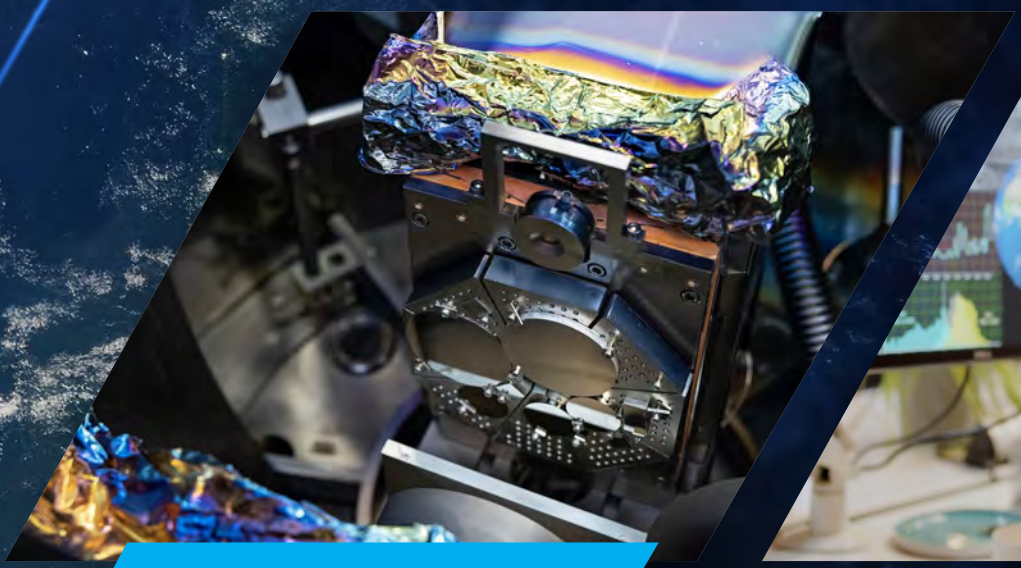
SURA

Annual Report

FY2023



A Letter from the President and CEO

Dear SURA Member Universities,

I am delighted to present the SURA 2023 Annual Report, a testament to the achievements we have collectively accomplished over the past year. As a consortium dedicated to collaborative research, our success is intertwined with you, our member institutions. Together, we enhance individual programs and strengthen the scientific infrastructure of our region and the nation.

This year, we have made significant strides in implementing our five-year strategic plan developed in FY2022, which centers around four key pillars: Jefferson Lab, scientific staffing, delivering industry-leading value to our members, and achieving operational excellence. At Jefferson Lab, our efforts have been particularly fruitful; we secured nearly $50M with the assistance of Virginia's universities and the Hampton Roads business community for the construction of a High-Performance Data Facility building.

In the area of scientific staffing, SURA continues to foster the next generation of scientists and engineers. We provide numerous opportunities through our involvement in programs such as NASA's CRESST II and GESTAR II, and we are expanding our reach with new initiatives at NIST-Gaithersburg and the Navy AUTEC underwater test facility.

Our commitment to delivering industry-leading value to our members is evidenced by the recent major restructuring of our board of directors—the first overhaul in over a decade. This restructuring has allowed us to become more agile in a rapidly changing market. Moreover, we welcomed Arizona State University into our consortium, marking our first new member in five years. We have also focused on enhancing the impact of our awards programs, which benefit a broader range of participants, from students to distinguished scientists.

On the operational front, SURA is dedicated to maintaining efficiency to ensure our long-term sustainability and growth. We have continued our efforts to minimize operational costs and have added a new position of Chief Growth Officer, filled by Scott Heefner, to increase the volume of our business and expand our funding base. Furthermore, we are investing in our communications platforms to enhance the visibility of our programs and the career opportunities they offer.

As we look to the future, our mission remains clear: to advance collaborative research and education to foster scientific innovation and excellence. I am excited about what we will achieve together in the coming year and appreciate your continued support and commitment to SURA.

