Research Teams in
Psychology PSYC 4970 and
PSYC 4980

Spring 2025

For more detailed information concerning PSYC 4980 (Creative Inquiry) you may visit the University website at http://www.clemson.edu/academics/programs/creative-inquiry/projects/current-projects.html?college=COBBS

Object Use in Children with Autism

Students interested in graduate school in psychology or any health-related field who have a GPA of 3.0 or higher and can stay involved with the project for at least 2 semesters, are welcome to apply for this research team. For this project, students will explore how individuals with Autism interact with everyday objects.

For more information, contact **Dr. Jennifer Grandits** at jbgrand@clemson.edu

The Use of Compression Clothing in Children with Autism

Students interested in graduate school in psychology or any health-related field who have a GPA of 3.0 or higher and can stay involved with the project for at least 2 semesters, are welcome to apply for this research team. For this project, students will explore how medical-grade compression vests affect physiological stress and observed behavior of children with Autism (in public settings). For this project, students will be working directly with individuals diagnosed with Autism Spectrum Disorder (and their families).

For more information, contact **Dr. Jennifer Grandits** at jbgrand@clemson.edu

Personality & Law

The aims of the research group are to study contributors to personality development and identify real-life implications of personality research findings. In particular, the group is interested in understanding how personality findings can be applied within legal settings. For instance, research suggests that personality impacts the performance of children as eyewitnesses during forensic interviews, as well as the perceptions of jurors when determining witness credibility.

For more information, contact **Dr. Ben Cotterill** at bfcotte@clemson.edu

Aging and Decision-Making

Decision-making is a prevalent part of everyday life, and the choices we make can have significant consequences across all stages of the lifespan. The purpose of this CI Team is to examine adaptive and maladaptive decision-making strategies that occur with healthy aging. This research seeks to assess how social, cognitive, emotional, and motivational factors influence decision-making. Understanding these factors may allow us to develop decision aids that can improve decision-making outcomes with age.
For more information, contact **Dr. Kaileigh Byrne** at kaileib@clemson.edu

Decision-Making and Risk-Taking

The purpose of this Creative Inquiry team is to conduct research on the (1) effect of emotion and reward motivation on goal-directed decision-making as well as (2) how individual differences, such as personality and susceptibility to performance pressure, affect risk-taking behaviors. Decision-making is an inescapable, prevalent phenomenon that can have significant consequences. This research aims to understand factors and cognitive mechanisms that affect decision-making and risk-taking.

For more information, contact **Dr. Kaileigh Byrne** at kaileib@clemson.edu

Social Psychology

Students work as part of a team investigating topics related to social psychology including cyberbullying, school and mass shootings, grudges, and psychological dread, among others. Students are expected to be active members of the group, including attendance at local, regional, and national conferences when possible..

For more information, contact **Dr. Robin Kowalski** at rkowals@clemson.edu

Perception & Action: Studies in Virtual Reality and Affordances
Students will assist graduate students in running their experiments or students will complete a project of their own. Preference will be given to students who have already taken Psyc 3220 with Dr. Pagano

For more information, contact **Dr. Pagano** at cpagano@clemson.edu

Courage and Positive Psychology

This ongoing research team uses the methodology of psychological science to investigate several positive psychological constructs. The primary construct we are investigating is courage, defined as taking a worthwhile risk. Can we become more courageous? What's the best way to encourage someone else? Is courage always a good thing? How can we measure courage for any particular action?

We also conduct research on other positive psychological constructs, including, but not limited to, serious leisure, awe, moral elevation, curiosity, life satisfaction, identity, meaning, and humility. To what extent do individual differences in these constructs predict real-life experiences? What external factors make them more likely? Students may work on graduate student projects exploring positive psychology in the workplace or in health-related outcomes.

In any given semester, students can expect to be involved in a selection of the following activities, depending on the projects we're working on: Literature search, literature review, hypothesis generation, materials selection, materials preparation, data collection, data cleaning, data coding, data analysis, data interpretation, report writing.

Must commit to at least 2 semesters.

