

SI BRIDGES

NEWSLETTER

SI Bridges is funded by the National Institutes of Health



As we begin the 2021-22 academic year, it is my pleasure to welcome all of you in celebrating and recognizing the achievements of Southern Illinois Bridges to the Baccalaureate (SI Bridges) scholars. I have had the honor of working with the SI Bridges Program since 2013. I enjoy recruiting SI Bridges scholars and helping them reach their potential as they develop as scientific researchers. This program opens doors of opportunities for the students and gives them skills (problem solving, research, presentation) that will be beneficial in any career. I am always so impressed at how much the students learn and accomplish in the program. I also enjoy having members of the SI Bridges team visit my classes and engage the students in CUREs research projects. It is always exciting to see the students transfer to a university and continue to flourish after leaving Shawnee Community College. I feel privileged to play a small part in their academic journey!



Lori Armstrong,

SI Bridges PI and Coordinator
Shawnee Community College

IN THIS ISSUE

WELCOME FROM LORI ARMSTRONG, SCC
PAGE 1

MEET THE NEW SCHOLAR
PAGE 2

RECOGNITION OF EXCELLENCE
PAGE 2

2021 SRI RECAP
PAGE 3

SCHOLARS AND THEIR RESEARCH 4-7

A LETTER OF REFLECTION BY DALTON FRANCIS
PAGE 8

STUDENT SPOTLIGHT INTERVIEW: TAMARA KEENE
PAGE 9

SCHOLARSHIP OPPORTUNITIES
PAGE 10

Meet the New Scholar - Jewel Green

Jewel was accepted into the SI Bridges Program in May before the start of the 2021 Summer Research Immersion. She quickly integrated into the program and found a mentor who aligned with her interests. Jewel is from Murphysboro and is currently a student at John A. Logan College with interests in biological sciences. She intends to transfer to Southern Illinois University Carbondale and is currently exploring options in the varied life science disciplines. Jewel's hobbies include guitar and wildlife photography.



Recognition of Excellence:

We extend congratulations to our scholars for the following prestigious awards and honors. We are very proud.

- Emily Duran was accepted into the McNair Scholars program at SIUC.
- Tamara Keene, Emily Duran and Lauren Troutt received competitive REACH awards at SIUC to conduct research with their faculty mentor during the 2021-22 academic year.
- Tehya Payne won the outstanding undergraduate poster at the SIUC Sigma XI Poster Symposium.
- Jace Moore received a Saluki Transfer Commitment fellowship, 2022-24



Cohort 6 SI Bridges Scholars at the 2021 Poster Symposium: left to right, Jewel Green, Jace Moore, Emily Duran, Tehya Payne, Tamara Keene, Lauren Troutt, Kelsee Dodd, and Ashley Bryant

2021 SRI Recap

With the tradition of the SI Bridges program, the 8 scholars of cohort 6 completed a rigorous 10-week Summer Research Immersion (SRI) during which they designed and completed an original research project under the guidance of a faculty or staff mentor. Scholars were tasked with balancing their research activities with a full day of face to face learning each Friday. While the weekly meetings focused on hands-on research skills development and included sessions on topics related to responsible conduct of research such as the mentor-mentee relationship, peer review, authorship, research misconduct, and gene-editing, there was plenty of time for the students to interact and bond as a cohort. During the SRI scholars mastered techniques in molecular biology, curation and collections, bioinformatics, microscopy, and they engaged in professional development sessions and workshops.

The hard work and discipline of our scholars culminated in a successful 18th Annual Summer Research Symposium with the McNair Scholars Program. The poster session was well attended by students, faculty and administrators. Scholars skillfully communicated the findings of their research and networked within the university community.

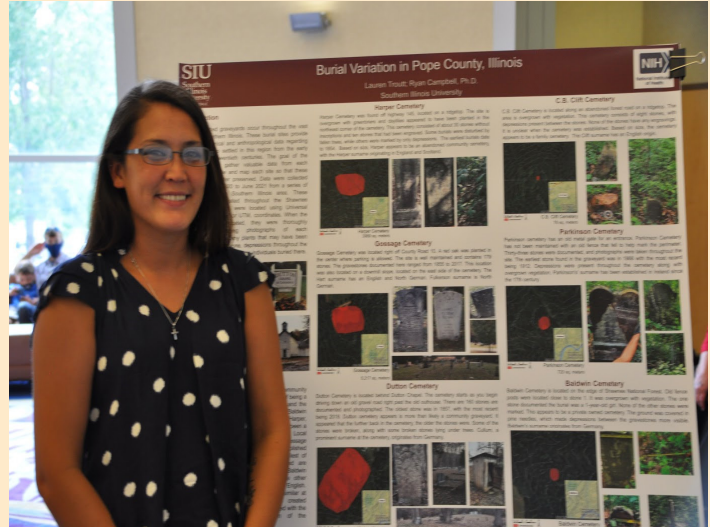
The following pages highlight the 2021 SRI research with images from the poster symposium.



