The Center for STEM Education and Research

at Chicago State University

Broadening Participation in STEM Impact Report



Table Of Contents

About CSU and our Leadership	1
About CSER	2
The CSER Team	3
Vision: Broadening Participation in STEM	4
CSER Programming	5
Annual Spring Symposium	9
Conference Programming	10
LSAMP Alumni Profiles	12
Regional Impact	14
National Impact	15
International Impact	19
Our Future Impacts	19



CHICAGO STATE UNIVERSITY



Chicago State University is the most affordable public university in Chicago.* With an 11:1 student to faculty ratio, 60+ degree and certificate programs, and 70%+ faculty of color, we stand as a model for opportunity and investment in our neighboring community as well as a beacon for broadening participation in the City of Chicago. Our renowned faculty, commitment to student services and student success, and our range of support programs for undergraduates aids in both recruitment and retention of historically underserved students. Our goals are to increase opportunities for these students through personal and professional development, ensuring financial stability, spur economic development, and encourage continued innovation and participation from students of color.

LEADERSHIP

The support of Chicago State University President Zaldwaynaka "Z" Scott has been essential to the success of STEM programming within the Center for STEM Education and Research. Her commitment to providing top-level instruction, forming partnerships with academia and industry, and championing student achievement at all levels is a testament to our efforts in increasing the STEM footprint and workforce.



ZALDWAYNAKA "Z" SCOTT, J.D.

President

Chicago State University

The Office of the Provost and Academic Affairs plays a vital role in the ongoing success of the Center for STEM Education and Research. As the leading University office for supporting students and faculty in the quest for an equitable learning environment, the Provost has championed efforts to increase participation in the STEM fields. The support of this office—as part of the larger Chicago State learning ecosystem—continues to further our efforts.



Provost & Senior Vice President of
Academic Affairs
Chicago State University



THE CENTER FOR STEM EDUCATION AND RESEARCH



The Center for Science, Technology, Education, Math (STEM), Education and Research is located on the campus of Chicago State University (CSU) and designed to provide support and programming in STEM for CSU and the surrounding community.

CSER strives to broaden the participation in and increase the pipeline of underrepresented students entering STEM studies and trade professions. We provide mentoring, professional development, community-building opportunities, and educational services while motivating students, faculty and the community to pursue careers in the STEM fields.





The CSER Team



DR. CHRIS BOTANGA

Executive Director, Center for STEM Education & Research Professor of Genetics & Genomics, Chicago State University

Dr. Botanga directs and leads programs at CSU—statewide, regionally, and nationally. He is currently the Executive Director of CSU's Center for STEM Education & Research (CSER) and formerly both the Director and Co-PI for the Illinois Louis Stokes Alliance for Minority Participation

(ILSAMP), and the PI and Director of the NSF LSAMP National Coordination Hub (both recently terminated under government mandates). Dr. Botanga has received over \$21 million in Federal grants, and has authored several publications in peer-reviewed journals. He most recently served as the Guest Associate Editor for the multidisciplinary journal, *Frontiers in Education*, on the Special Issue Publication, "New Developments in Pathways Towards Diversity and Inclusion in STEM: A United States Perspective," and was also the PI and Co-Director for the Louis Stokes Midwest Regional Center of Excellence (LSMRCE). Prior to joining CSU, Dr. Botanga was Assistant Professor of Biology at Augsburg University, Minneapolis, MN. He received a Ph.D. degree in Biology from the University of Virginia, Charlottesville, VA, and served as a Postdoctoral Associate in Genetics & Genomics at the University of Minnesota, Twin Cities, MN.



TARA BALDRIDGE

Associate Director, Center for STEM Education & Research

Tara Baldridge currently serves as the Associate Director of the Center for STEM Education and Research at Chicago State University. She is responsible for overseeing the daily processes and procedures of the center as well as providing ongoing support for faculty, students, and program stakeholders. Tara also manages local, regional, and national conferences and coordinates annual reporting. Prior to working at CSER, she held supervisory and Executive Director positions at educational non-profits. Tara is a graduate of the University of Chicago.



