, and executing specific campus programs focusing on literary and cultural activities ; (c) coordinating internal and external administrative communications with advisory board, as well as on and off campus partners; and (d) participating in funded research to create and expand digital archival collections and access for educators, scholars, librarians, and the general public.

**Student qualifications and characteristics:** The Undergraduate Program Assistant should possess:

- Effective written and verbal communication skills;
- Major familiarity with key social media tools (e.g. Twitter and Facebook);
- Interest in doing basic research in the humanities and social sciences;
- Interest in marketing, communications, and/or social media;
- Excellent attention to detail and a high motivation to learn;
- A proactive and focused attitude, with the ability to prioritize tasks and meet deadlines;

- The ability to work collaboratively within a team.

This student will have a chance to work in a team of fellow undergraduate and graduate students, attend conferences, and strengthen their research, leadership, and communication skills.

**Additional comments:** An ideal position for a student interested in expanding their knowledge of Black life and culture.

# Position #54; *Peter Grund*

**Mentor name:** Peter Grund, English

**Job/project title:** Writing the Salem witch trials

**Project description:**

Are you interested in learning about how people spoke and wrote in earlier times in North America? Are you excited about old documents and finding out more about people's relationships and communities in historical periods? Then this position would be for you. Our project is trying to trace who wrote the legal documents that have survived from the witch trials in Salem, MA, in 1692–1693, an infamous event in the early history of the English settlement in North America. Previous research has assumed that the some 900 witness statement, trial records, and other documents were simply written by a few court clerks. However, our project is demonstrating that this assumption is incorrect; instead we have found that more than 250 people recorded documents, many of the writers being ordinary members of the Salem community or of neighboring towns. The project is compiling a database of the Salem recorders, their writing habits, and their language. You would be involved in tracking down information about these recorders, organizing the evidence (including digital images of manuscripts), and, in time, in charting some of the similarities and differences between the recorders' handwriting practices and language choices. You would be contributing to the overall goal of providing a searchable electronic database of the Salem recorders, a book on Salem as a writing community, and various article-length projects. In other words, you would assist in bringing forward new information about this event that has not been known before!

**Potential student tasks and responsibilities:**

- Tracking down names of identified Salem recorders to provide information on their life, their relationship to other people in the community, etc. This will involve online as well as library searches of various resources (training will be provided). You will submit regular reports that will involve listing what sources you have consulted, what you have found, etc.

- Organizing and handling digital images. For example, you will be asked to collect different kinds of documents to make access easier. You may also be asked to do some minor work with the help of image-handling software (again training will be provided).

- Locating research materials for studies of specific features of handwriting or language. This will involve working with research databases and compiling (lightly) annotated bibliographies.

- Searching project databases for patterns. Second semester. You will assist in processing language and handwriting data in preparation for conference presentations and publications. For example, we are looking at variation in the spelling between ‘u’ and ‘v,’ where some recorders use ‘v’ and others ‘u’: as in “up” and “vp” (for “up”) or “haue” and “have” (for “have”).

- Proofreading. Second semester. You will read the profiles compiled for each recorder and make sure that references are correct, and that they follow a consistent style sheet (which we will provide).

### Student qualifications and characteristics:

- No prior knowledge of historical language use or manuscripts is necessary. Basic, necessary training will be provided.

- Working time is flexible, especially in the first semester. But on some days you will need to work in Watson and Anschutz Libraries in order to consult some sources.

- You need to be detail-oriented and organized. It will be important to document sources and research steps.

- You need to be patient and recognize that some things are not easily discovered. But with some work, there is often a great reward!

- Good language and reading skills.

- Responsiveness to email!

- A willingness to ask questions if you do not understand or are stuck!

# Position #55; *Joo Ok Kim*

**Mentor name:** Joo Ok Kim, American Studies

**Job/project title:** Archival Research Assistant for Latino/a Participation in the Korean War

**Project description:**

This research project examines archived collections from KU's Spencer Research Library, in addition to other regional libraries. In particular, the project focuses on print culture (primarily newspapers, also magazines, etc.) during the Korean War. The main objectives of the project are 1) to add to current scholarship on Latino/Chicano soldiers in the Korean War, and 2) to lend complexity to contemporary discourses about the Korean War. The methods for this project include identifying and analyzing archival material.

**Potential student tasks and responsibilities:** The student archival assistant's responsibilities include: key word searches in the KU libraries and finding aid searches in the Spencer Research Library; archival research in the Spencer Reading Room; reading, digitally reproducing, and summarizing relevant primary source articles; keeping detailed records of searches and research conducted; and engaging in other research activities as needed.

**Student qualifications and characteristics:** I especially encourage students interested in Latina/o Studies to apply! Knowledge of Spanish and Korean is a plus, but not required. An interest in the Korean War is helpful, as is related interest in literature, popular culture, and journalism. The scheduling requirements partially follow Spencer Research Library hours, but are otherwise very flexible. The emerging scholar should be detail-oriented, self-motivated, organized, and thorough. It would be excellent if the emerging scholar has an open, curious approach to learning and research!