SI BRIDGES SCHOLARS AND THEIR RESEARCH

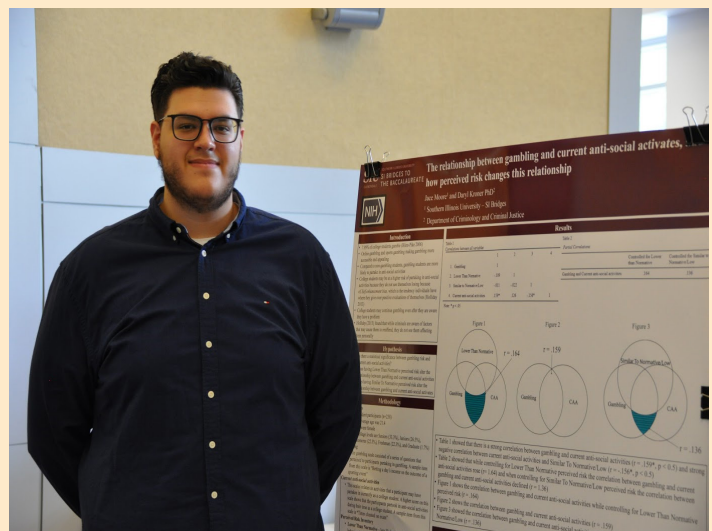
Lauren Troutt

Lauren is a junior at SIUC with a double major in Anthropology and Forensic Science. She joined the SI Bridges program in March 2020 while still a student at Shawnee Community College. This summer she presented her research on "Burial Variation in Pope County, Illinois" under the guidance of her research mentor Dr. Ryan Campbell.



Jace Moore

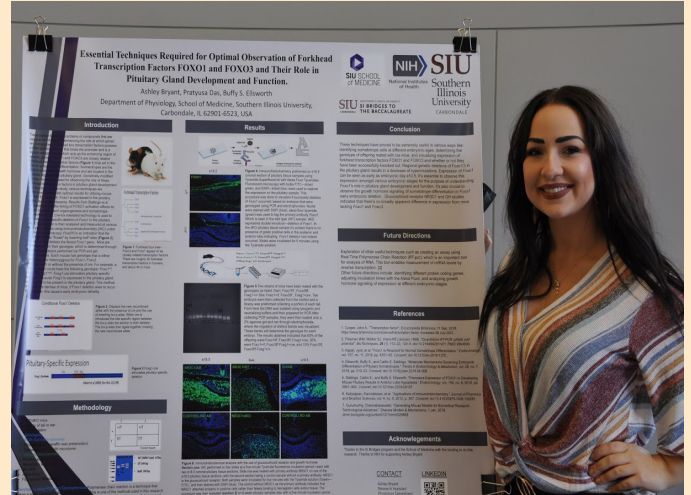
Jace recently transferred from John A. Logan Community College to SIUC where he is majoring in Information Technology. He was accepted into the SI Bridges program in December 2020. This summer he completed a research study entitled "The relationship between gambling and anti-social activities, and how perceived risk changes this relationship" under the guidance of his research mentor Dr. Daryl Kroner.