GREGORY CURRY

Program Coordinator, Center for STEM Education & Research

Gregory Curry serves the Center for STEM Education and Research at Chicago State University as a Program Coordinator. Gregory is the point of contact for students, providing information on research opportunities, internships, and fellowships. He supports the office with data on student activities and achievements and reports metrics to national agencies. Gregory organizes and leads professional development workshops on campus and webinars for the larger STEM community. Gregory earned a BS in Computer Science from Chicago State University, and his research has been published in peer reviewed journals.

CSER Vision: Broadening Participation in STEM

Vision

The Center for Science, Technology, Education, Math (STEM) Education and Research (CSER) is located on the campus of Chicago State University (CSU). CSER provides support and programming for students, faculty, and the surrounding community to improve outcomes in STEM.

CSER strives to broaden the participation in and increase the pipeline of historically marginalized students entering STEM studies and professions. The Center accomplishes this by providing mentoring, professional development, and increased community-building opportunities and educational services, while actively motivating students, faculty and the community to pursue careers in STEM fields—both academically and within industry.

Through year-round programming, a dedicated staff, and administrative support, we have contributed to establishing a viable and replicable system for the continued enhancement of STEM innovation by pursuing and retaining talent from various cultures and backgrounds.





Broadening Participation in STEM at Chicago State University

Broadening Participation in STEM serves to give access and support to those individuals from historically marginalized populations in pursuit of STEM degrees. This includes; eliminating barriers of application and testing fees, providing resources on careers, internships, and fellowships, creating mentorship opportunities, and giving access to and encouraging thoughtful research. Broadening Participation at CSER is a multi-faceted approach in which we build STEM pathways that not only address the limitations of traditional access, but also encompass social-emotional, community, and cultural components to create and sustain more resilient students.

ACADEMIC SUPPORT

In addition to the traditional tutoring model, CSER has supported the adoption of the Learning Assistant (LA) Program for STEM courses on the CSU campus. The LA program is a collaborative tutoring system between the Learning Assistant and course instructor. The LA is considered part of the instructional team and participates in weekly meetings with the instructor as well leading smaller group discussions in and out of the classroom. Notably, all LA's are required to fulfill a pedagogy course to enhance their understanding of teaching and learning as well as to support their personal development as both student and tutor. This program gives participants agency in the classroom, provides an open dialogue with professors, and adds to their professional resume. In 2024, CSER was able to support a cohort of LA's over a variety of STEM courses.

"CSER has provided me with multiple opportunities to meet experts in my field by giving me opportunities such as trips to Argonne National Lab. It also funds my LA work, allowing me to mentor my peers. My experience at CSU would be significantly lesser without CSER." - Laszlo Toth, Physics Major & LA

MENTORSHIP



Building strong relationships between students, faculty, administration, and corporate partners is an integral part of creating persistence in STEM for historically marginalized students. Research has indicated that these relationships contribute positively to student's STEM identity, allowing them to view themselves as student, scientist, and colleague, and giving them a firm foundation in supportive resources. Through our monthly webinars with STEM graduates and corporate partners we facilitate the "future self" model to our STEM students. Additionally, our faculty serve as research mentors who take great care to consider cultural and social-emotional differences in the mentor-mentee relationship. As evidence of the results of such mentorship, prior students from our program have established an alumni network that is now self-sustaining.

"The CSER office has helped me in many ways. Mainly, it has been a safe space for me as an international transfer student as it provides resources that not only make college life more manageable but also provides resources that make college more fulfilling, This is mainly due to the amiable staff who is always willing to guide, mentor, and converse with students." - Joseph James, Biology, Senior, Walder Research Student

RESEARCH

Research is an essential factor in developing students prepared for entering the STEM academic or industrial workforce. Our Research Assistant Program gives students hands-on research experience—either on campus with a faculty mentor or off-site through partnerships with laboratories, museums, and corporations. The program prepares students to understand key factors in scientific discovery and individualized practice within their specific area of interest. In this program, students are also tasked with learning how to communicate and present their research to fellow scholars, faculty, and the public. We have seen many students flourish in this program, often finding their future graduate school research topic, winning presentation awards at conferences, or gaining a lifelong mentor or advisor. For populations historically underrepresented in STEM, the ability to develop quality research as an undergraduate provides a better understanding of the technicalities and expectations before entering graduate school.