# Position #67; *Marie-Alice L'Heureux*

**Mentor name:** Marie-Alice L'Heureux, Architecture

**Job/project title:** Politics and the Built Environment

**Project description:**

I am working on a number of research projects. One of them is the preliminary work to apply for a "Healthy Communities" grant from the Robert Wood Johnson foundation to study the Ivanhoe Neighborhood and its emergence from being the most dangerous sector of Kansas City, Missouri, to being a poster child for positive development without gentrification. I want to study the basis for this phenomena, which will involve map-making, scanning, reading, maybe participation in neighborhood meetings, and as much or as little hands on involvement as you desire. The second project is to prepare a book manuscript on the Estonian cultural landscape for publication-this also involves a variety of tasks that would be useful to anyone interested in history/research methods/organizing materials. I am also working on an article on Urban Renewal and Highways in Kansas City, Kansas and Kansas CIty, Missouri, which is an archival and a material culture project. The final project is a book on the Presidential libraries, mainly right now, the Truman, Eisenhower, Hoover, Roosevelt, Johnson and Kennedy Libraries, and the up-coming Obama Library. You would help me in many ways depending on your interests. Nothing is very complicated and I am very open to helping you learn practical skills, as well as research methods.

**Potential student tasks and responsibilities:** There are all kinds of tasks and I am very happy to have you help at whatever level you feel comfortable-and to progress to higher level tasks as you feel comfortable. Images need to be formatted (using Photoshop) for all of the projects, copyrights tracked down, and scanning of documents done. If you do not have Photoshop or illustrator skills, and would like to acquire them, this could be part of your work. I would also help you learn a bibliographic application such as Zotero or Endnote which would be useful for you as an emerging scholar.

**Student qualifications and characteristics:** Since the projects are at very different stages in their progress, from the very early stage of the Presidential libraries and the Ivanhoe research (yet even these are 6 years old) to the manuscript preparation phase on the Estonian cultural landscape which has been in the works for at least 15 years, you can have a variety of skill levels and still grow in the position, or if you have few of these skills but are open to learning them, then you could progress with the work. Given the range of projects you could be interested in sociology or health (Ivanhoe) history, cultural studies or architecture (presidential library or Estonian Cultural landscape); urban

issues about race and place (KC Urban Renewal and Highways). There is a place in Marvin you can work and some of the work can be done independently. Detail oriented and organized are two useful skills to have.  But an artistic temperament would also work.

# Position #56; *Elizabeth MacGonagle*

**Mentor name:** Elizabeth MacGonagle, Kansas African Studies Center

**Job/project title:** Africa is Here in the Midwest

**Project description:**

Did you know there are several African populations living in communities throughout Kansas and the Midwest? The Kansas African Studies Center at KU is engaged in a project that collects and promotes stories from these communities. The initiative seeks to offer moving stories about individuals of African descent who contribute to America's diversity. The student scholar will be mentored by the Center's Director (Prof. Liz MacGonagle) and staff to become familiar with current research and issues related to immigration, particularly to the Midwestern region. The project will benefit from the talents of a student scholar who will act as a research assistant to collect, analyze, and promote stories of recent migrants and their American-born children that will be featured on the project's website at www.migrationstories.ku.edu  By participating in this project you will gain research experience, learn more about Africans in the Midwest, and teach others about their stories based on your research. This position provides an opportunity for research in the humanities and social sciences, and calls for creative thinking about how to present resources to students, teachers, and the general public. It also allows for collaboration with KU's Center for Latin American and Caribbean Studies on the shared goal of enhancing our national narrative about immigration.

**Potential student tasks and responsibilities:** Tasks will grow in difficulty and responsibility as the student gains a familiarity with the project and available resources related to stories of migration. Throughout the year the scholar will work with Prof. MacGonagle and Center staff to collect and analyze research materials that will be relevant for the development of appropriate resources related to stories of migration. The student will supplement existing source material gathered previously by conducting humanities-based research and developing mini-projects related to the theme of migration stories under the guidance of Prof. MacGonagle.  These might include video vignettes from migrants or host community members; a photo essay; a podcast, a lesson plan, or an annotated bibliography. We look forward to benefiting from a student's perspective and learning more about how particular resources might resonate with youth and K-16 audiences.

**Student qualifications and characteristics:** We are seeking a student scholar interested in the development of new perspectives through the power of stories. This research position requires organization, motivation, and creativity. Strong writing skills, attention to detail, and the ability to

produce relevant and polished written materials are necessary. Attention to detail is also important. Other skills such as website design, graphic design or creating and editing videos, podcasts or blogs are preferred, but not required.

**Additional comments:** An openness to discussing the contested dialogue surrounding immigration and citizenship is needed.