Warm regards,

SEAN J. HEARNE
President and CEO

PROGRAMS

CRESST II

The **Center for Research and Exploration in Space Science & Technology** (CRESST II) cooperative agreement between NASA's Goddard Space Flight Center and the University of Maryland-College Park, University of Maryland-Baltimore County, Catholic University of America, Howard University, and SURA, entered its 7th program year in April 2023. The CRESST II program facilitates collaboration between NASA researchers and space scientists from CRESST II partner institutions conducting research in support of NASA Goddard's astrophysics and solar system exploration work.

In FY23, SURA helped grow the successful CRESST II post baccalaureate program to 18 participants. This program provides career development workshops and opportunities to help the post bacs write their graduate school applications, update their resumes, network effectively at scientific conferences, and learn about career paths available to them with their skillsets.

Other CRESST II activities in FY23 included our annual Undergraduate Interaction Day with approximately 85 undergraduate students (including 16 from SURA member universities), our annual Holiday Brunch in December, two proposal writing seminars for all CRESST II scientists, and our summer internship program with 13 interns that came to NASA Goddard for 10 weeks. SURA also hired two new CRESST II administrative personnel in FY23, and both have been excellent additions to the team.

Scientific presentation at NASA Undergraduate Interaction Day

Carolyn Wilson, SURA Special Projects Manager at Undergraduate Interaction Day

SURA helped grow the successful CRESST II post baccalaureate program to 18 participants and 13 summer interns.

PROGRAMS

GESTAR II

The **Goddard Earth Science Technology and Research** (GESTAR II) cooperative agreement between NASA's Goddard Space Flight Center and University of Maryland-Baltimore County, Morgan State University, Arizona State University, Colorado State University, Penn State University, ERT, Northrup Grumman, and SURA entered its 3rd program year in December 2023. The GESTAR II program works to advance Earth science and Goddard's leadership in earth science research by providing a competitive environment to hire and retain high-quality scientists on track to be leaders at NASA, in academia, and industry.

In FY23, SURA was able to create a connection through the GESTAR II cooperative agreement between NASA civil servants in the Earth Science Division at NASA Goddard and a lab at George Washington University by hiring a laboratory technician to run samples at GWU for the NASA scientists.

The SURA GESTAR II administrative staff worked closely with the GESTAR II universities and with NASA to recruit and support undergraduate and graduate students working onsite through GESTAR II.

SURA hired a laboratory technician to run samples at GWU for the NASA scientists

LASSO

The **Laboratory Support Services and Support Operations** (LASSO) contract at NASA's Kennedy Space Center (KSC) operated and maintained a diverse set of operational and research laboratories that span a wide range of disciplines, many of which may not be traditional NASA technologies, including plant biology, geology, mechanical engineering, surface science, and material science.

From left to right: Dr. Tracy Gibson (SURA-LASSO), Dr. Joel Olson (SURA-LASSO), Carolyn Wilson, SURA Special Projects Manager, Dr. Bruce Link (SURA-LASSO)

SURA filled the role of involving academic researchers and other subject matter experts in KSC's scientific research and engineering activities. The LASSO contract ended in March 2023. SURA is proud of all the cutting-edge research conducted by our scientists and subject matter experts working on the LASSO contract. Much of their work will be essential for NASA to be able to sustain life in space and on the moon in the very near future.

NEW IN FY23

SURA had a positive FY23 in working toward its strategic planning objectives to expand its research program portfolio. Awards received and proposal activities have provided revenue growth and the base for possible future awards.

▶ NIST - Professional Research Experience Program

In July 2023, SURA won a subaward with George Washington University on a cooperative agreement from the National Institute of Standards and Technology to support the Professional Research Experience Program (PREP) at Gaithersburg, MD. It is a 5-year program. NIST's PREP is designed to support the agency's mission in science, technology, engineering, and math (STEM) education and provide valuable laboratory experience and financial assistance to undergraduates, graduate students, postdocs, master's and bachelor's degree holders, and faculty.