WALDER FOUNDATION



CSU Walder Foundation student researcher Mia Martinez conducting research.

The Walder Foundation supports scientific discovery and research primarily in the Chicago region. Under their Environmental Sciences and Sustainability Program, CSER supports faculty and student researchers in scientific discovery aimed at addressing issues in these disciplines. Projects under this initiative not only work to enhance the rich and diverse landscape of the Chicago area but also center on subjects of environmental inequities and urban development affecting the natural environment. Students participating in research under the Walder Foundation work directly with a faculty mentor, present at conferences, and build a solid support system for future impact on the global climate crisis.



POST BACCALAUREATE RESEARCH

CSER's sponsorship of the Illinois Post-Baccalaureate Research Experiences for LSAMP Students (IPRELS) supports recent graduates with up to one year of faculty-guided research experience. This program is beneficial for students who were unable to participate in hands-on research experience during their undergraduate years. During the IPRELS program, students are able to either begin or continue their research journey before joining the the STEM workforce or matriculating into graduate programs in STEM. As a background in research and understanding of lab protocols are crucial factors in STEM graduate school success, CSER provides this essential real-world experience to students in a supportive environment.

INTERNSHIPS & FELLOWSHIPS

Assisting in connecting with employers and partners for mentorship and training is an important aspect of CSER programming. Along with hands-on research experience, we expect our students to gain real-world experience while in our program. Our department has created viable partnerships with many esteemed organizations, such as Argonne National Laboratory, The Field Museum, Fermi National Accelerator Laboratory, and the Eaton Corporation. The continuity of partnerships is essential in providing well-rounded support to students. Through careful matching of interests, company dynamics, and student experience, we have fostered successful internships and fellowships, which have developed into deeper research, higher-level networking skills, and lifelong career opportunities.

The staff at CSER actively provides students with sourcing opportunities and helps students navigate the application process. Periodically, we invite partners and institutions to present via a virtual internship fair for our STEM students. This allows students to interact with representatives and ask questions in a live environment, establishing a first connection and initial engagement with companies traditionally difficult to access. This process has increased student interest and confidence in experiencing unfamiliar institutions and new research opportunities.

EDUCATIONAL TRANSITIONS

The ability to successfully transition between academic institutions while maintaining a commitment to STEM studies is an important aspect of our programming. CSER has worked extensively with local community colleges to support the transition of students from two-year institutions to continue their matriculation into a four-year institution. The CSER office provides support and mentorship to these students, including either continuing to support their research or introducing them to hands-on research.

Along with community college to university transitions, we have worked closely with doctoral programs as part of an NSF Bridge to the Doctorate grant to support students pursuing a STEM doctoral degree. Through these programs, we have found that consistent support, resources, and mentorship throughout their STEM journey leads to higher retention among traditionally marginalized groups.

ENGINEERING PLUS

The **Engineering PLUS (Partnerships Launching Underrepresented Students)** is a NSF initiative dedicated to addressing the decline in US Engineering graduates. The alliance addresses areas of workforce readiness, math and academic readiness, research opportunities, and retention among engineering students.

As a partner institution in the Engineering PLUS Alliance leading the Midwest Regional Hub, CSER has made a significant effort in broadening participation in the Engineering field for students from historically marginalized communities. Some of the main focuses of CSER within the framework of the Engineering PLUS Alliance have been establishing partnerships with industry, providing professional development strategies to engage students in engineering, assisting institutions in adopting evidence-based programming to increase retention, and hosting an annual conference for faculty and administrative staff focusing on broadening participation initiatives.