# Position #57; *Chris McKitterick*

**Mentor name:** Chris McKitterick, Center for the Study of Science Fiction / English

**Job/project title:** Science Fiction Research Partner

**Project description:**

Are you passionate about speculative fiction? Do you want to do research in SF while helping keep the field vital and growing strong? Then perhaps you're the person that KU's prestigious Gunn Center for the Study of Science Fiction is looking for. KU's Gunn Center for the Study of Science Fiction - the first of its kind in the world - is looking for one or more motivated undergraduate researchers to work with the Center's directors (Chris McKitterick and Kij Johnson, both scholars and writers), our Graduate Research Assistant (Jason Baltazar), and our volunteers to help build the new framework and provide content and connections for educational, research, and creative outreach to the world as we shift our static website to a dynamic, interactive focus for science fiction.

During a time of radical and increasingly accelerating change (technological, scientific, and social), science fiction is becoming ever-more important as a mode and path to help people understand what it means to live through changing times. The Center's mission is to help educate writers and other creatives, educators, librarians, donors, volunteers, fans, and scholars, and other shapers of culture in ways to make SF more accessible to the public at a time when change is an increasingly significant social concern.

About the Gunn Center: http://www.sfcenter.ku.edu

What is science fiction? http://www.sfcenter.ku.edu/SF-Defined.htm

**Potential student tasks and responsibilities:** We seek a student to work within our diverse and growing programs on the research we need assistance with and which most inspires you, then share it via our educational outreach and social-networking resources. We interact with a large and growing group of science fiction professionals, alumni, authors, volunteers, educators, librarians, and students across the world. You have the opportunity to shape the position to best serve our mission while pursuing the research that most inspires you.

We have many opportunities for getting involved in real research and outreach in the SF field, and will work with motivated undergraduate researchers to help custom-tailor responsibilities. The student researcher will coordinate with our AboutSF Coordinator, Center GRA, and others on various Gunn Center research projects and outreach, and assist the Directors on other duties when needed. Some possible projects and responsibilities:

Do you want to create social change while doing literary scholarship? We would love to publish a regular column online with our readers (and get the word out through our social networks) about SF literature. We envision this in the form of a weekly reading list on various SF topics (especially focusing on women, people of color, non-Anglo authors, and other under-represented authors, nations, and movements), or a weekly book report (very short – 500 or more words is fine) especially using our materials and the Spencer Special SF Collection archives (again with a focus on under-represented SF authors, nations, and movements) as part of our educational-outreach program. Help research and write educational materials, reading lists, and so forth for educators, researchers, and serious readers, especially about under-represented SF authors, movements, and groups, and share results via social-network and digital-humanities systems.

Is education in your future? Our AboutSF educational-outreach program helps educators (in literature, science, and other fields) understand how to use science fiction in the classroom. You might also help prepare for our SF Summer program (and during, if available): Assist with residential-program Housing and Conference motel arrangements, assigning rooms to attendees and special guests, and so forth. You might also work with Center-specific special guests, lecturers, and other visitors on scheduling, travel, housing, local transportation, promotion and publicity, and so forth, and help organize volunteer assistance.

Are you a grassroots organizer (or want to become one)? Our activities and outreach work in an arena as broad as the universe! Via AboutSF and our conferences, workshops, institutes, websites, clubs, and elsewhere, you'll have opportunities to not only write regular articles as mentioned above, but also to work with existing and recruit new volunteers, present workshops to schools and libraries, present panels on SF education at conventions, and/or update and enhance our websites and social-media presence. Perhaps you want practice writing grants and proposals or doing fundraising? We have endless opportunities for these, too.

Is multimedia your thing? The Center holds hundreds of hours of audio and video recordings that need to be put into shape to share with the world via our YouTube, Podomatic, and other sites. The Spencer Collection also contains a wealth of materials that need to be shared with the world in digital and edited form. Short films, podcasts, vlogs, and such are all great ways to reach people while pursuing the Center's mission. We've published several things so far, but would really love to expand our multimedia presence!

Excited about science-fiction awards? The Center gives two major, international awards each year, so you might work with the Theodore Sturgeon Memorial Award for best short SF to help deepen the group of nominators, help solicit nominations, help our GRA generate a scored preliminary list of nominees, track down copies of finalist stories. You might also work with the John W. Campbell Memorial Award for best SF novel to help work with publishers to get a solid set of nominations.

Are you a web designer (or want to become one) or programmer? Our AboutSF.com, sfcenter.ku.edu, and other websites will be seeing major updates to modernize them and better integrate with our social networks. You could help our volunteers, GRA, and the Directors migrate and update the Center website to a fully interactive system. We'd love to develop new projects, too, up to and including an app for science-fiction scholars, educators, and others that serves our core mission.