▶ AUTEC (Atlantic Undersea Test and Evaluation Center)

In the fourth quarter of FY23, SURA secured an Indefinite Delivery Indefinite Quantity (IDIQ) subcontract to provide research and development support for the AUTEC program. The United States Navy's AUTEC is a laboratory that performs integrated three-dimensional hydrospace/aerospace trajectory measurements covering the entire spectrum of undersea simulated warfare – calibration, classifications, detection, and destruction. Its mission is to assist in establishing and maintaining naval ability of the United States through testing, evaluation, and underwater research. Potential research and development support includes managing a Naval Undersea Warfare Center (NUWC)-sponsored extramural research program, facilitating distance learning capabilities to AUTEC employees through its member universities, and serving as a recruiting pipeline for the NUWC and AUTEC intern program with one or more of SURA's member universities.

▶ SURA Student Internship Program

In FY23, SURA launched an internship program to make it possible for students to gain academic credit and paid work experience. During the spring semester, SURA partnered with Howard University and hosted Bethel Adewale, majoring in Criminology and Afro-American Studies and Anaya Hunte, majoring in Strategic, Legal and Management Communications. Bethel and Anaya assisted with several projects at SURA over the course of several months and during the summer of 2023, Bethel returned to SURA and SURA also hosted Helen Egata, a rising 3rd year law student at the University of Baltimore. Helen drafted documents, conducted research, and had an opportunity to experience in-house legal work. SURA looks forward to hosting a Corporate Counsel Externship for the University of Baltimore's Clinical Law Programs in FY24.

Bethel Adewale
SURA Intern

Helen Egata
SURA Intern

Anaya Hunte,
SURA Intern

JSA Initiatives Fund Program

SURA, through Jefferson Science Associates (JSA), annually funds the JSA Initiatives Fund Program. Now in its 18th year, **JSA has awarded ~$7.5M for over 450 projects** that enable and support programs, initiatives, and activities that further scientific outreach and foster a vibrant research environment that supports the lab's missions and helps to develop our next generation scientific workforce.

Award of Initiatives Funds are made for:

- Graduate and undergraduate fellowships, providing hands-on research experience and mentorship for students while they further their education.
- Scientific meeting support, facilitating exchange of ideas and collaboration among researchers and honing presentation skills of young researchers at conferences and workshops.
- Education and career development, equipping students and early-career scientists with the skills and knowledge needed to thrive in the scientific workforce.
- STEM activities, inspiring future generations of scientists through outreach programs and educational initiatives starting at the K-12 level.
- Student prizes and awards, recognizing and encouraging outstanding research achievements among students and young researchers.

*JSAT teacher **Brandy Bergenstock** demonstrates an egg drop experiment at 2023 Teacher Night.*

▶ JSA Sabbatical/Research Leave Support Program

The JSA Sabbatical/Research Leave Support Program provides living expenses for university faculty conducting research at Jefferson Lab during approved sabbatical leave from their home institutions. Support enhances the research opportunities for faculty through access to the lab facilities and interactions with lab staff and users, strengthens the teaching and research capabilities of universities through faculty involvement, and strengthens the research programs by attracting "new blood" into the lab science programs.

Lamiaa El Fassi
MS State U

Edward Kinney
U of CO Boulder

Zisis Papandreou
U of Regina

Julie Roche
Ohio U

SURA

▶ JSA/JLab Graduate Fellowship Program

Nine graduate students pursuing doctoral degrees at SURA member universities were selected to receive research stipends for their proposals that incorporated their academic studies with Jefferson Lab research projects. Since program inception, over 260 graduate fellowships have been awarded to students at SURA member universities.