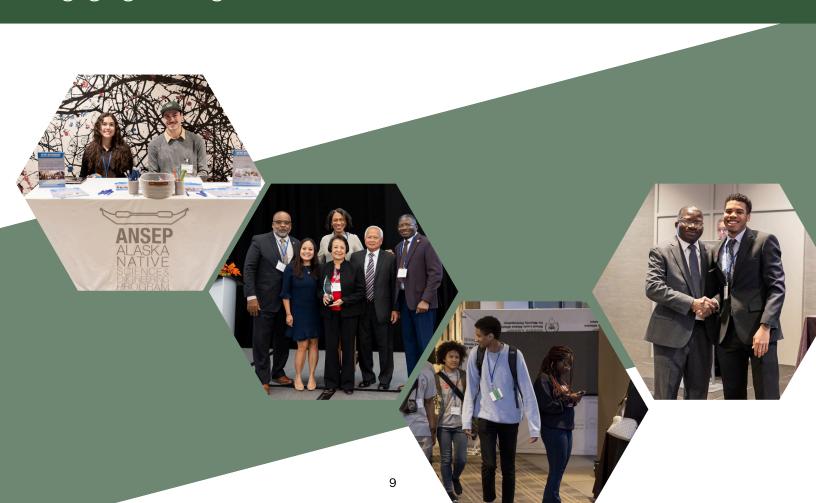
Annual Spring Symposium

A major impact of CSER is ensuring budding scientists are fully equipped to conceive and manage research projects. Through mentorship with faculty, government laboratories, and corporate partners, student interest in research is supported at every level, including the development of presentation skills via poster and oral presentations at local, regional, and national conferences.

Along with encouraging students to hone their skills in classrooms, each year CSER offers an annual research symposium designed to showcase research across all levels. We provide all students involved in research with both judged and non-judged categories because we know practice and encouragement elicit lifelong confidence and success.

In addition to providing presentation experience, we host a range of professional development workshops and plenary sessions to encourage continued learning. Our conferences also serve as a platform for networking with peers, faculty, and corporate partners.

Engaging Undergraduates to Increase STEM Resilience & Innovation



Conference Programming

SPEAKER SESSIONS

Dynamic speakers bring their expertise to Symposium Plenary Sessions. This allows students time to listen and learn along with their peers. Topics range from STEM advocacy, personal resilience, job and fellowship opportunities, to triumphant success stories from scientists of all backgrounds and abilities. A highlight of the speaker sessions is the number of students we incorporate into the symposium. With a firm belief that "if you can see it, you can be it", we bring current and past STEM students to the forefront of the conference to speak honestly and encouragingly about their personal journey. Additionally, through our Conversations with Scientists sessions, students network directly with symposium speakers, making sound connections for future opportunities.

EXHIBITOR SESSIONS

Providing students opportunities to interact with representatives offering fellowships, internships, graduate programs, and career opportunities is an essential aspect of the conference. These sessions are integral to student success, as exhibitors in these sessions are committed to the same values of Broadening Participation in STEM. Students feel valued in their research and knowledge of STEM and are able to realize a promising future in higher education, a research lab, or a career in industry.





Conference Programming

WORKSHOPS

Small scale workshops geared toward professional development are vital to encouraging conversation and connection between students from different institutions. While inter-institutional conversations are encouraged throughout the conference, these workshops facilitate an opportunity to form collaborative connections for future learning and research across institutions and academic levels. Many of our workshops address the needs of historically marginalized STEM students, such as a roundtable on *Building Inclusive Spaces in STEM*, or programs of interests, such as our session on *Leveraging Learning Assistant (LA) Voice and Perspectives to Impact Instructional Delivery*

NETWORKING



CSER prioritizes networking as a skill and an opportunity. As historically marginalized students are often underrepresented in STEM academic programs, fellowships, and industry, encouraging them to make new connections with peers, faculty, and potential employers with confidence is an important factor in establishing retention as well as addressing social and emotional needs. We utilize both formal and informal networking sessions at every conference. In addition to these sessions, we provide professional headshots to each student—allowing them to establish a business profile representing their academic and industry pursuits in a professional manner and as a networking tool.