For more information, contact **Dr. Pury** at cpury@clemson.edu

Diversity and Individual Differences

This CI team explores topics related to diversity and individual differences in the workplace. We consider how diversity and individual differences (e.g., personality, cognitive ability) may interact with the work environment. Tasks will include assistance with literature reviews, preparing study materials, data collection in lab experiments, data tabulation, and statistical analysis. Students who plan on pursuing a graduate degree and have a major GPA over 3.0 are welcome to apply for this CI team. For more information, please visit link.

Healthy Aging

Students in this CI will support research efforts in the Study of Healthy Aging and Applied Research Programs (SHAARP) Lab. This could include direct engagement with participants through telephone screening and conducting study visits, conducting and writing literature reviews, and contributing to publications and presentations. Students may also have the opportunity to propose and conduct their own investigations using SHAARP Lab datasets, engage in community outreach events through the Institute for Engaged Aging, and participate in other healthy aging initiatives as time and interest permit.

Students must complete an application (available at https://www.shaarp.org/contact) and commit to spending 8-10 hours/week on lab activities; we are based in Seneca, SC at Oconee Memorial Hospital. We strongly prefer new students to be in their sophomore or

junior year, as this provides sufficient time for students to be trained, get familiar with our lab and research, and carry out meaningful work before graduating, though we encourage all interested students to apply.

For more information, contact **Dr. Abby Stephan** at atsteph@clemson.edu or **Dr. Lesley Ross** at laross@clemson.edu

<u>Child Development</u>

Students will be involved in a weekly in person CI meeting with Dr Grandits and Dr Sanborn where they present on various topics or discuss items related to their specific projects; in addition to this they are assigned tasks related to their subproject and will be expected to meet with their sub team members and report to their team leader each week. There are three groups currently (this will be paired down to 2 groups in the spring) that are focused on various things concerning child development (note groups 2 and 3 will be combined in spring 2024 very likely- I am trying to downsize the group a little as we wrap up projects):

1) Parent-Child Attachment Subteam-- how factors like parents' age, postpartum depression/anxiety, parental support, co-sleeping, breastfeeding, co-parenting, and infant characteristics impact that attachment? How is father-infant attachment unique from mother-infant attachment? How do first time parents respond to their infants' needs differently than parents who have already had one or more children?

2) Perceptions of Infant Crying and Toddler Tantrums SubTeam: How do parents and non-parents perceive and respond to infant crying and toddler tantrums, specifically their own children but also other children, especially if they had what they labeled an "easy" vs. "difficult" infant who becomes a tantruming toddler? How are parents and non-parents physiologically impacted by infant crying and toddler tantrums (e.g., heart rate, stress responses, etc.) and how does that compare to their perceptions of crying/tantrum intensity? Do parents respond differently to toddlers and infants who have special needs or a known developmental delay?

3) Emotions and Cognition Subteam: This group focuses on the impact of emotion on cognition. How can parents and non-parents multi-task and pay attention to various cognitive tasks when they have children demanding their attention, particularly by crying and screaming? We know that cell phones are distracting when driving, but what about children, especially when they are crying and screaming while you try to focus on the road?

Preferred Requirements: It is strongly preferred that a student has made B or higher in Psych 3100 (required or completion of another similar class in research methods) and preferred to have taken Psych 3400 (and/or Psych 4430) and scored with B or higher. We are willing to take on non-psych major students who may have not had Psych 3100 or psych students who have not taken 3100, depending on the student and their past experiences and motivation for being on the team.

For more information, contact **Dr. Sarah Sanborn** at ssanbor@clemson.edu

Cyber-Crime and Psych

Cyber-crime has become a prevalent threat to modern society. Billions (if not trillions) are lost each year to various forms of cyber-crime. One form of cyber-crime that needs further exploration is phishing emails. Phishing emails are attacks that attempt to steal your personal information (e.g., social security numbers, bank account information) by disguising themselves as a reputable source (e.g., your bank, or IT department. In this CI team we will explore the various factors that lead to phishing susceptibility and how we can potentially improve email users' resiliency to these types of attacks. To accomplish this, we will conduct literature reviews, develop research questions, run studies, analyze data and write up that data for conferences presentations and publications. Students with a GPA of 3.0 or higher, an interest in graduate school, and an interest in cybersecurity are preferred.