> Nine graduate students were selected to receive research stipends for their proposals

Academic Year 2022-23 recipients included:

- Hem Bhatt, Mississippi State University
- Andrew Denniston, Massachusetts Institute of Technology
- Isurumali Neththikumara, Old Dominion University
- Nathan Heinrich, University of Regina
- Lydia Lorenti, College of William and Mary
- Casey Morean, University of Tennessee
- Pushpa Pandey, Old Dominion University
- Jackson Pybus, Massachusetts Institute of Technology
- Maria Satnik, College of William and Mary
- Erin Seroka, The George Washington University

Erin Seroka, GWU
Monitoring Hall B (CLAS12) Experimental Data

▶ JSA/JLab Minority/Female Undergraduate Research Program

Research stipends were awarded to minority or female undergraduate students who worked on projects in the lab's research program with their advisors. Diana Perez Martin (Florida International University), Katia Birch (James Madison University) and Hannah Valenty (Duquesne University) were nominated by their faculty advisors to receive the awards.

Hannah Valenty *at CLAS12*

▶ HUGS International Fellowships

HUGS International Fellowships were awarded to three international graduate students from developing countries to extend their participation in the Hampton University Graduate Studies (HUGS) Program. One of the original Jefferson Lab student programs, established by Hampton University and Jefferson Lab in 1986, HUGS is designed to train the next generation of nuclear physics researchers. The 2023 awardees: Johan Colorado Caicedo (Center for Research and Advanced Studies of the National Polytechnic Institute, Mexico), Lucas Benasque Froguel (Universidade Estadual Paulista, Brazil), and Maria Guadalupe Morales Trejo (Universidad Michoacana de San Nicolás de Hidalgo, Mexico) stayed at the Lab three weeks beyond the end of the 2023 HUGS Program during which time they continued to meet with Lab researchers and users and strengthen research collaborations.

▶ Jefferson Lab Science Activities for Teachers (JSAT) Program

JSAT, a STEM science education development program for fifth-, sixth-, and eighth-grade science teachers, builds teachers' skills in the physical sciences and effective teaching methodologies. Teachers attend 2-hour evening sessions throughout the school year at the lab where they learn interactive activities that enhance physical science instruction and hear from the lab science education staff various applications of science. Participants receive class sets of the demonstrated activities which they can use in the classroom immediately.

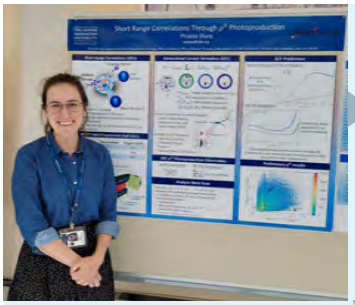
In addition to the 44 regional elementary and middle school teachers participating in the award-winning JSAT program during the school year, JSAT hosted the 14th Annual Teacher Night in April 2023, drawing over 115 participants from nine Virginia school districts engaging with JSAT teachers who shared demonstrations, activities and experiments learned during the year.

▶ Jefferson Lab Users Organization (JLUO)

JSA supported the Annual Meeting of the JLUO. The JLUO is comprised of ~1,900 staff scientists, professors, researchers, post docs and students working at their home institutions and at the lab on a variety of research projects in computation, data analysis, experiment preparation and related lab activities. JSA supported 60 students to attend and participate in the 2023 meeting, hosted several student events and sessions, and provided travel support for key speakers. At its 2023 Annual Meeting at Jefferson Lab, June 26 -28, 2023, JSA announced the award of the JSA Post Doctoral Grant, JSA Thesis Prize, and Student Poster Prizes.

▶ JSA Poster Prizes:

One of the exciting events on the JLUO Annual Meeting agenda is the JSA Graduate Student Poster Competition. In selecting the winning posters, the judges considered: Scientific context and merit; Scientific accomplishment, contribution and/or innovation; Accessibility to the broad nuclear/particle physics community; and, Poster design, clarity and visual impact. In addition to awards to Phoebe Sharp (George Washington University), Isurumali Neththikumara (Old Dominion University), and Ezekiel Wertz (William & Mary), Old Dominion University's Caleb Fogler received an Honorable Mention.