LSAMP Alumni Profiles



Dr. Archer speaks on *Navigating STEM Success* at the 2024 NSF LSAMP PI/PD Meeting in Washington, DC.

Dr. Akibi Archer

Engineering Specialist Al, Data Science, and Machine Learning Digital Design and Engineering

Eaton Corporation

"The Center for STEM Education and Research (CSER) and LSAMP have played a pivotal role in my growth as both a scholar and a STEM professional. As an LSAMP graduate with a B.S. in Mechanical Engineering from the University of Florida, and an M.S. and Ph.D. in Mechanical Engineering from Georgia Tech, I've had the privilege of mentoring students and speaking at LSAMP conferences and events. These experiences have shaped my approach to engineering and leadership at Eaton, where I continue to advocate for inclusion and innovation. I'm proud to be part of a company that actively supports initiatives like LSAMP to broaden participation and empower future STEM leaders."



Dr. Archer shares opportunities at Eaton with student attendees.

LSAMP Alumni Profiles



Dr. Leticia Meza-Marshall

Postdoctoral Scholar Advancing Systems-Based Solutions Through Research, Stakeholder Coordination, and Education

Department of Microbiology and Plant Pathology
University of California, Riverside

"When I returned to school at 32 as a single mother of two, I could not have imagined the doors that Chicago State University (CSU), CSER, and LSAMP would open for me. At CSU, I discovered not only mentorship and opportunity, but the realization I had the capacity to belong in STEM spaces and succeed in higher education. CSER and LSAMP-funded opportunities—paid research, professional development, faculty mentoring, supplemental instruction, and participation in the Annual Student Research Symposium—were lifelines for me as a low-income mother and first-generation student. That foundation carried me forward.

As a National Science Foundation Graduate Research Fellow, I deepened my expertise in plant nanobiotechnology and crop pathology, leading to peer-reviewed publications, international collaborations, and patented innovations. After completing my Ph.D. in Plant Sciences at UC Riverside in 2023, I was awarded the prestigious ASEE Innovative Postdoctoral Entrepreneurial Research Fellowship.

Today, as a postdoctoral scholar, I work at the intersection of agricultural sustainability, education, and policy, supporting collaboration across citrus systems, circular economy education, and workforce pipeline innovation.

Most importantly, the impact has been generational. My eldest daughter, who was six when I returned to school, is now 21, studying physics at a prestigious private university and preparing for graduate school herself. Having mentored over 40 undergraduate and graduate students, I remain committed to opening doors for the next generation, just as CSER and LSAMP once opened them for me."

LSAMP Alumni Profiles



Dr. Bryson presents her STEM non-profit at the 2023 NSF PI/PD Meeting in Washington, DC.

I founded Scientists That Elevate Me, a business dedicated to introducing students from diverse ages and backgrounds to the vast opportunities available within STEM fields. I've had the privilege of presenting at several LSAMP-funded conferences—speaking on the importance of mentorship and exposing scholars to a range of STEM careers.

LSAMP has been nothing short of life-changing. It not only shaped my path in STEM but also fueled my passion for outreach, mentorship, and equity in science education."

Dr. Tasia Bryson

AAAS Fellow, **US Department of Energy**Founder, **Scientists That Elevate Me**

"As a former LSAMP scholar, I received invaluable support and guidance throughout my academic journey—from earning my associate degree all the way to completing my doctorate. Before participating in LSAMP workshops and conferences, I had little knowledge of the importance of undergraduate research or the graduate school process. LSAMP changed that entirely.

Through the program's exposure and resources, I was able to participate in three undergraduate research experiences, each of which played a pivotal role in my academic development and ultimately led to my acceptance into a fully funded doctoral program. The impact of LSAMP inspired me to give back.