Are you a scientist, engineer, or other non-English major with a vision of how science fiction can help further understanding about and interest in your field? We get it! SF is more an approach or mode of inquiry than a literary genre, and its practitioners and readers are at least as likely to be physicists, philosophers, technologists, or historians as they are to be literature scholars.

Planning on doing journalism or related work? You might work with Directors, Division Heads, alums, and others to create and share news releases.

If interested, you could potentially present research at local events, science-fiction conventions, and other venues.

And lots more as we identify opportunities and get to know one another. Whatever excites you most, the Center probably needs someone to bring that particular passion and energy to our mission.

**Student qualifications and characteristics:** This will vary depending on what projects our potential undergraduate research assistant is most interested in and for which they are best suited. To succeed, you must be good at self-direction and completing tasks without constant supervision, enthusiastic about being in contact with and serving our audience as appropriate for the work you do, and excited about using your creativity to help educate the world about science fiction and its possibilities. Beyond that, it depends on the kinds of projects we and you work out to best serve our mission. Here are a few general qualities that will make you stand out:

- Familiar with and passionate about science fiction literature, media, and the field. You need not be an expert, but must be willing and able to learn.
- Excellent at and interested in research.
- Open to mentoring and direction as needed.
- Strong written, spoken, and media communication skills, including keeping the Center's Directors informed of your progress (informal, weekly progress reports and occasional in-person meetings and mentoring sessions).
- Familiar with communicating via social-networking tools, blogs, email and lists and groups, and video sites, with an interest in maintaining communication. If you work outreach, you'll also make regular contacts with new people.
- Good attention to detail (tactical thinking) with the ability to see the big picture (strategic thinking).
- Excellent at managing time and prioritizing projects.
- Motivated, good at working with others, good self-direction once on a task, and able to work creatively toward novel solutions on short- or long-term projects with team members and mentors.
- If you work with others, you should be excited about meeting the movers and shakers in the SF field as well as coordinating volunteers around the nation and world.

- If you wish to do personal outreach, you must be enthusiastic about traveling to SF conventions and other venues in the area or around the country to meet people, promote our programs, and deliver the occasional talk or workshop.

- If you work with our websites, multimedia resources, or other creative outlets, you must be familiar with the tools and techniques for creating these things, or able to quickly learn how to do so.

- If you work on grassroots organizing, excited about and interest in coordinating volunteer activities in support of science fiction education, encouraging others to provide content, recruiting and working with volunteers, and more.

- If you want to write proposals, grants, and otherwise help secure donations and funding for our various programs, a basic understanding of what these are goes a long way, though we will mentor you and share resources as needed.

Primarily, we seek someone who is motivated and excited about working in science fiction, and who has a vision of how to best serve our mission of helping make the future a better place through SF! Your projects will determine what other qualifications are most important.

# Position #*58*; *Sarah Robins*

**Mentor name:** Sarah Robins, Philosophy

**Job/project title:** Creating a memory error catalog

**Project description:**

This a project about memory errors. Lots of recent work in psychology and neuroscience shows that our memory can be faulty and in many surprising ways. For this project, we'll be reviewing the extensive scientific research on these errors, with the aim of creating a taxonomy of all of the different kinds of errors that exist. This scientific review is actually part of a project in philosophy (particularly philosophy of mind) where the professor is attempting to give an account of the nature of memory (how it works, what it's good for, etc.). Getting clear on all the ways that memory can go wrong is a very important part of that overall project.

**Potential student tasks and responsibilities:** (With guidance and training), the student would be expected to search scientific databases for relevant research articles and archive articles that meet our criteria using bibliographic software. The student is also expected to read articles and write summaries of interesting findings. Depending on student preferences, much of this work can be done independently and during flexible hours. I expect that the student and I will have regular meetings (a few times a month) to talk about the findings and brainstorm ideas about how to classify the findings of the studies - and possibly even discuss the kinds of studies that should be done in the future to help improve memory error classification.

**Student qualifications and characteristics:** The ideal student for this position would have interest in the cognitive sciences (especially psychology and neuroscience) and also interest in theoretical or philosophical issues. Familiarity with conducting scientific experiments and/or reading scientific articles would be great, but is not required. Curiosity about theories of science or theories of the mind would be a real benefit - and could help to ensure that the student could be engaged with the project long term. Schedule for this position can be flexible, but will require a student who is self-motivated and an independent worker.

# Position #59; *Misty Schieberle*

**Mentor name:** Misty Schieberle, English

**Job/project title:** Rare Books Studies Research Assistant

**Project description:**

When 17-18th century college students weren't writing papers or studying, what did they do with their time? This Digital Humanities project investigates a unique rare book in the Spencer Research Library that collects the intellectual efforts and amusing writings of Oxford students who procrastinated by composing original poetry about duck hunting; arguing over the best liquors for a dinner party; devising a polite "recipe for love"; mocking their Oxford professors' pretensions; and making their own interpretations of other writers' texts. The handwritten book in question will be the subject of a digitization and transcription project, which will include historical research and annotations to explain antiquated references to modern readers. Your job will be to aid in the beginning of this research project; our overall goal will be to present a digital edition of the book with notes and materials that will help our readers better understand the interests and writings of our authors in their original context and in a way that is meaningful for 21st-century readers.

