2021
Three Minute Thesis Event Program

February 4, 2020
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Dear Friends,

Welcome to the 3 Minute Thesis competition at Idaho State University! Whether you are joining us as a graduate student contestant, a judge, a faculty mentor, or interested community member, please know that we are thrilled with your interest in the strength of the research and creative activity occurring at Idaho State University.

The 3 Minute Thesis competition was started at the University of Queensland (Australia) in 2008. It now takes place at over 900 universities in more than 85 countries across the world. It has become a staple part of many graduate students’ educational journey. We are pleased to have hosted this event at Idaho State University since 2018.

The reasons for the event’s popularity are arguably twofold. For our graduate researchers, clinicians, and artists, this event represents an unparalleled opportunity to present their work to an interested public in clear, compelling, and accessible terms – a skill that will be important throughout their professional careers in years to come. For the rest of us, the event offers a view of the compelling and remarkable advancements that these talented individuals are making in their various fields. In doing so, it essentially offers us a glimpse into our future – of where our intellectual and artistic journey as a species might be taking us.

Those participating today will come from a variety of disciplines – biologists working to better understand the dynamics of the ecosystems in which we live, engineers looking to build better bridges, health care workers identifying how we might enjoy a higher quality of life, humanists and artists exploring how our collective experiences have shaped and are reshaping our contemporary world. I encourage you to listen to their presentations with an eye towards seeing their research in its broadest implications, because we cannot stratify the value of what we will hear today. Cures for systemic diseases, for instance, are of critical importance to us all – but, as our recent history has shown us, systemic disease can just as easily be social as physical, and both can be deeply destructive. Many of the answers that we need to address the challenges we collectively face today will unquestionably emerge from the minds of researchers, artists, and clinicians populating our universities today.

I urge you to revel in the experience of hearing from these brilliant individuals (and in the experience of sharing your own hard-won knowledge if you are presenting!). I am certain that doing so will inspire you, as it does me every year, with hope – a renewed belief in a brighter, emergent future for ourselves, our students, our community, our institution, and our world.

Dr. Adam Bradford
Dean of the Graduate School
Professor of English
Agenda

February 4

**MAIN ZOOM ROOM**

Meeting ID: 842 3136 4573  
Passcode: 722669

2:30 PM  
**Event Opening**  
Associate Dean Tracy Collum

2:35 PM  
**Graduate School Dean Welcome**  
Dean Adam Bradford

2:40 PM  
**Idaho State University President Address**  
President Kevin Satterlee

2:45 PM  
**Introduction of Event**  
Associate Dean Tracy Collum

3:00 PM  
**Move to Preliminary Round**
ORANGE ZOOM ROOM

Meeting ID: 823 8645 3856
Passcode: 970817

3:05 PM  Adrian Avila
3:10 PM  Katherine Estep
3:15 PM  Dawn Fitzpatrick
3:20 PM  Laticia Herkshan
3:25 PM  Sydney Knight
3:30 PM  Maxfield Lawrence
3:35 PM  Bindal Makwana
3:40 PM  Subash Pandey
3:45 PM  Joshua Pixton
3:50 PM  Corina Sanchez
3:55 PM  Karolina Stetinova

BENGAL ZOOM ROOM

Meeting ID: 832 0827 1272
Passcode: 521649

3:05 PM  Sandro Benitez
3:10 PM  Taher Deemyad
3:15 PM  Graci Meier
3:20 PM  Andrea Nef
3:25 PM  Kelsey Sarasqueta-Allen
3:30 PM  Todd Sherman
3:35 PM  Ali Shokrgozar
3:40 PM  Amin Torabi
ROAR ZOOM ROOM

Meeting ID: 839 0799 7476
Passcode: 545969

3:05 PM Rachel Brinkley
3:10 PM Sophie Hill
3:15 PM Beverly Hines
3:20 PM Meesha Iqbal
3:25 PM Jessica Johnson
3:30 PM Shishir Khanal
3:35 PM Uma Shankar Medasetti
3:40 PM Usha Pant
3:45 PM Sami Phuyal
3:50 PM Shelby Weber
3:55 PM Carrie Yuan