SI BRIDGES SCHOLARS AND THEIR RESEARCH

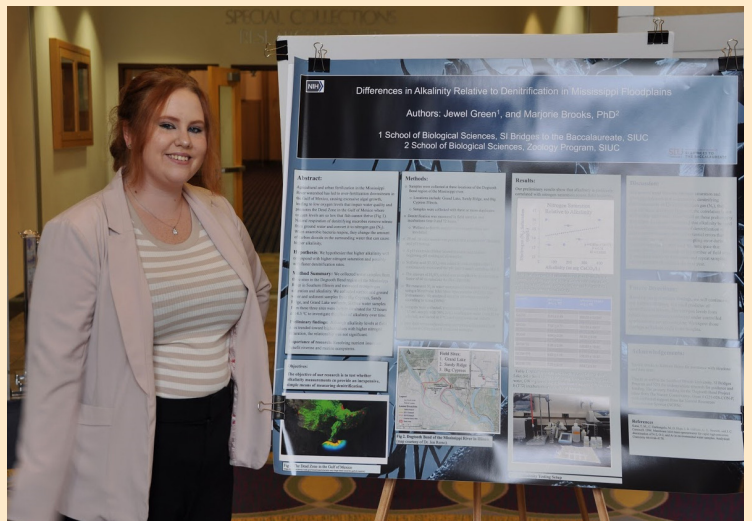
Ashley Bryant

Ashley is currently a junior at SIUC majoring in Microbiology. She joined the SI Bridges program in Spring 2020 while still a student at JALC. This summer she presented her research on “Essential Techniques Required for Optimal Observation of Forkhead Transcription Factors FOXO1 and FOXO3 and Their Role in Pituitary Gland Development and Function” under the guidance of her research mentor Dr. Buffy Ellsworth.



Jewel Green

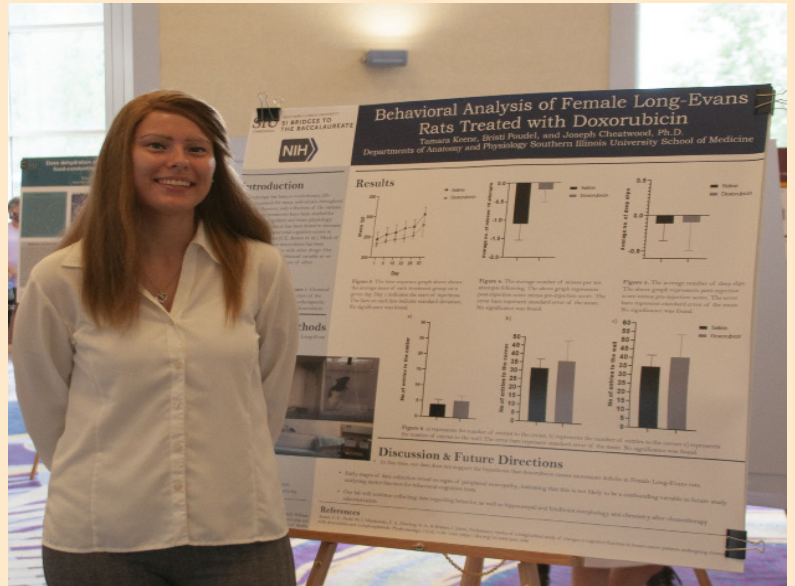
Jewel is currently a JALC student with a focus in Biology. She joined the SI Bridges program in May 2021. This summer she presented her research on “Differences in Alkalinity Relative to Denitrification in Mississippi Floodplains” under the guidance of her research mentor Dr. Marjorie Brooks.



SI BRIDGES SCHOLARS AND THEIR RESEARCH

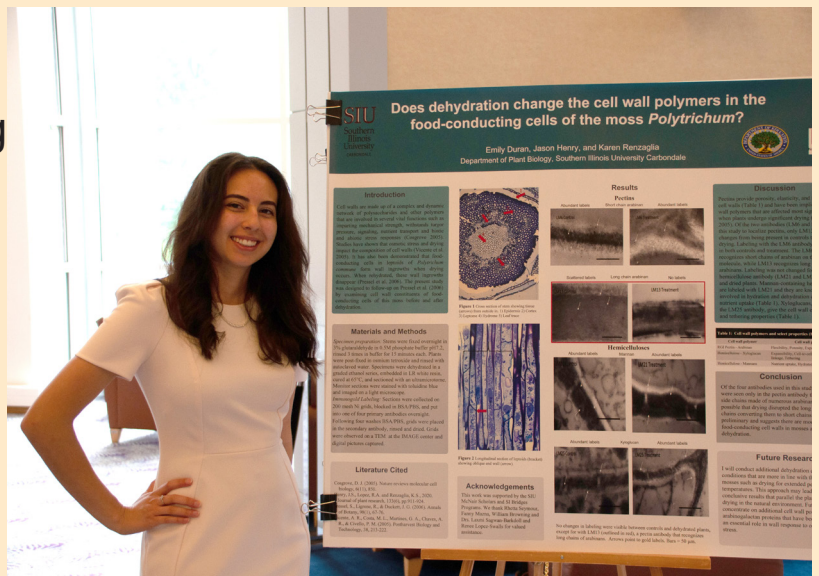
Tamara Keene

Tamara became an SI Bridges scholar in Spring 2020 while at JALC. She is currently a junior at SIUC majoring in Nutrition. During the summer she conducted research and presented a poster on “Behavior Analysis of Female Long Evans Rats Treated with Doxorubicin” under the guidance of her research mentor Dr. Joseph Cheatwood.