For more information contact **Dr. Dawn Sarno** at dmsarno@clemson.edu

Applied Vision and HF

Visual processes dominate our daily activities, whether we are searching for our car keys in a cluttered drawer or trying to avoid pedestrians on a busy road. Many applied visual tasks involve understanding how individuals visually search for various targets amongst noisy backgrounds. Such contexts include radiology, baggage screening, and military operations. In this CI team we will investigate how users search for a variety of targets (e.g., cancerous tumors) and how automation can aid users in their search strategies. Topics such as target prevalence, oculomotor correlates of attention (i.e., eye tracking), automation complacency, and usability will be explored. To accomplish these goals, we will conduct literature reviews, develop research questions, run studies, analyze data and write up that data for conferences presentations and publications. Students with a GPA of 3.0 or higher, an interest in graduate school, and an interest in vision and technology are preferred.

For more information contact **Katharine Sabo** at sabo2@clemson.edu or **Dr. Dawn Sarno** at dmsarno@clemson.edu

Healthcare Superheroes

Understanding how to effectively coordinate patient care has been a long-standing issue within the healthcare context. Moreover, soaring healthcare costs, staffing shortages, and legislative changes have contributed to a surge of interest in the ways healthcare organizations manage their leaders and teams in order to better impact patient outcomes. As a research initiative of the DIGITAL lab, we are interested in better understanding the role of effective coordination and communication between leaders and team members on multiple levels of analysis: this includes, but is not limited to, rounding structure, leader health and burnout, team effectiveness, patient safety and experiences, and employee engagement and health.

The purpose of this CI team is to aid our research efforts in understanding how different healthcare teams must work together to provide effective care within Prisma Health - Upstate.

Specifically, CI members on this team will be involved in field research including observations, interviews, and focus groups; training development and evaluation; data organization and analysis; and other qualitative and quantitative research efforts. If you are interested in healthcare management, employee engagement, leadership and team development, patient experience, applied statistics, or any combination of the above, this CI team is likely to be a great fit for you.

For more information, contact **Katelyn Hedrick** at knhedri@g.clemson.edu, **Tiffany Merucci** at tmerucc@clemson.edu, or **Dr. Marissa Shuffler** at mshuffl@clemson.edu

Creativity and Collaboration

Have you ever wondered how the teams of people who work on shows like SNL, South Park, and The Daily Show with Trevor Noah are able to come up with such creative content in such a short amount of time? What stands in the way of creativity in teams like these and what can we do to help teams reach their creative potential? Come to think of it, what even is creativity? As a research initiative of the Developing and Improving Globally Integrated Teamwork and Leadership (DIGITAL) Lab, we are interested in exploring these topics by specifically looking at what goes on during team meetings that helps or hinders creative processes and outcomes.

Students selected for this Creative Inquiry research team can expect to gain experience with experimental research by engaging in literature reviews, running participants through experiments, coding participant behaviors, and helping to tell meaningful stories with analyzed data.

For more information, contact **Kyle Christenson** at kmc9@g.clemson.edu, **Tiffany Merucci** at tmerucc@clemson.edu, or **Dr. Marissa Shuffler** at mshuffl@clemson.edu

Getting to "All-In:" Team Development in the Context of Sports Teams

The current state of college athletics has everyone asking a lot of questions. Policy changes to transfer and NIL rules leave us asking, "How do we get the right players here, and how do we keep them here?" A growing call to better support student-athlete mental health has us asking, "How do we strike a healthy balance between player support and challenge without compromising team goals?" As competitors, we have always been asking, "How do we get on top and stay on top? How do we build and sustain a championship culture?"