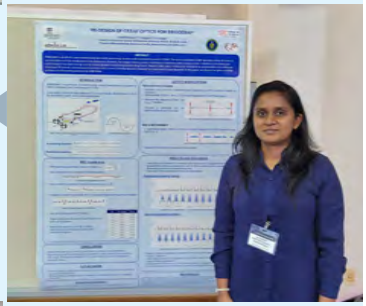


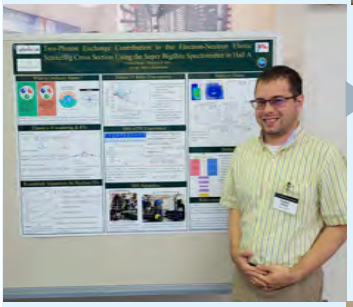
FIRST

Phoebe Sharp, GWU
Short Range Correlations Through p^{o} Photoproduction

SECOND

Isurumali Neththikumara, ODU
Re-Design of CEBAF Optics for ER@CEBAF



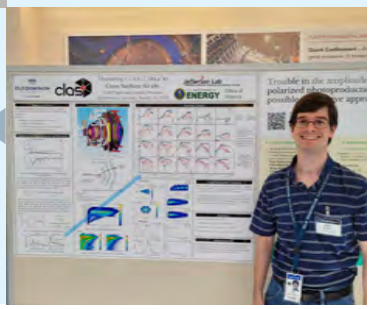


THIRD

Ezekiel Wertz, W&M
Two-Photon Exchange Contribution to the Electron-Neutron Elastic Scattering Cross Section

HONORABLE MENTION

Caleb Fogler, ODU
Measuring CLAS12 D(e,e',π) Cross Sections for e4v



NEWS & EVENTS

▶ SURA 2023 Annual Member & Board Meeting

SURA held its annual Member and Board of Directors meeting at its Washington D.C. home office August 8-9, 2023. The Annual Meeting included committee meetings, a presentation on opportunities to engage with SURA, conversations among colleagues, and scientific presentations by both Dr. Dalia Kirschbaum, Director of the Earth Sciences Division at NASA Goddard Space Flight Center and by Dr. Sherry Yenello of Texas A&M, one of the SURA 2023 Distinguished Scientists Awardees.

From left to right: Dr. David Norton, University of Florida, Board Chair; Dr. James Weyhenmeyer, Auburn University, Board Vice-Chair, Dr. Andres Gil, Florida International University, Board Member and Chair, Development & Relations Committee

From left to right: Dr. Daniel Sui, Virginia Tech, Board Member, Dr. Pamela Norris, George Washington University

From left to right: Dr. Anthony Tongen, JMU, Member Representative, Dr. M. Omar Faison, Virginia State University, Board Member and Chair, Committee of Minority-Serving Institutions

▶ 2023 Distinguished Scientists Awards

The Annual Meeting included an evening reception during which SURA honored Dr. Linsey Marr of Virginia Tech and Dr. Sherry Yennello of Texas A&M University as the recipients of the 2023 SURA Distinguished Scientist Awards.

Dr. Linsey Marr, an aerosol scientist, is a University Distinguished Professor and the Charles P. Lunsford Professor in Civil and Environmental Engineering at Virginia Tech and member of the National Academy of Engineering, Dr. Linsey Marr was awarded the SURA Distinguished Scientist Award "For collaborative leadership in multidisciplinary research efforts in aerosol transmissions significantly impacts guidance, policies, and research protocols, potentially saving thousands of lives."

Dr. Sherry Yennello, an internationally renowned nuclear chemist and expert in heavy-ion reactions, holds the Bright Chair in Nuclear Science and has served since 2014 as director of Texas A&M's world-class Cyclotron Institute, one of the world's leading nuclear science research facilities. Dr. Yennello received the SURA Distinguished Scientist Award for "research internationally known which significantly influences knowledge of the forces shaping our universe, with transformational contributions to our understanding of nuclear reactions induced by radioactive nuclei and the properties of neutron-rich matter."