Emily Duran (McNair Scholar)

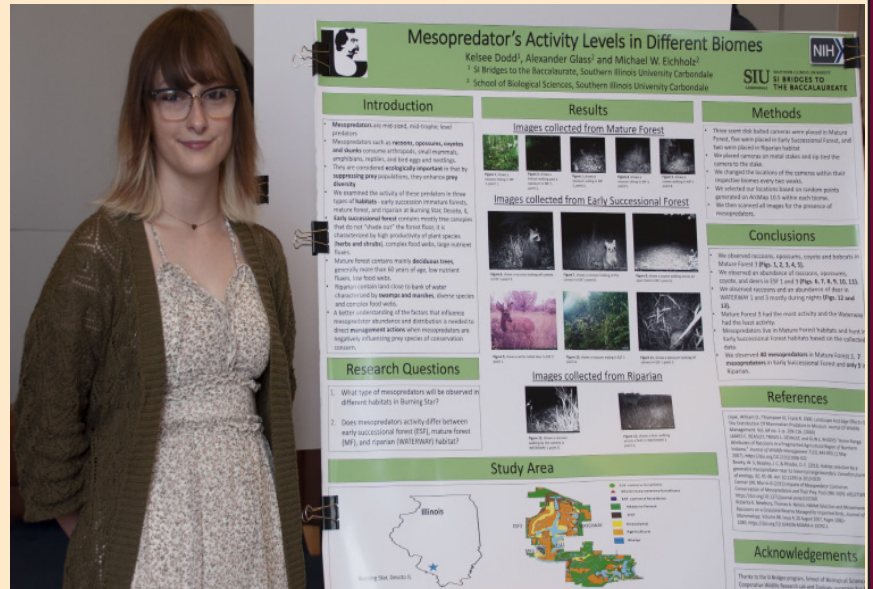
Emily is currently a senior majoring in Plant Biology at SIUC. She was accepted as an SI Bridges scholar in Spring 2020 while still a student at JALC. This summer she conducted research as a McNair scholar and presented a poster entitled “Does dehydration change the cell wall polymers in the food-conducting cells of the moss *Polytrichum*?” at the SRI symposium. Her mentors are Dr. Karen Renzaglia and Dr. Jason Henry.



SI BRIDGES SCHOLARS AND THEIR RESEARCH

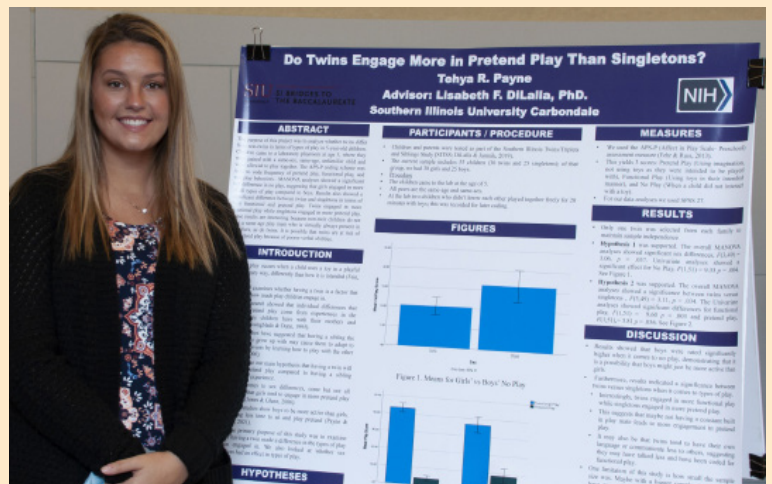
Kelsee Dodd

Kelsee is currently a JALC student and will major in Wildlife Conservation when she transfers to SIUC. She joined the SI Bridges program in Spring 2021. This summer she presented her research on “Mesopredator’s Activity Levels in Different Biomes” under the guidance of her research mentor Michael Eichholz.