The purpose of this research is to help find answers to these questions by applying principles from industrial-organizational psychology and team science to college athletics. Specifically, we will look at players' perceptions of several variables (e.g., fit, commitment, etc.) and how these perceptions influence retention, mental health, performance, and other related outcomes. The outcomes of this research will not only expand our academic knowledge of teamwork in

dynamic team environments, but will have the potential to equip coaches and athletics staff with information and recommendations to help them meet their team's needs in real time. The aim is to build high-performing teams that set players up to thrive.

For more information, contact **Ally Wentworth** at anwentw@g.clemson.edu, **Marlee Johnson** at marleej@g.clemson.edu, **Tiffany Merucci** at tmerucc@clemson.edu, or **Dr. Marissa Shuffler** at mshuffl@clemson.edu.

Mission Impossible? Teamwork and Team Composition in High Risk, High Stress Environments

How do we turn teams of experts into expert teams, especially when they are teams working in stressful and demanding military environments? We are currently investigating this question in the DIGITAL (Deriving Innovative & riGorous science for Teaming And Leading) Research Lab, as teams today face new challenges which may require different interventions and strategies than what seems to work in traditional teams. This CI team will involve conducting lab and field research in military research contexts to answer this question and expand our current knowledge of teamwork and leadership in diverse, physically distributed, dynamic, and adaptive work environments.

Specifically, CI members on this team will be involved in research of military-inspired, team-based activities. CIs will assist in setting up and running experimental sessions, collecting data through observations and survey administration, and assisting with data management and organization. This research will develop skill in training, development and evaluation; data organization and analysis; teamwork and leadership; and other qualitative and quantitative research capabilities. If you are interested in learning more about high stress work environments, leadership and team development, team composition, applied statistics, or any combination of the above, this CI team is likely to be a great fit for you.

For more information, contact **Dr. Marissa Shuffler** at mshuffl@clemson.edu; **Marlee Johnson** at marleej@g.clemson.edu, or **Tiffany Merucci** at tmerucc@clemson.edu

Frontline & Sideline: Understanding Teamwork in High-Stress, Perform-at-All-Costs Environments

The world is changing, and teams are changing with it. In every context, especially those that are complex and uncertain, teams are becoming increasingly more important. For instance, in college sports, team retention, performance, and well-being are top concerns of nearly every administrator, coach, and program. In the military, changing landscapes (physical or not) make teamwork more important but more difficult than ever. In healthcare/emergency response, the coordination within and between teams (or lack thereof) can save (or cost) lives. The purpose of this research team is to better understand teamwork in these high-stress, perform-at-all-costs environments by applying principles from industrial-organizational psychology and team science to better support teams in all areas. Specifically, we look at retention, well-being, and culture in college sports, and coordination in military and first response teams. To do so, we take an interdisciplinary, relationship-driven approach to develop novel methods, measures, theories and outcomes. The outcomes of this research will not only expand our academic knowledge of teamwork in dynamic team environments, but

will have the potential to equip real-word teams with actionable insights. The aim is to build high-performing teams that set individuals up to thrive.

For more information, contact **Ally Wentworth** at anwentw@g.clemson.edu, **Marlee Johnson** at marleej@g.clemson.edu, **Tiffany Merucci** at tmerucc@clemson.edu, or **Dr. Marissa Shuffle**r at mshuffl@clemson.edu.

Occupational Health Psychology

The goal of this CI team is to conduct research addressing issues in the field of Occupational Health Psychology (OHP). OHP generally concerns the impact of individual and environmental factors on workers' safety, health, and well-being. Our lab currently focuses on OHP areas such as nonstandard work arrangements (e.g., gig work), economic stress (e.g., job insecurity, underemployment), and the nature of well-being. The CI team will be working on at least two projects to follow up and extend our lab's previous work. One project will focus on finding an operational definition of well-being through a systematic literature review project. In this project, we are carefully reviewing the occupational health psychology literature to determine how researchers have defined and measured "well-being" in various contexts with the goal of creating a comprehensive definition of well-being to guide future research. So far, we have identified several facets of well-being and will continue to focus on this project next semester. Our CI team was just awarded the second place Clemson Libraries Undergraduate Research Award for our well-being review! We expect that we will begin the planning process for a new data collection on work and well-being that will take place at some point during the 2023-2024 school year. This project will explore worker health and well-being, stress, burnout, and engagement either in a general population or in specialized groups of workers such as gig workers. We also have had multiple team members get involved in independent research projects related to the team's work, either for honors theses or for their own professional development.