**Potential student tasks and responsibilities:** Tasks that will be required (with guidance from mentor but with increasing independence over the year):

1. Assist in the scanning of pages from a rare book.

2. Read and transcribe the handwritten pages into a Microsoft Word or GoogleDoc document (the writing is all in English; some texts are translated from short, sometimes scandalous Latin poems - for which modern English translations exist, too).

3. Identify terms and topics to look up in historical dictionaries and databases that will help readers interpret the Oxford students' writings (e.g., "buxom" does not mean what it used to!).

4. Research historical topics raised in the book's items, e.g., what general education topics Oxford students studied, what texts were the students imitating, and (if there is student interest/ability) what forms/genres the writers used.

5. Build a bibliography of resources for studying and analyzing the book and its contents.

6. Begin to theorize about the point of some of the entries, the kinds of writers that produced them, and the purpose of the volume as a whole.

7. Meet regularly to discuss progress with mentor and other collaborators.

**Student qualifications and characteristics:** The successful applicant for this position is excited to learn about the random musings of youths from centuries ago, comfortable reading cursive with some instruction in deciphering early handwriting, and able to conduct basic research into words used, facts about the time period, and topics raised by using library databases and other scholarly resources, in Spencer Research Library and elsewhere. Being organized and attentive to detail is essential. The student will be required to perform some of the research in the Spencer Research Library during its hours (items cannot be checked out), but otherwise, the exact schedule for work is flexible.

Students with interests in English Literature, History, and Classics (Latin) may find this work professionally useful, but all interested parties are welcome to apply. This project does not require any particular field-specific knowledge or experience, just curiosity. Applicants should simply be willing to try and have enthusiasm for detective work.

# Position #*60*; *John Symons*

**Mentor name:** John Symons, Philosophy

**Job/project title:** Science of Security Project

**Project description:**

Do you like listening to podcasts? Are you interested in learning about cybersecurity policy and theory? Do you put tape over your laptop camera? This is the job for you! Come join the science of security project team and you will gain exposure to the fascinating and exciting foundational research at the University of Kansas on cyber-defense strategies and challenges.

**Potential student tasks and responsibilities:** Your task will be to work with a faculty mentor (Professor John Symons) and a graduate student researcher to track new developments in cyber-security. You will listen to podcasts or read news articles online, record your findings on a spreadsheet, and meet once every two weeks with the team to talk about what you've learned.

**Student qualifications and characteristics:** No prior experience is necessary.

# Position #61; *Dhanashree Thorat*

**Mentor name:** Dhanashree Thorat, Institute for Digital Research in the Humanities

**Job/project title:** Social Media Archiving Toolkit - Research Assistant

**Project description:**

While there is interest among scholars in studying social media content (on Twitter, Facebook, YouTube, Instagram, etc), many scholars are also thwarted by the challenges of data collection and management. How do you collect ten thousand tweets and analyze them? We are developing a Social Media Archiving Toolkit which will guide researchers who want to do social media research. The toolkit will be created as a website that is openly accessible to researchers at KU and elsewhere. This toolkit will have sections on:

- Collecting Social Media Content
- Data Curation and Management
- Reviews of Digital Tools
- Social Media Research Ethics
- Sample Studies on Social Media

The Emerging Scholar will be involved in research and writing for the components of the toolkit. To start with, the Scholar will work on the Sample Studies section to create a bibliography of existing books and articles on social media related topics. The Scholar will also be involved in writing some of the reviews of digital tools.

This project is being developed under the auspices of the Institute for Digital Research in the Humanities.

**Potential student tasks and responsibilities:** We don't expect the Emerging Scholar to have any specific technical proficiencies, and we will meet regularly to ensure the student is prepared for the task at hand.

You will first work on creating a bibliography of research articles on social media studies. (A list of specific Humanities and Social Sciences journals will be given to you). This bibliography will be linked on the website of the Social Media Archiving Toolkit. This task will require you to be familiar with searching academic databases through the KU Libraries, and creating a bibliographic citation with basic information from each article. We will have project meetings to clarify how these processes work so you don't need to familiar with them already.

The Scholar will also be involved in writing reviews of digital tools (which allow you to scrape social media data). When the project reaches that stage, we will discuss how to write the reviews and meet regularly to ensure the Scholar is prepared.

We hope this experience will be a learning opportunity for the Emerging Scholar: the Scholar will be acknowledged as a research assistant or co-author on the project site, and learn how to conduct academic research, write for a public audience, develop an open access (OA) project, and publish on digital platforms.