Dr. Bryson leads the student track at the 2024 NSF PI/PD Meeting.

CSER Regional Impact

The Center for STEM Education and Research has been the recipient of multiple grants expanding its reach and programming. In addition, the success of our programs, collaborations, and students—as documented in external evaluator reports and empirical data—has allowed us to organize efforts on a national scale. Through the lifetime of CSER, we have brought Broadening Participation to multiple institutions and industries on a much larger scale.

Programming and events on this scale speak to our ability to replicate successful recruitment and retention efforts, form cohesive partnerships with colleges and universities, provide highly qualified students for careers within STEM industries, and offer professional development to those interested in Broadening Participation. Moreover, we recognize the power of global awareness and innovation and include international partners and experiences in our general programming.

LS-AMI

LSAMP PROGRAM

The Louis Stokes Alliances for Minority Participation (LSAMP) program, for which Chicago State has served as the lead institution since 1993, creates alliances of higher education institutions and tasks them with working to diversify the nation's STEM workforce. Within this initiative, Chicago State University provided programming support and funding for eleven (11) Illinois higher education and community college institutions, the Field Museum of Natural History, and Argonne National Laboratory. The Illinois LSAMP program greatly expanded the impact of historically marginalized students in the pursuit of STEM.



LSAMP students have attained STEM graduate degrees at significantly higher rates than either the URM or the white and Asian comparison samples. Moreover, former LSAMP participants are also more likely to complete a graduate degree in STEM than in a non-STEM field than are the other two comparison groups.

¹The Urban Institute. (2005). Final Report on the Evaluation of the National Science Foundation Louis Stokes Alliances for Minority Participation Program

CSER National Impact

Through the Louis Stokes Midwest Regional Center of Excellence (LSMRCE) for Broadening Participation in STEM, a partnership of Chicago State University (CSU) and Indiana University Purdue University Indianapolis (IUPUI) in collaboration with the Ohio State University (OSU) and Fermi National Accelerator Laboratory (Fermilab), Chicago State expanded its impact and reach of students pursuing STEM degrees. While the LSMRCE began as a regional initiative, the programming, research, and professional development provided by the partner organizations evolved into a nationwide effort. LSMRCE became a national model of Broadening Participation by fostering connections between academia and industry, building a database of online resources, hosting conferences to disseminate research-based strategies, and continuously increasing the number of STEM professionals. LSMRCE formed programs and partnerships aimed at mentorship and support across institutions and industry, leaving a major impact across both channels.

LSMRCE PROGRAMMING

- NALA(*STEM*) The National Alliance Leading the Acceleration of STEM, created through LSMRCE unites, supports, and builds community among historically excluded peoples in STEM. This is now a self-sustaining non-profit of alumni.
- National Database A database of STEM professionals used to collaborate and disseminate information and opportunity across academia and industry.
- Student Experiences at Eaton Corporation A partnership for students to visit Eaton Corporation's regional and national headquarters to develop an understanding of the industry as well as gain an overview of the recruitment and hiring process.
- Publications Multiple peer-reviewed publications; however a special edition (2020) of Trailblazers
 Magazine and a special volume (2022) of Frontiers in Education, "New Developments in Pathways Towards
 Diversity and Inclusion in STEM: A United States Perspective"
- FERMILAB SIST (Summer Internship in Science and Technology) Program Dedicated internships for qualified applicants to work with scientists and engineers at the nations preeminent high energy physics laboratory.
- Resume Book an online database for industry and academia
- Conference Organizer NSF LSAMP Principal Investigators/Project Directors National Conference.



CSER National Impact

The awarding of the **NSF LSAMP National Coordination Hub** in 2024 to Chicago State University as the lead institution cemented our impact on the national broadening participation agenda.

NSF NATIONAL COORDINATION HUB (NSF LSAMP-NCH)













LEAD INSTITUTION



The NSF LSAMP
National Coordination
Hub (NSF LSAMPNCH) is funded by the
National Science
Foundation.