Our CI team is great for beginners! Our current team is a mix of Sophomores, Juniors, Seniors, majors, future career paths, prior research experience, etc. Most of our team started with us as Sophomores or Juniors and learned along the way. We will be accepting new team members in the Fall, and training is provided for any new tasks. If you are interested in being considered as a team member, please send us a copy of your resume then we can go from there.

For more information, contact graduate student team leader **Meredith Pool** at mjpool@g.clemson.edu or **Professor Bob Sinclair** at rsincla@clemson.edu.

Wearables Redefining Mobility

Students will work on one or more of the following tasks: (1) read research articles and reports to learn about the use of wearable devices (e.g., smartwatch, smart glasses) in transportation (mainly cars), (2) integrate wearables in a driving simulator or in VR environments using computer programming (mostly Python), (3) design and conduct experimental studies with human subjects, (4) analyze primary and secondary data using statistical analysis (mostly using R), (5) write sections in a research manuscript, and (6) present research at the annual CI conference and other avenues.

For more information, contact **Dr. Shubham Agrawal** at agrawa3@clemson.edu.

Improving Inclusion in Organizations

This C.I. the team will examine the exclusion of different subgroups within organizational settings. Historically, marginalized individuals have faced a variety of challenges and barriers to be seen and heard within the workplace. Even today, individuals of the LGBTQ+ community and those with visible tattoos and piercings continue to be stigmatized against. To help combat this, this C.I. team will be broken up into two projects, outlined below to have the maximum amount of impact.

Project 1: The team's first project will focus on the inclusion of LGBTQ+ members in organizations. In response to consumer backlash, major organizations have chosen to appease anti-LGBTQ+ customers by countering their own initiatives or statements. The CI team will collect experimental, survey-based data on online platforms (e.g., Amazon Mechanical Turk or Prolific) to examine how this response to anti-LGBTQ+ backlash can impact employee perceptions of an organization. Students will have the opportunity to gain experience designing and implementing questionnaires as well as analyzing data using R and additional software.

Project 2: The team's second project will focus on including employees with tattoos in organizations. While tattoos were historically associated with more masculine or delinquent groups (military, prisoners, gangs, and motorcycle groups), tattoos have become part of the mainstream. Now, women are getting more tattoos than men. Even though tattoos are very common now, most tattooed individuals still have negative stereotypes attributed to them, harming their hireability. Through online platforms such as Qualtrics and Prolific, this C.I. team will investigate current perceptions of tattooed individuals, especially tattooed women, and examine if positive stereotypes, rather than negative, can potentially increase a tattooed individual's chance of being hired. Furthermore, C.I. team members will have the opportunity to brainstorm and work in a niche area of research related to non-typical forms of stereotypes and stigma. Students will have the chance to gain experience designing research, analyzing data through software such as SPSS, Qualtrics, and learning how to synthesize findings.

Must commit to at least two semesters

For more information, contact **Dr. Allison Traylor** at amtrayl@clemson.edu.

UX and Game Design

The use of gamification relies on psychological principles such as motivation, reward, or personalization to design game elements like avatars, points, or leaderboards to increase one's performance on a task. This research team investigates gamification as a tool to assist in task performance in multiple areas of application. Gamified tasks have already been used in topics such as training, health, and other areas where the goal is to increase human performance on a given task. This team also investigates usability heuristics in game design to better develop and inform on the gamification of tasks.

For more information, contact **Dr. William G. Volante** at wvolant@clemson.edu

Addictive Behaviors, Unhealthy Behaviors, and Health Disparities
This Creative Inquiry (CI) team is committed to investigating addictive behaviors and other unhealthy behaviors, with the aims of (1) increasing our knowledge about the underlying mechanism associated with these behavioral patterns; and (2) identifying effective approaches to attenuate these maladaptive behaviors.