**Student qualifications and characteristics:** We expect the student to be interested in learning about the research process, and willing to write and revise their writing based on constructive feedback. Both writing and research are critical parts of this project.

The student should also be attentive to detail and able to (or willing to learn how to) record, organize, and present information effectively for a public audience.

We will meet with the student once a week for an hour to establish weekly goals, and to prepare the student for those goals. The student will have flexible work hours aside from this meeting, and hence should be able to work independently.

We welcome applicants from a variety of Humanities and Social Sciences disciplines who are interested in social media, digital research, writing for a public audience, or other aspects of this project. It may be possible to tailor the Scholar's work based on their interests (for eg. data ethics, rather than digital tools)

# Position #62; *Luciano Tosta*

**Mentor name:** Luciano Tosta, Spanish and Portuguese

**Job/project title:** The Unlettered City: Human Geography, Subalternity, and Spaces of Oppression in Iberian and Latin American Literature and Film

**Project description:**

I am working on a book manuscript entitled “The Unlettered City: Subalternity and Spaces of Exclusion in Latin American Film and Literature.” It discusses representations of marginal(ized) subjects such as prostitutes, homeless people, vagrants, transvestites, beggars, and street children in public spaces in Iberian and Latin American cities. I analyze these portrayals by focusing on how the spaces that they inhabit transform life and perceptions of the ideal Iberian and Latin American city. This project is theoretically informed by the fields of postcolonial and subaltern studies in connection to scholarship in architecture, demography, and urban geography, with an emphasis on the urban experience. The project is still in its very early stages.

**Potential student tasks and responsibilities:** The students will locate Spanish, Portuguese, Spanish American and Brazilian films and literary works in which such "marginal(ized)" characters are portrayed. They will conduct bibliographical research on these works and authors/directors,, as well as on specific Iberian and Latin American cities such as Lisbon, Madrid, Barcelona, Buenos Aires, Mexico City, Rio de Janeiro, and São Paulo. They may also scan articles to digital format, and read some of the works in order to identify major themes. The students will research critical scholarship on cities, and particularly on urban sites, and notions such as space, place, and mobility. The students are also expected to help proofread professor's draft chapters or essays written for conference presentations. They will discuss each step of the research with the professor, including manuscript submission.

**Student qualifications and characteristics:** The ideal emerging scholar would have an interest in literature and cinema, as well as in urban and architectural studies, and in social issues. Knowledge of Spanish and Portuguese is not necessary, but certainly a plus. Students in humanities, social sciences, or art and architecture desired. Proficiency with computer applications such as Microsoft Office suite, especially Microsoft Word. Expert user of the World Wide Web. Experience with academic writing a plus. Organization and attention to detail a must. Familiarity with MLA or Chicago Style desired. Must be available for three mandatory weekly meetings with professor.

# Position #63; *Lorie Vanchena*

**Mentor name:** Lorie Vanchena, Germanic Languages & Literatures

**Job/project title:** WWI American Immigrant Poetry

**Project description:**

This Digital Humanities project collects and makes accessible poems written by immigrants in the U.S. during the World War I era. We identify poems in archival materials on campus and in print publications and online sources. The poems are then transcribed and encoded using XML (eXtensible Markup Language), a process that entails typing a poem text into a template using an XML editor, thus rendering the texts machine-readable. The XML files are then styled for display on the project website, which will go live in summer 2018. The project also applies data science methods to our XML files to explore what the poems reveal about ethnic identity. The Emerging Scholar will learn a range of digital humanities and research skills during the academic year, with a focus on encoding poetry.

**Potential student tasks and responsibilities:** The Emerging Scholar will complete the following tasks, listed in order of increasing difficulty and responsibility, during the academic year:

1. Learn how to work with 100-year-old archival materials

2. Learn and use best practices for naming, organizing, and backing up encoded and scanned files on external drives and remote server

3. Proofread encoded poems

4. Learn and use Digital Humanities skills such as encoding poems in XML using the Oxygen XML editor, working with the file transfer program FileZilla, transforming XML files into HTML for the project website, and using PyCharm to add JavaScript elements to HTML files. No prior knowledge necessary.

5. Acquire familiarity with the schema that specifies the structure and content of our XML files, the XSL (eXtensible Style Sheet) we use to style our XML, and the CSS (Cascading Style Sheet) that describes how our HTML is displayed. No prior knowledge necessary.

**Student qualifications and characteristics:** Preferences:

1. Willingness to collaborate productively with team members (1-2 undergraduates and faculty mentor)

2. Availability for mandatory team time at the Max Kade Center, ideally one 3-hour session each week, as well as shorter sessions with one other team member. Schedule depends on students' and mentor's schedules and will be determined at start of semester.