RETURN TO MAIN ZOOM ROOM FOR FINAL ROUNDS

Meeting ID: 842 3136 4573
Passcode: 722669

4:00 PM Final Round
Associate Dean Tracy Collum

4:15 PM Finalist 1 (TBD)
4:20 PM Finalist 2 (TBD)
4:25 PM Finalist 3 (TBD)
4:30 PM Finalist 4 (TBD)
4:35 PM Finalist 5 (TBD)
4:40 PM Finalist 6 (TBD)
4:45  Vote for People’s Choice Award

OR

click here and use event code #40819

4:50 PM  Winners Announced

4:55 PM  Closing

Associate Dean Tracy Collum
Judges

Deb Easterly
Assistant Vice President for Research
Debra Easterly is currently the Assistant Vice President for Research at ISU. In this position she oversees research compliance matters (human subjects, animal use, export control, conflict of interest) and coordinates undergraduate research activities at ISU. Dr. Easterly has worked at ISU since 1996 in a variety of roles in research administration. She has participated in equity and diversity issues at ISU also. She earned her doctorate in Educational Leadership/Higher Ed administration from ISU in 2006.

Shane Hunt, PhD
Dean, College of Business
Dr. Shane Hunt is the Dean of the College of Business and a Professor of Marketing at Idaho State University. Shane is the recipient of the 2010 National Inspire Integrity Award from the National Society of Collegiate Scholars, the 2010 Lt. Col. Barney Smith Award as Professor of the Year and the 2015 Honors Professor of the Year at Arkansas State University, and the 2019 National Teaching Innovation Award from the Association of Collegiate Marketing Educators. Shane’s research has appeared in The Journal of Personal Selling and Sales Management, The Journal of Business Logistics and he has been invited to present to numerous organizations including the American Marketing Association and the National Conference in Sales Management. Shane is also the co-author of McGraw-Hill’s newest Principles of Marketing textbook that is being used by students across the country. After completing his MBA at the University of Oklahoma, Shane went to work for a Fortune 500 company in Tulsa, OK and spent eight years working as a pricing analyst, product manager, and business development manager overseeing numerous Mergers and Acquisitions initiatives before completing his Ph.D. at Oklahoma State University. Shane lives in Pocatello, ID with his wife Jenifer and their two children, Andrew and Sarah.

Matt Hunter
President & CEO, Pocatello/Chubbuck Chamber of Commerce
Matt Hunter joined the Pocatello Chamber of Commerce in June of 2005 as the President & CEO. Matt initially came to Pocatello in May of 2001 as the General Manager of the Red Lion Hotel Pocatello. He left the hotel to join the Chamber after 21 years of working in the hotel industry throughout the Northwest. Matt has a Business Administration degree from Washington State University and an A.S. degree from West Valley College in Saratoga, CA in Food Service & Restaurant Management.

Matt serves on many boards throughout the region and state. These include The Idaho State University College of Technology Advisory board as well as multiple advisory boards within the College of
Technology. He also serves on the Bannock Development Corporation Board of Directors, The Eastern Idaho Development Corporation Board, The Southeast Idaho Council of Governments Board and loan committee, The Idaho Chamber Alliance Executive Committee and as the Region 5 Representative on the Idaho Travel Council.

MiaCate Kennedy I
CEO, Bannock Development Corporation
MiaCate Kennedy I was recently named the new CEO of the Bannock Development Corporation. She is a native of the San Juan Islands northwest of Seattle and, among several leadership roles, she is the former executive director for the Greater Kingston Community Chamber of Commerce in Kingston, Washington. Her background in IT and business development are guiding her focus in the job. She will be providing Economic Development and Urban Technology in Southeast Idaho.