Students may be involved in several stages of the research process, including conducting literature searches; reading and critically evaluating scientific literature; assisting in collecting research data; entering data, and writing scientific output for conference presentations and publications. Students are expected to work on the team for a minimum of 2 semesters.

For more information, Contact **Dr. Pericot-Valverde** at iperico@clemson.edu

Health Psych Across the Lifespan

1-hour, in-person meeting weekly (location & time TBA) + 3 hours per week per credit additional work (max) As a preventionist, I have always been drawn to health-related topics that have the potential to immediately impact society. In this manner, I conduct research at the intersection of Heath and Developmental Psychology in relation to health promotion. Across my career I have examined ways to promote healthy development in areas such as teen pregnancy, second-hand smoke and lead-poisoning reduction, nutrition in childhood, and cognitive aging. In Fall 2023, I will be working with my CI team to collect and evaluate health promotion programming across the lifespan. For Spring, 2025, I will be focusing on research related to the MIDUS project (Midlife in the US). This is a large longitudinal study that has been continuing over 30 years to learn more about successful aging across adulthood. Students will be able to dive in-depth into this amazing study, have direct experiences in how this research is being collected here at Clemson. Students will be expected to identify areas of research within this large.

You'll need to commit to meeting during the listed meeting time each week, complete expected out-of-meeting work, and lead one weekly journal club. It is preferred that students have taken, or are currently enrolled in, Lifespan Development (PSY3400) and Health Psychology (PSY4800). This is a great CI for people interested in medical careers, though all career paths are welcomed to apply!

Please contact **Dr. Jody Nicholson** at JodyN@clemson.edu if you are interested in finding out more about joining this CI team! Include in your email your resume, a list of relevant courses, a brief explanation for why this CI experience will support your career aspirations, your CU ID number and how many credits you are hoping to take.

Campus Suicide Prevention

This project focuses on campuswide suicide prevention as part of Clemson's Tigers Together to Stop Suicide initiative (www.clemson.edu/suicideprevention). Team leaders are affiliated with

Healthy Campus and the Psychology Department. Students will conduct research and advocacy activities related to suicide prevention, including reviews of evidence-based prevention strategies, implementation of social marketing campaigns, hosting activities for National Suicide Prevention Awareness Month, and leading the Clemson Out of the Darkness Walk.

Students will partner with organizations both on and off campus, including student organizations, non-profits, and university administrative units, to implement comprehensive strategies to address risk and protective factors for mental health concerns among Clemson students. Students will engage in program evaluation and related research activities to identify evidence-based strategies for implementation, evaluate the efficacy of Clemson's programmatic activities, and present findings that inform policy and practice in both the Clemson and broader academic communities.

For more information, contact **Delana Reynolds** at delanar@clemson.eduTrauma & Addiction

This project will develop and evaluate a trauma screening, referral, and sexual violence prevention protocol for women in substance use treatment. The project will involve a development phase and a pilot trial phase. In the development phase, we will collect interview data from healthcare providers, peer support specialists, and patients. Data will be used to develop and refine the protocol. In the pilot phase, the screening and prevention protocol will be implemented with patients at Prisma Health, Phoenix Center, and Magdalene Clinic. The team will collect survey data to evaluate the impact of the intervention on trauma exposure, behavioral health service use, and mental health symptoms such as posttraumatic stress and substance use.

For more information, contact **Dr. Heidi Zinzow** at hzinzow@clemson.edu.

Resilience Advantage

Students who join this CI Team will have the opportunity to explore research on resilience at these three levels: the individual, the organization, and the community. Each week students will present research about resilience. We will also have invited speakers from the Clemson community, industry, and the military share with us about resilience. This will be accomplished through visits between the CI Team and related parties.
As a final project, students will be required to produce their own research using their data from visits and any related material from secondary sources. They will also make a video presentation of their project which will be presented to the class at the end of the semester.