▶ New SURA Member University added in FY23

Arizona State University

SURA's Board of Directors voted to approve the membership application of for Arizona State University, named No. 1 in innovation for eight years in a row in the annual Best Colleges rankings by U.S. News & World Report. With strong academic and research programs focused on innovation, ASU will bring significant resources to collaborations with SURA's member universities. "We are very excited to welcome ASU to the SURA consortium," said Dr. Sean J. Hearne, President and CEO of SURA. "ASU's numerous strengths in the Earth and space sciences are well-matched with SURA's key directions and we look forward to many years of partnership."

▶ New faces at the SURA Home Office

SURA's home office added some key team members during the past year.

In December of 2022, **Ariana Johnson** joined SURA's home office as our dynamic and dedicated Human Resources Manager. With a passion for people and a wealth of experience, she's poised to elevate our HR practices to new heights. Ariana brings 7 years of invaluable human resources experience from the private sector. Her previous role at a global transportation organization honed her skills in talent acquisition, employee relations, and organizational development. A proud Purdue University alumna, Ariana holds a Bachelor's degree in Business. She believes that people are our greatest asset, and she's comitted to fostering a positive and inclusive work environment.

"ASU's numerous strengths in the Earth and space sciences are well-matched with SURA's key directions and we look forward to many years of partnership."

In July 2023, SURA added **Scott Heefner** as the organization's new Chief Growth Officer to lead the next phase of SURA's organizational growth into a world leading university consortium providing scientific solutions for the nation. Scott hit the ground running to plan and grow a pipeline of possible business opportunities networking with the SURA staff, members from Industry, small and large businesses alike, and potential government customers to target and capture business opportunities. Scott trained as a civil engineer before developing expertise in cost, economic and financial analysis, infrastructure capital investment strategies, organizational transformation, business development and executive leadership. He earned a Bachelor's of Civil Engineering (BCE) at the Georgia Institute of Technology and a Master of Science in Engineering at Utah State University and is a licensed Professional Engineer in Georgia and Virginia.

Join us in welcoming Ariana and Scott to the SURA family! Together, we'll continue to make big science happen.

SURA

COMING IN FY2024

NEW AWARDS, PROGRAMS AND EVENTS

▶ Early Career Scientist Award

The purpose of the Early Career Scientists Award is to recognize SURA member institution faculty who have generated a sufficient volume of scholarship of high quality and are emerging in their fields as leaders and acknowledged as such by their peers. This award is for early career scientists at the faculty level of Assistant Professor, or who have held the rank of Associate Professor for less than three years at the time of the nomination.

▶ IDEA2 Public Policy Fellowship, Summer 2024

A professional development opportunity in science policy from the American Institute of Biological Sciences (AIBS) and the Southeastern Universities Research Association (SURA). AIBS and SURA are jointly offering a paid Inclusive, Diverse, Equitable, Accepting, and Accessible (IDEA2) Public Policy Fellowship in the summer of 2024 for current and recent graduate students in the life sciences or a closely related field. This unique training opportunity provides young scientists with valuable first-hand experience in science policy. The Fellow will have the opportunity to work on a range of science policy projects that could include planning a Capitol Hill science policy briefing, preparing science policy documents, conducting research on science and science education policy initiatives, and attending Congressional and executive branch meetings.

▶ MSI Graduate Awards Program

The MSI Graduate Awards Program provides opportunities for undergraduate students from non-R1 SURA Member Minority-Serving Institutions to pursue graduate (PhD) education in a STEM discipline at a SURA member university. The program supports SURA's commitment to help build a diverse and inclusive educational community by reducing barriers for students in higher education. Funds will be provided directly to the student during their first semester in a STEM PhD program at a SURA member university. Award funds may be used to help defray expenses related to the student's graduate education, such as tuition, books, tools and supplies, training equipment, travel to conferences, and living expenses.