Donna Lybecker, PhD
Acting Vice President of Research
Donna Lybecker is the Acting Vice President for Research at Idaho State University. Prior to joining the Office for Research in 2020, Donna Lybecker served as the Chair for the Department of Political Science and an Assistant Dean for the Graduate School. Lybecker has contributed to research and education within Idaho since 2007. She has focused on interdisciplinary endeavors to connect diverse researchers, with the aim of addressing issues in emerging areas that impact Idaho, the United States, and global communities. Lybecker’s areas of focus include international relations, environmental and science politics in the Western U.S. and Latin America, border politics, water issues among the Western states and more recently the role language and narratives play in policy development. Outside of ISU, Lybecker is a member of the United States Environmental Protection Agency’s (USEPA) National Advisory Committee, and an Associate Editor for the Social Science Journal and for the International Journal for Sustainable Society. Her academic background includes a PhD in Political Science from Colorado State University and a master of arts in Political Science from Tulane University.

Jean McGivney-Burelle, PhD
Dean, College of Education
Jean McGivney-Burelle joined Idaho State University in June of 2020 as Professor and Dean of the College of Education. Jean has more than two decades of experience in higher education. Prior to ISU she spent 15 years at the University of Hartford in West Hartford CT where she served as Professor of Mathematics and Director of Secondary Education; Chair of the Department of Education in the College of Education, Nursing and Health Professions; Associate Dean of Budget and Finance in the College of Arts and Sciences; and Inaugural Executive Director of the Center for Teaching Excellence and Innovation. Jean’s scholarly work is focused on the teaching and learning of mathematics at the K-16 level and she has served as PI or Co-PI on
STEM education grants totaling more than $2m. Jean is a Mathematical Association of America Project NExT Fellow, a National Network for Educational Renewal Fellow, and a participant in the 2016-17 HERS Leadership Institute. She holds a B.S. in Mathematics from the University of Hartford, an M.S. in Mathematics from Northeastern University, and a Ph.D. in Curriculum and Instruction from the University of Connecticut.

Dave Rodgers, PhD

Associate Vice-President for Research

Since July 2019 I’ve been ISU’s Associate Vice-President for Research, helping to foster a campus-wide culture of creative and scholarly research activity. Our team in the Office for Research provides a variety of services to faculty and staff including seed grants, proposal development and submission, post-award accounting of research expenses, compliance with government and safety guidelines, improving diversity in STEM fields, community outreach, and technology transfer. We also oversee several Research Centers and Institutes. Beyond campus, I serve as Associate Director of the Center for Advanced Energy Studies (CAES), which is a consortium of four schools (ISU, BSU, UI, UW) and the Idaho National Laboratory (INL). Beyond work, I backpack, ski, coach soccer, and take a few weeks off each year to vacation with my family. We travel extensively through the West and have a strong interest in visiting remote places.

Chris Sanford, PhD

Interim Associate Dean, School of Communication and Rehabilitation Sciences

Chris Sanford’s clinical and research training background includes Bachelor’s degrees in Psychology and Audiology and a Master’s Degree in Audiology from Brigham Young University, a PhD in Hearing Science from the University of Washington and a postdoctoral fellowship at Boys Town National Research Hospital. Chris came to Idaho State University in 2009 and has taught graduate courses in the audiology program, conducted research, mentored students in clinical and research activities, and served in administrative roles. Chris’ primary clinic and research interests include investigations of middle-ear assessment techniques with goals of improving diagnosis and treatment of hearing disorders. Chris is currently an Associate Professor and Department Chair in the Department of Communication Sciences & Disorders and Interim Associate Dean and Director for the School of Rehabilitation & Communication Sciences. Chris’ primary life interests include spending time with his wife, children, and participating in as many outdoor activities as possible!
Kandi Turley-Ames, PhD
Founding Dean, College of Arts and Letters
Vice Provost of Advanced Opportunities