PSYC 2010; If students desire to collect original data, then they must commit to at least two semesters.

For more information, contact **Dr. Keisha A. Mitchell** at KEISHAM@CLEMSON.EDU.

Decision Making & Risk

This CI team is designed to introduce undergraduate students to the psychology of decision

making, especially as it pertains to how people reckon with risk information in the real world. Students in this lab will have the opportunity to explore how risk information influences decision making across high stakes domains (e.g., medical decision making, financial decisions, decisions in the face of extreme weather, or new and emerging threats). Throughout the semester, students will work to develop and evaluate new risk communications across various domains.

Students will be expected to attend weekly meetings, complete reading and writing assignments, lead one weekly journal club, and contribute to the research project throughout the semester.

Ideal students will have completed PSYC 3100 and would have at least some interest in learning about decision making topics such as heuristics & biases, judgment, risk comprehension, and risk communication.

Students should have completed PSYC 3100. Ideally, students will also be able to commit to at least two semesters.

For more information, contact **Dr. Jinan Allan** at jinana@clemson.edu.

Body image and technology

The ongoing research in my lab examines how technology negatively impacts body image, disordered eating, and weight stigma. We also study how we can use technology to improve these same health outcomes. Students who join my team will be involved in some ongoing studies looking at the impacts of TikTok and AI-generated selfies on body image. Students will be involved in data collection, coding, analysis of data, and dissemination of the findings.

Students will need to commit to meeting during our set meeting time and complete expected out-of-meeting work each week. I expect that students will be on the team for two or more semesters.

For more information, contact **Dr. Brooke Bennett** at blbenne@clemson.edu.

Vehicle Automation

Our lab research goals are to investigate human-automation interaction and human performance with driving simulation, particularly with a focus on age-related challenges. To achieve these research goals, we will utilize our lab's existing driving simulator and eye tracking glasses. Learning outcomes for students who participate in STAAR Labs research are mainly to learn how to (1) Design & run simulation experiments, and (2) Extract useful performance & psychological measurements from participants.

All CI students will help run experiments and co-design the Traffic Jam Assist feature, however CI students will not have to use all the software tools. We will teach you about our existing lab tools, however much of the technology of this project will be new grounds. We

will teach you how to use ArcGIS and OpenStreetMaps, which are Geographic Information Systems widely used to visualize data with a spatial component. We will provide guidance from current lab members on how to use software tools and how to share knowledge gained with the research team.

The new technologies we are trying to bring onboard are mostly virtual tools to supplement our understanding of accident patterns and a Virtual Reality (VR) platform. These tools will be used to test drivers' responsiveness in a variety of scenarios with different levels of hazard and automation. RoadRunner is a road modelling software which can help recreate real-world intersections and road networks in a virtual environment. Unreal and Unity are free game engines that are compatible with RoadRunner and will allow us to develop new scenarios for PC and VR.

 Subjective measurements of usability and workload will be taken, as well as physical measurements of heart rate, pupil characteristics, and brain activity. This project will investigate trust, driving performance, and situation awareness using self-report and eye tracking measurements. Potential ways of gamifiying situation awareness and hazard detection are also of interest.

Must commit to at least two semesters.

For more information, contact **Dr. Dustin Souders**, djsoude@clemson.edu; **Alan Mintz**; amintz@clemson.edu

Work, Tech, & Well-being lab

1. Students will read through scientific articles related to worker well-being and worker reactions to automation, to code information for review papers. E.g., this will include noting information on study research questions, method, and results in excel sheets.

2. Students may also work on literature reviews to search for and identify research articles related to topics of worker well-being, worker attitudes towards automation, and trust.

3. Students may also work on putting together IRB applications and entering survey items into online survey tool Qualtrics. Students who are interested can also have opportunities to work on data cleaning (e.g., reverse-scoring items, calculating scale scores from data).

Students must have completed PSYC 2090.

For more information, contact **Dr. Jenna Van Fossen**, jvanfos@clemson.edu