Teyha Payne

Teyha is currently a junior at SIUC majoring in psychology. She joined the SI Bridges program in Spring 2020 while still a student at SCC. This summer she presented her research on “Do Twins Engage More in Pretend Play Than Singletons?” under the guidance of her research mentor Dr. Lisabeth DiLalla.



A Letter of Reflection from Dalton Francis, MSW

Dalton became an SI Bridges scholar in Spring of 2016 when he was a student at JALC. He matriculated to SIUC in the Fall of 2017 as a psychology major. His reflections on the experiences in the program follow.

Now that I have graduated with a Master of Social Work, I wanted to take a moment to reflect upon how the Southern Illinois Bridges to the Baccalaureate Program helped me. I started my undergraduate studies at John A. Logan College, and after two years I transferred to SIUC. AT JALC, I enrolled in SI Bridges and the program was an important part of my educational journey that enabled me to get to where I am.

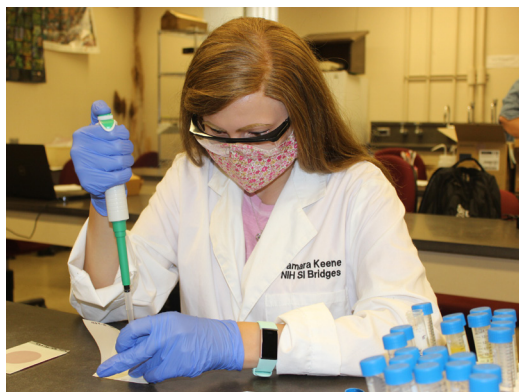


During my time as an SI Bridges scholar, I learned the process and value of conducting research. I also acquired valuable skills that helped me later in my field of study, including presentation skills and scientific writing. SI Bridges helped me secure a position in a psychological research lab known as the Southern Illinois Twins, Triplets, and Siblings Study (SITTS) during my undergraduate education. The lab is headed by Dr. Lisabeth DiLalla and focuses on research related to twins and triplets aged 1 to 5. During my time in this lab, I learned about how genetics impacts personality and disposition. I was able to work closely with graduate students doing their own research so that I would be better prepared when I began my studies. I eventually became involved with another lab headed by Dr. Douglas Knutson known as the Diversity and Rural Advocacy Group (DRAG) lab. In this lab, I worked closely with Dr. Knutson conducting my own research on gender expression, affect, and attachment styles in gay male-identified relationships. I presented my findings at the 2019 annual conference for the Midwestern Psychological Association (MPA) in Chicago, IL.

After graduating with my Bachelor of Arts in Psychology, I applied to the Master of Social Work program at SIUC. The accomplishments which were a direct result of the connections I made through the SI Bridges Program helped me in securing a spot in this graduate program. While in this graduate program, I worked at Project 12-Ways. This agency is part of the Behavior Analysis Program at SIUC and is a referral-based service available to families involved with the Illinois Department of Children and Family Services. I was able to implement a variety of daily routines with families to decrease stress on the parents and increase the likelihood that families will be able to remain intact.

The SI Bridges Program was a springboard which catapulted me into success. I cannot express how grateful I am for this program. It gave me the knowledge necessary to reach my dreams. It also helped me build a network of supportive people. I am a first-generation college student, so these networks enabled me to have people to turn to if I had any difficulties.

Student Spotlight Interview: Tamara Keene



Q: Please summarize your research project including the aims, objectives, and skills you have learned?

This summer I conducted research in Dr. Cheatwood's lab in the SIU Physiology Department. The title of my project is Behavior Analysis of Female Long Evens Rats Treated with Doxorubicin. Chemotherapy has historically been used to treat cancer and lengthen the lives of many individuals. However, the chemotherapeutic agents such as Doxorubicin have been implicated in a condition referred to as chemobrain. This drug has been found to cause neurodegeneration by disruption of hippocampal cell proliferation and neurogenesis, and increase of oxidative stress. These conditions are thought to cause neurological damage related to learning and cognition. My study investigates behavior change as a result of doxorubicin treatment. Twelve female Long Evans rats were divided into two groups and each rat received four consecutive weeks of injections. Half of the rats received a 6mg/kg intraperitoneal doxorubicin injection and the remaining half received a control injection 0.9% saline. Behavior was then analyzed on tasks such as the bar-walk, string-pulling, and open-field test. No significant differences were detected possibly indicating little disruptions in hippocampal cell proliferation and neurogenesis. Throughout this project I learned how to mount tissue sections to a slide, the basics of immunohistochemistry, and how to treat rats in a lab environment.