Dean Kandi Turley-Ames earned her Ph.D. in psychology with an emphasis in cognition and memory in 1996 from Washington State University. She has been a member of the Department of Psychology since 1997 and has subsequently served the University in numerous leadership positions. She was appointed Chairperson of Psychology from 2003 to 2009. She served as the Interim Assistant Dean for the College of Arts and Sciences in 2007-2008 and as an Associate Vice President in Academic Affairs in 2009-2010. She became the founding dean of the College in 2010. During the 2006-2007 academic year, Turley-Ames was named Distinguished Teacher at ISU. She was acknowledged as a Master Teacher at ISU in 2001-2002 and 2005-2006. Turley-Ames is also a graduate of the Higher Education Resource Service (HERS) for women in higher education administration, and was a nominee for the US Professors of the Year Award in 2007-2008.
Abstracts

Adrian Avila
Nursing Practice – DNP

*Mental Health Help-Seeking Behaviors in a Latino Population*

Estimates of mental health service utilization among Latino adults was 7.3 percent within the past few years, Asians being the only other group with a lower percentage. Latinos tend to place a high value on the importance of personal relationships when seeking care. Relationship-building and word of mouth is one of the keys to breaking down barriers to mental health help-seeking in the Latino community. Education also plays an important role in dispelling myths and providing information about how the mental health system can work for them.

Sandro Benitez
Educational Leadership – EdD

*Closing the Gap? How Grit Impacts Hispanic Students’ Retention*

This study focused on an Intermountain West institution that provides a remedial course to help first-year students transition to college. One of the several principles taught in this course to strengthen student retention is Grit (Duckworth, 2016). This study took two academic semesters. The purpose of this study was to identify the relationship between grit and retention for first-year Hispanic students taking a transitional college course at a predominantly white institution.

Rachel Brinkley
Biology – MS

*How Many Red Fish Were in Redfish Lake?*

Idaho’s sockeye salmon have been decimated. Limited records of historical abundance highlight the need for a frame of reference to inform restoration attempts. As anadromous salmon have a high proportion of isotope 15N:14N we used shifts in δ15N from lake sediments to quantify historical abundance of sockeye in Idaho Lakes. Our results suggest that management goals may be as low as 5% of historical sockeye returns. Additionally, shifts in escapement suggest that abundance decreased by 90% over 10 years following downstream dam construction.

Tafer Deemyad
Engineering & Applied Science – PhD

*Autonomous Mobile Manipulator and EOAT for Virus Detection and Removal*

The world population will be dramatically increased by 2050 which causes ~110% rise in demand for agricultural products. Potato Virus Y is a common disease in potato fields that significantly affect the quality and quantity of the products. We tackle this problem by designing an autonomous ground vehicle (AGV) to rogue the sick plant automatically from the field while this AGV is guided to the target location by an equipped unmanned aerial vehicle with proper sensors.
Katherine Estep  
Nursing Practice – DNP  
*Stop the Bleed® in the Rural Oneida County Farming Community*  
Rural farming communities experience a high incidence of farm-related bleeding injuries leading to morbidity and mortality. A Stop the Bleed® course was implemented. A quasi-experimental design assessing pretest/posttest means for overall knowledge (P<.001), self-perceived knowledge (P<.001), and self-perceived comfort (P<.001) regarding bleeding injury was conducted. Implementation of Stop the Bleed® in rural Oneida County will decrease overall morbidity and mortality for rural farmers.

Dawn Fitzpatrick  
Human Resource Development – MS  
*Perceived Organizational Support of Adjunct Faculty at Idaho State University*  
Adjunct faculty in the US comprise almost fifty percent of the academic workforce at four-year institutions. Insufficient consideration has been given to the support structure needed for adjuncts, yet adjuncts are an integral part of student success and retention. This study describes the perceived organizational support of adjunct faculty at a medium-size public institution in the mountain west. The results indicated a greater level of POS at the department level than the university level.