3. Ability to complete tasks independently

4. Strong computer skills and an aptitude for learning Digital Humanities skills such as encoding in XML with Oxygen Editor

5. Reading knowledge of a European language would be helpful

6. Curiosity about the First World War and the poetry it generated, the immigrant experience, and Digital Humanities

# Position #64; *Omaris Zamora*

**Mentor name:** Omaris Zamora, Spanish and Portuguese

**Job/project title:** Afro-Latinas in Reality TV and Digital Afro-Caribbean Diasporas

**Project description:**

Are you someone who enjoys popular culture, social media, and a good dose of reality TV? Are you a well-rounded and informed individual when it comes to the diversity of blackness, gender, and sexuality? Then this job, may be for you! I am working on my first book, which is on transnational Afro-Dominican women's narratives of blackness and womanhood in literature, performance, and social media. For this particular part of the project I am focusing on the social media and reality TV research and archival data entry around Afro-Latina artists Cardi B and Amara La Negra.

**Potential student tasks and responsibilities:**

- The ideal research assistant will work with me to create a cataloguing system for organizing YouTube videos, Instagram posts, and reality TV episodes using Zotero, EndNote, and/or Evernote.
- We will work together to find ways to create an archive of this digital media and I will provide all the training necessary
- The research assistant will watch episodes from Love and Hip Hop NY and Miami and take detailed notes, which must later be coded or categorized.
- Will use Google Scholar to build on literature on digital diaspora and cyberspace as they relate to blackness, specifically Afro-Latinos.
- Will digitize sources by scanning books, articles, documents, images, etc.
- Must be available to work 5 hours a week which will be scheduled in consultation with me

**Student qualifications and characteristics:** The ideal student for this position should be invested and committed to diversity in scholarship that represents people of color, women, and people with varying genders, sexualities, and abilities. A curiosity for engaging and analyzing cultural texts and popular culture is a must. The student will have a set weekly schedule and will meet with me once a week to go over goals for the week as well as provide mentorship and guidance in their own research experience. The student must have good attention to detail, be organized, and creative in

their thinking and problem-solving. Speaking, listening, and reading ability of Spanish preferred, but not required.

# Arts

# Position #65; *Jane Barnette*

**Mentor name:** Jane Barnette, Theatre

**Job/project title:** Assistant Dramaturg & Designer for Sycorax, a new play

**Project description:**

I am directing a play in early 2019 that is a feminist and queer prequel to William Shakespeare's The Tempest, called Sycorax by Susan Gayle Todd. This creative work will be part of the research for a book I am working on about makeup design for stage witch characters and for the performance of witchiness in everyday life. The purpose of this project is dual: for the stage production, I want to share Todd's vision of Caliban's mother Sycorax with audiences and inspire conversations about the fictional worlds playwrights create and how they reverberate for today's spectators. By exploring major witch figures like Sycorax, the Algerian woman whom Prospero calls "the blue-eyed hag," I can discover patterns of adaptation dramaturgy for the book. By dramaturgy, I mean the research for producing the performance as well as the adaptation process of writing the play. Dramaturgs work behind the scenes to support the director's concept, the designers' processes, and they curate the spectators' navigation of the show.

The Emerging Scholar will help design and build the puppets, makeup and headgear, and props that will be part of the KU Theatre's production of Sycorax in the early spring semester. This process will have two primary parts: in the fall semester, students will gather research about the culture, styles, and materials dramaturgically appropriate to the play and share that research with the rest of the design team. In the spring, students will help build the puppets, headgear, and props for the show, while documenting the process. After the run of the show, students will organize and summarize an inventory of the documentation (photographs, video clips, interviews, publicity) that will be crucial evidence for the book.

**Potential student tasks and responsibilities:** Possible tasks and responsibilities include receiving training from the costume and scenic designers and theatre staff on how to work with the materials and tools needed for puppet, headgear (hats, horns, crowns, etc.), and prop (handheld object) design and construction. Students may also receive training from arts-based library staff on how to work with theatre history and design research. With this training in place, the student will then begin methodically collecting images and material details about the location, culture, and production history of both The Tempest and Sycorax. As the student gets more comfortable with this task, there will likely be a chance to work with the construction crew and the design team for this show.

**Student qualifications and characteristics:** This job requires cooperation, determination, and creativity because we are making theatre. The student must also be organized, attentive to detail, and systematic—they will receive training to help hone these skills. Curiosity about the history of witchcraft, feminism, and/or the LGBTQ community will be very helpful as will an interest either in Theatre, African & African-American Studies, Religious Studies, History, or Women, Gender, and Sexuality Studies. We will meet regularly to discuss your findings, progress, and for general supervision and mentoring. Beyond these regular meetings, the scheduling for student work is only confined to the KU Theatre costume and scenic shops' hours of operation. I will occasionally join you in the shop/s to work together.

**Additional comments:** Content Warning for Sycorax: This play contains depictions of sexual and domestic violence and abuse.