Q: Why did you get started in undergraduate research?

As the time got closer for me to transfer from John A. Community College to a 4-year university, I became more concerned about where I would end up. Ultimately, I chose SIUC because of its familiarity and proximity to home. In the midst of my dream to become a Medical Doctor I decided that I wanted to do research while I was completing my undergraduate degree.

Q: How has your research experience shaped your undergraduate career?

The research I have conducted here at SIU has led me to be a more informed and proactive student. This program in combination with the Leadership Development Program has allowed me to develop my confidence and speaking abilities. In addition, my ability to think critically has improved. I am most thankful that my classes have gradually become more meaningful. My presentation projects are more developed, deep with knowledge, and interesting to my peers! During lectures I find myself imagining the research process that produced the knowledge we are learning, often wondering about where more research should be done to enhance or critic the textbook's position. In conclusion, my undergraduate experience has been incredibly fulfilling. There are many students who search tirelessly for a chance to break away from the mundane cadence of life, but I get to do that anytime I find something new and interesting to learn about.

Q: What advice would you give someone interested in UG research?

The most important piece of advice that I would give is that it is better late than never. This statement can be rephrased to illustrate with any one of our insecurities. For example, "it's better half finished, then incomplete", "it's better to be uncertain, then to miss out", "it's better to try now, then to wish you had later".

Q: What are your plans for the future?

I love this question, because my answer is always changing! Right now, I am working to finish my Bachelor's degree in Dietetics. Once I graduate, I hope to continue my education in SIUC's Masters of Physiology Program with the ultimate goal of becoming a college professor or high school teacher.

SCHOLARSHIPS AND OTHER OPPORTUNITIES

SALUKI TRANSFER COMMITMENT

The Saluki Transfer Commitment is our pledge that all new transfer students who meet certain criteria are guaranteed that tuition and mandatory fees will be fully covered for four consecutive semesters at no cost to students or families. In other words, if you qualify for the Saluki Transfer Commitment and your financial aid package does not completely pay for your tuition and mandatory fees, we will close the gap to make sure there are no financial barriers between you and your education.

WHO QUALIFIES

1. Transfer student enrolling in Fall 2022
2. GPA of 2.0 with 26 or more transferable credits
- Low income
3. Illinois resident who attended Illinois High School
4. Dependent student under age 24
5. Eligible for Federal financial aid

If you meet these qualifications, please visit their [website](#)

UNIVERSITY HONORS PROGRAM

The University Honors Program (UHP) is a university-wide undergraduate program that models the intellectual excitement and individualized attention of a small college of liberal arts and sciences within a comprehensive research university. It is designed to reward SIU's best students for their high academic achievements and ambition to contribute to society. We mentor each student individually, empowering them to take charge of their education; form enduring relationships, and develop life-long habits of thinking independently and working collaboratively. Through our motto of Learn. Lead. Serve we work with the whole student, introducing them to academic, leadership, and service opportunities on our campus and beyond.

If you are interested in applying to the HONORS program, please visit the [Honors Website](#).

MCNAIR SCHOLARS PROGRAM

The SIU Carbondale McNair Scholars Program helps students realize their full potential by providing enriching educational experiences for low-income, first-generation college students and members of underserved groups in higher education. Beginning with a strong mentoring network, McNair scholars are fully supported and engaged in educational and professional development activities that lay the foundation for stellar research and academic skills.

Our McNair Scholars Program promotes academic excellence, success in graduate school, and the achievement of a PhD – confirming there is no such thing as too much ambition when it comes to educational goals.

Visit <https://mcnair.siu.edu> for application information



SI BRIDGES



A Partnership

MEET THE TEAM

SIUC

Scott Hamilton-Brehm
Karen Renzaglia
Laxmi Barkdoll Sagwan
William Browning

JALC

Stephanie Hartford
Hannah Henson
Jo Forer

SCC

Lori Amstrong

SI Bridges to the Baccalaureate Program

Facebook: [@SI Bridges](#)

Blog: sibridges.siu.edu/blog/

Website: sibridges.siu.edu