Laticia Herkshan  
Political Science – DA  
*Envisioning the Future Research Relationship between the Shoshone-Bannock Tribes and Idaho State University*  
Tribal peoples are often subjects rather than agents of research, undermining Tribal sovereignty. Drawing on calls to decolonize research in higher education, this project examines the lived experiences of researchers from Shoshone-Bannock Tribes (SBT) and Idaho State University (ISU) engaged in joint research projects. These experiences should support the project’s goal of developing a new vision of research relationships premised on community engagement and respect for Tribal sovereignty.

Sophie Hill  
Biology – DA  
*Looking Beyond Leaves: Litterfall from the Urban Forest and its Impacts on Water Quality*  
Urban trees benefit our cities; however, we design infrastructure to efficiently collect and transport water and debris from city streets. Litterfall collecting in gutters leaches nutrients—particularly N and P—with negative impacts to water quality. To assess litterfall’s impact, I measured nutrients leached from blossoms, fruit, and leaves of ten tree species across Pocatello, Idaho. Combined with litter basket surveys to measure litterfall rates, my results suggest that litterfall can be a significant source of nutrients to waterways.

Beverly Hines  
Counselor Education & Counseling – PhD
**Supervision: It’s All About the Relationship**

The strength of the relationship between a supervisor and supervisee is the “heart and soul” of effective supervision of counselors. Though routinely asking for feedback from supervisees about the supervisory relationship is a best practice mandate, little is known about how often supervisors do it or what the impact is on the relationship. This study looks at supervisees’ perceptions of the frequency and focus of their supervisor’s feedback requests and the effect these feedback requests have on the strength of the supervisory relationship.

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**Meesha Iqbal**

Public Health – MPH

*Screening & Awareness of Breast Cancer in an Urban Slum of Pakistan*

Community based breast cancer screening was carried out in Rehri-goth; an urban slum of Pakistan. The community was trained on breast self-examination, followed by clinical examination and diagnostic mammography. One woman out of 93 was diagnosed to have stage II breast cancer and was treated adequately in time.

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**Jessica Johnson**

Educational Leadership – MEd

*School Climate and Culture: Defined by Relationships, Strengthened by Community*

If writing behavior referrals were an Olympic sport, teachers would be gold medalists. Teachers and administrators are tasked with determining the best practices for student discipline in order to create a lasting change in the student and the school. Creating and fostering a safe school environment is imperative to the success of schools. Will implementing proactive community circles in a classroom change the culture and climate of a school?

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**Shishir Khanal**

Measurement & Control Engineering – MS

*Cross Reality (XR) Simulator for the Dynamics Visualization & System Integration of Single-Stage Axial Compressor*

My Research is focused on developing an effective XR Simulator that utilizes data from an automatically controlled Single Stage Axial compressor to visualize the dynamical information such as efficiency and stall using Mixed Reality. In virtual reality, I will integrate the physical compressor to jet engine and simulate the changes in altitude and disturbances in their physical form. With my prototype, I will be able to fly a jet engine in the virtual world by borrowing a physical compressor from the real world.

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**Sydney Knight**

Nutrition – MS
**Nutrition and Health Behaviors Influenced by COVID-19 using the Information Motivation Behavior (IMB) Health Model**

The COVID-19 pandemic has produced an overwhelming amount of information on ways to protect against infection. Although research has shown relations between COVID-19 and health behaviors, no data are available on whether information, motivation, or behavioral skills influence health behaviors. This research examines whether food- and COVID-19-related information and motivation are related to behaviors 1) directly and 2) indirectly through behavioral skills. Findings will help direct strategies to influence evidence-based nutrition behaviors.

**Maxfield Lawrence**
Physician Assistant Studies – MPAS

**Microscopic Colitis**

A brief case-based review of presentation, diagnosis and management of microscopic colitis. Microscopic colitis is an inflammatory bowel disease with a poorly understood pathology but a good clinical prognosis.