# Position #*66*; *Joe Colistra*

**Mentor name:** Joe Colistra, Architecture

**Job/project title:** Research Assistant for the Institute for Smart Cities

**Project description:**

Research Assistant needed to conduct literature review of Smart Cities technology, organize KU research efforts, dissemination of research through websites, and social media.

**Potential student tasks and responsibilities:** Web research, some light architectural drawing, architectural models depending on experience, compilation of articles on research.

**Student qualifications and characteristics:** Flexible tasks and schedule, organizational skills a must, preferably a Design or Architecture student.

# Position #67; *Marie-Alice L'Heureux*

**Mentor name:** Marie-Alice L'Heureux, Architecture

**Job/project title:** Politics and the Built Environment

**Project description:**

I am working on a number of research projects. One of them is the preliminary work to apply for a "Healthy Communities" grant from the Robert Wood Johnson foundation to study the Ivanhoe Neighborhood and its emergence from being the most dangerous sector of Kansas City, Missouri, to being a poster child for positive development without gentrification. I want to study the basis for this phenomena, which will involve map-making, scanning, reading, maybe participation in neighborhood meetings, and as much or as little hands on involvement as you desire. The second project is to prepare a book manuscript on the Estonian cultural landscape for publication-this also involves a variety of tasks that would be useful to anyone interested in history/research methods/organizing materials. I am also working on an article on Urban Renewal and Highways in Kansas City, Kansas and Kansas CIty, Missouri, which is an archival and a material culture project. The final project is a book on the Presidential libraries, mainly right now, the Truman, Eisenhower, Hoover, Roosevelt, Johnson and Kennedy Libraries, and the up-coming Obama Library. You would help me in many ways depending on your interests. Nothing is very complicated and I am very open to helping you learn practical skills, as well as research methods.

**Potential student tasks and responsibilities:** There are all kinds of tasks and I am very happy to have you help at whatever level you feel comfortable-and to progress to higher level tasks as you feel comfortable. Images need to be formatted (using Photoshop) for all of the projects, copyrights tracked down, and scanning of documents done. If you do not have Photoshop or illustrator skills, and would like to acquire them, this could be part of your work. I would also help you learn a bibliographic application such as Zotero or Endnote which would be useful for you as an emerging scholar.

**Student qualifications and characteristics:** Since the projects are at very different stages in their progress, from the very early stage of the Presidential libraries and the Ivanhoe research (yet even these are 6 years old) to the manuscript preparation phase on the Estonian cultural landscape which has been in the works for at least 15 years, you can have a variety of skill levels and still grow in the position, or if you have few of these skills but are open to learning them, then you could progress with the work. Given the range of projects you could be interested in sociology or health (Ivanhoe)

history, cultural studies or architecture (presidential library or Estonian Cultural landscape); urban issues about race and place (KC Urban Renewal and Highways). There is a place in Marvin you can work and some of the work can be done independently. Detail oriented and organized are two useful skills to have.  But an artistic temperament would also work.

# Position #*68*; *F. María Velasco*

**Mentor name:** F. María Velasco, Visual Art

**Job/project title:** Studio/Research Assistant

**Project description:**

Spaces of Conviviality consists of the creation of several artistic installations around historic memory, identity and stereotypical perceptions of the 'Other.' The artwork will be created during my residency in Spain from July-August 2018 and I will use architectural patterns, historical symbols and textual resources dating Islamic Iberia (710-1491). Upon return, I will publish a brochure with images and an essay by Dr. Susan Earle, Curator of European and American Art at the Spencer Museum of Art.

This project is a continuation of my research about visual patterns and socio-cultural patterns, specifically in the geographic area of Islamic Iberia (Spain, Portugal, North of Morocco). I will need a studio/research student to help me organize the work produced, update artist website, handle photo/video documentation of the project and assist with the production of the brochure. Concurrently, we will investigate contemporary artistic and curatorial practices (residencies, organizations, research centers) engaged in the process of reactivation of cultural heritage and collective memory in relation to this geographic area.

**Potential student tasks and responsibilities:** Some tasks will be very hands-on and will entail handling the artwork, packing and transporting it to be photographed in the studio and investigating the best preservation methods (archival paper, boxes, portfolios etc); general studio organization. Additional tasks: basic design and layout; website updating; editing and preparing images for brochure; conduct research relative to the wider context of the topic in contemporary art practices; organizing the literature and textual resources related to the project. A student with an interest in contemporary art, curatorial practices, history, sociology, visual anthropology, or journalism will enjoy being a part of this project.

**Student qualifications and characteristics:** The ideal student is organized, pays attention to detail and is able to handle delicate materials with care. Some knowledge of Adobe Photoshop, data entry and design layout is desirable, and can be arranged with existing online tutorials. Curiosity, initiative, a certain amount of trial and error will make the tasks interesting and enjoyable. A regular and reliable schedule is required to fit blocks of time (2-3hrs) to meet and make good progress.

**Additional comments:** Somebody said the best learning takes place outside of the classroom!