LSAMP - NCH OBJECTIVES

The overall objective of the LSAMP-NCH is to provide a nationally unified platform that promotes collaboration, communication, partnership, and dissemination to the broader STEM community. The program aims to:

- Influence change in the national STEM community
 - Internship/fellowship resources, publications, conferences, connecting LSAMP and non-LSAMP partners
- Establish mentoring networks, dissemination of information, and promote evidence-based strategies for broadening participation in STEM
 - Webinars, website, mailing list, data analytics



MENTORSHIP

The **LSAMP-NCH Mentoring Institute** provides evidence-based mentoring best practices to members of the LSAMP community and others who are also invested in developing a globally competitive STEM workforce. This is achieved through quarterly mentorship webinars led by STEM mentoring program experts, resource videos on our website, on-site workshops at conferences, and research/data on mentoring strategies.

PUBLICATION

The **LSAMP-NCH Publication Hub** provides resources and best practices on successful publication of research in peer-reviewed journals. These articles are essential to disseminating information throughout the larger STEM community and exemplify our dedication to quality programming across the nation. Through this website, we share suggested journals, citations, and terminology to aid the pursuit of publication. In addition, our call for papers for a special edition of *Frontiers in Education, "Catalyzing Change: Best Practices for Broadening Participation in STEM in the United States"* further upholds our values of collaboration and research.

COMMUNICATION

The **LSAMP-NCH Website** continues the work of the LSMRCE by providing a direct link to information on Broadening Participation in STEM. Along with hosting professional development materials (videos, papers, terminology, etc.), the site serves as a connector for faculty, researchers, students, and industry, addressing the multi-pronged approach needed to make dramatic inroads in increasing diversity and opportunity in STEM. Individuals who subscribe to the mailing list are provided information about workshops, job opportunities, new research, publications, internships/fellowships, and grants.

EVALUATION

At the cornerstone of our LSAMP-NCH Programming is evaluation. Our partner, SageFox Consulting Group, is tasked with collecting and providing data on our efforts in Broadening Participation. As part of their role, SageFox uses an open source platform to provide data on degree completion in STEM by students from historically marginalized communities engaged in our past and current programming. This data underscores our efforts and allows us to constantly assess our initiatives, as well as target programming to achieve maximum impact across the entire STEM community.

National Conferences



Through LSMRCE and LSAMP - NCH, Chicago State University has executed multiple national conferences on behalf of the National Science Foundation. These conferences, with up to 500 attendees, serve to educate and empower STEM faculty, students, and industry partners on the most pressing issues related to the STEM national agenda.



These conferences are unique opportunities for professional development in the areas of recruitment and retention, partnership building, collaboration, and mentorship. In addition, students from our sponsored programs (from undergraduate to the Bridge to Doctorate) present their research to the broader STEM community.



PRINCIPAL INVESTIGATORS & PROJECT DIRECTORS MEETING

October 24 - 26th, 2024 Capital Hilton, 1001 16th Street NW Washington, DC 20036

CSER International Impact

An understanding of the global STEM community is an additional feature of our programming. We have hosted the International Undergraduate Research Symposium (IURS) on the campus of Chicago State University. We have also sponsored students presenting research at the CERN as well as formed a partnership with Jaramogi Oginga Odinga University of Science & Technology (JOOUST), Bondo, Kenya.







Our Continuing Impact

- Provide hands-on research skills to STEM students.
- Facilitate mentorships between students, faculty, and industry professionals.
- Develop industry partnerships to encourage a diverse talent pool.
- Elevate summer and weekend programming for high school students interested in learning more about STEM.
- Support current and new students' academic and social-emotional needs as they pursue studies and careers in STEM.
- Create professional development tools, including peer-reviewed articles, to aid those interested in Broadening Participation at their institution



Contact Us



773-995-3296



cser@csu.edu



Center for STEM Education and Research (CSER)