**Bindal Makwana**
Clinical Psychology – PhD

**Sideline High-School Athlete Study: An Examination of the Predictability of Concussion from a Computerized Neuropsychological Battery**

Research suggests that neuropsychological measures are able to detect changes immediately following a concussion. This study investigated the predictability of concussion diagnosis from neurocognitive modules in 64 high school athletes. Results showed that a symptom checklist and reaction time measures were predictive of concussion diagnosis. These clinically significant findings support the use of neuropsychological measures to aid in diagnostic clarification and athletic decision making.

**Uma Shankar Medasetti**
Engineering & Applied Science – PhD

**Training in Disaster Response for First Responders Using Extended Reality Technologies Like Augmented Reality, Virtual Reality And Mixed Reality**

Disaster response preparedness is the key to reduce property damage, minimize distress, and save lives. We require a lot of capital for preparing for disaster response training. We, ISU, are collaborating with INL on a project to train first responders using Extended Reality (XR) technologies like Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR). This project’s advantage is that the cost is low, and the first responders can be trained in the same scenario often.

**Graci Meier**
Physician Assistant Studies – MPAS

**The Importance of Urine Protein Screening In the Diabetic Patient**
Diabetic kidney disease is the leading cause of chronic kidney disease and end stage kidney disease worldwide. It has been shown that early detection of protein in the urine is the leading risk factor for progression of disease. Early detection and treatment have also proven to reverse and/or stop kidney destruction. Therefore, it is essential for primary care providers to screen all diabetic patients at each visit for proteinuria.

Andrea Nef  
Nursing Practice – DNP  
**Acl Injury Prevention - Education Is the Goal**  
Female adolescent soccer players are vulnerable to injury to their ACL. Injury prevention programs help reduce the risk of ACL injuries; however, these programs are not being utilized frequently. This project helped identify potential barriers on an ACL injury prevention program utilization to high school girls’ soccer coaches. Participants were taught about an ACL injury prevention program and information on their experiences with the program was gathered after implementation to identify barriers to aid in future implementation practices.

Subash Pandey  
Sociology – MA  
**Evaluating the Effectiveness of Local Adaptation Plan of Action (Lapa) In Reducing Climate Change Vulnerability: A Case from Western Nepal**  
This study uses Livelihood Vulnerability Index (LVI) to assess the effectiveness of LAPA by comparing the LVI value in LAPA implemented and non-implemented community. LVI was calculated for nine major components which were identified based on literature review. Quantitative analysis shows that there is not statistically significant difference in any of the components between LAPA implemented and non-implemented community.

Usha Pant  
Civil Engineering – MS  
**Analytical Modeling and Experimental Testing of Modular Structural Concrete Insulated Panels**  
Structural concrete insulated panels (SCIPs) are the alternative construction technology to traditional wood framing and masonry units. The main objective of this research is to process experimental results from testing of structural concrete insulated panels. This project had three main objectives: first, analytical modelling of SCIPs; second, develop the manual for SCIPs for a company called Blastcrete Equipment Company; and third, to perform shear capacity testing of panels in lab and compare the results.

Sami Phuyal  
Nursing Practice – DNP  
**Improving Health System Navigation among Bhutanese Refugees**
This project is about improving the Bhutanese refugees’ health system navigation in Boise, Idaho. The project aims to empower a small number of Bhutanese refugees through a Community health workers course in their native language. With an expectation, the participants further empower their fellow community members in health system navigation.

Joshua Pixton  
Nursing Practice – DNP  
*Teacher-based Suicide Prevention in Eastern-Idaho*

Suicide is one of the leading causes of death among adolescents in the United States. Schools are an ideal setting for identifying at-risk adolescents. This project evaluated the effectiveness of training teachers to identify at-risk students using a suicide prevention program called Question, Persuade, Refer (QPR) in addition to education about the importance of teacher engagement, behavior rehearsal techniques, and content review using spaced repetition.

Corina Sanchez  
Biology – MS  
*Reducing the Impact of Common Ravens on Greater Sage-Grouse through Egg-Oiling*

Common raven populations have increased with human expansion. This has led to higher rates of raven predation upon sensitive prey such as greater sage-grouse for which ravens are nest predators and sources of population declines. Past raven management methods have not adequately prevented damage caused by ravens on sensitive prey. Novel raven management methods are being evaluated with sage-grouse nest survival as the treatment response. Raven nest behavior is being recorded to understand raven breeding biology and maximize treatment efficacy.

Kelsey Sarasqueta-Allen  
Counselor Education & Counseling – PhD  
*Influencing Mental Health Legislation in Counseling Programs: Assessment Creation*

Barriers to mental health treatment are a social justice concern that continues to be neglected in public policy. This macrosystemic issue can be addressed by implementing legislative action experiences into counselor education training programs. There is not a psychometrically sound, assessment to measure public policy engagement in counseling. Thus, an assessment will be created to uncover areas of engagement so innovative approaches can bridge social justice advocacy ideology to practice.

Todd Sherman  
Nuclear Science & Engineering – PhD  
*The Synthesis, Characterization and Irradiation of New High Entropy Carbides for Nuclear Applications*

My research will develop a new series of never-before-created high performance ceramic materials being called high entropy carbides and characterized many of their atomic-structural and mechanic properties.
before and after high radiation doses. The new high entropy carbides may be able to withstand radiation doses hundreds of times greater than the conventional steel and nickel alloys are able to and at temperatures up to 1000 degrees C for more than 100 years.

Ali Shokrgozar
Civil Engineering – MS
Bond Strength Behavior between Non-proprietary UHPC and High Strength Precast Bridge
Components
Accelerated Bridge Construction methods are relatively new in the U.S. ABC requires bridge precast concrete components be effectively connected to one another in the field. The most common material used for that connections is Ultra-High Performance Concrete (UHPC).

The proposed research primarily aims to investigate a non-proprietary UHPC based on the materials in Northwest to be used in precast deck elements in order to reduce costs and investigate the bond strength between non-proprietary UHPC and high strength precast bridge components.

Karolina Stetinova
Clinical Psychology – PhD
Change Blindness and Facial Processing in Adolescents Diagnosed with ASD
Inspired by Weak Central Coherence theory, we investigated whether participants diagnosed with autism spectrum disorder (ASD) differ from those typically developing in their ability to detect and label changes presented on pictures of human faces. We hypothesized that the response times and accuracy scores will be influenced by group membership and the type of change. Matched-pairs design was utilized, revealing that the groups were similarly fast, but the ASD group was less accurate when discriminating between different emotional expressions.

Amin Torabi
Engineering & Applied Science – PhD
A Novel Submerged Oscillating Water Column (SOWC) Energy Harvester
Wave energy converters (WEC) are hydraulic structures that are used to harvest energy from oceans. Different types of WECs technology from beginning to present reviewed and studied. This research proposes a new concept of a WEC termed a Submerged Oscillating Water Column (SOWC) that can capture energy from waves. Numerical simulations using the Computational Fluid Dynamics (CFD) code Flow-3D and physical model tests were carried out at Idaho State University to assess the validity and efficiency of the proposed device.

Shelby Weber
Clinical Psychology - PhD
Understanding the Relations Among Adverse Childhood Experiences (ACE), Substance Use, And Reoffending Among Juvenile Offenders
Existing literature suggests that ACEs are related to reentry in the criminal justice system and increased risk of using substances among youth offenders, but there is little research on the indirect role of substance use in the relation between adversity and offending. In the present study, there was a significant medium indirect effect of ACEs on reoffending via substance use. Gender differences and clinical implications will be discussed.

Carrie Yuan
Physician Assistant Studies – MPAS

Negative Feedback Perception and Burnout
Feedback has a powerful impact on learning. How we perceive feedback can have either negative or positive consequences. Burnout is a state of feeling physical, emotional, and mental stress in response to prolonged stressors. Negative feedback perception increases feelings of burnout and impairs our ability to learn while decreasing our productivity.