SURA EVENTS

- **November 2023:** SURA's Fall Workshop on Advancing Coastal Resiliency Through Research and Community Engagement.
- **July 23rd - 24th, 2024**: SURA Stakeholder Engagement Workshop and Annual Meeting
- **September 2024**: SURA Fall Workshop

A Letter from the Controller and Interim Chief Financial Officer and Treasurer

Fiscal Year 2023 was one of cautious optimism for the SURA team. The challenges posed by the lingering pandemic and the ever-shifting economic landscape were met with resilience and adaptability. Guided by prudent fiscal planning and fueled by ambitious strategic growth initiatives, we navigated the complexities of uncertain global markets.

At the end of FY23, we had a positive 10.5% revenue growth. This success can be attributed to several factors including to increased efforts at our Thomas Jefferson National Accelerator Facility, the expansion of activities within our existing programs, and keeping the FY23 operational expenses well within the projected budget. Additionally, SURA's investment portfolio exceeded expectations. After an 18.9% decline in FY22, it rebounded impressively with a 14.03% increase.

We are proud to announce that once again, SURA's commitment to financial integrity was reflected in our financial statement audit which once again resulted in an "unmodified" opinion, with no "findings" related to our Federal Single Audit. Our financial statements as confirmed by our outside auditors present the financial position of SURA fairly and accurately, in accordance with accounting principles generally accepted in the United States of America.

Despite the ongoing economic climate, SURA remains resilient. While overall net operating results dipped, our robust portfolio performance offset this, leading to a marginal increase in our overall net assets.

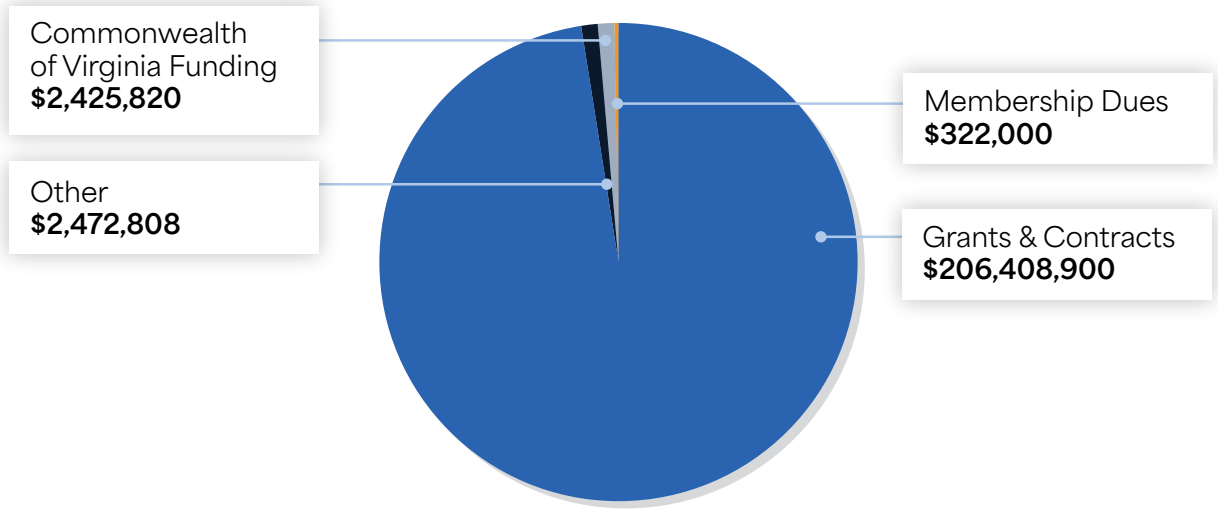
We extend our deepest appreciation to our Members, Board, dedicated team, and stakeholders. Your unwavering support throughout FY23 has been instrumental in our collective success.

Sincerely,

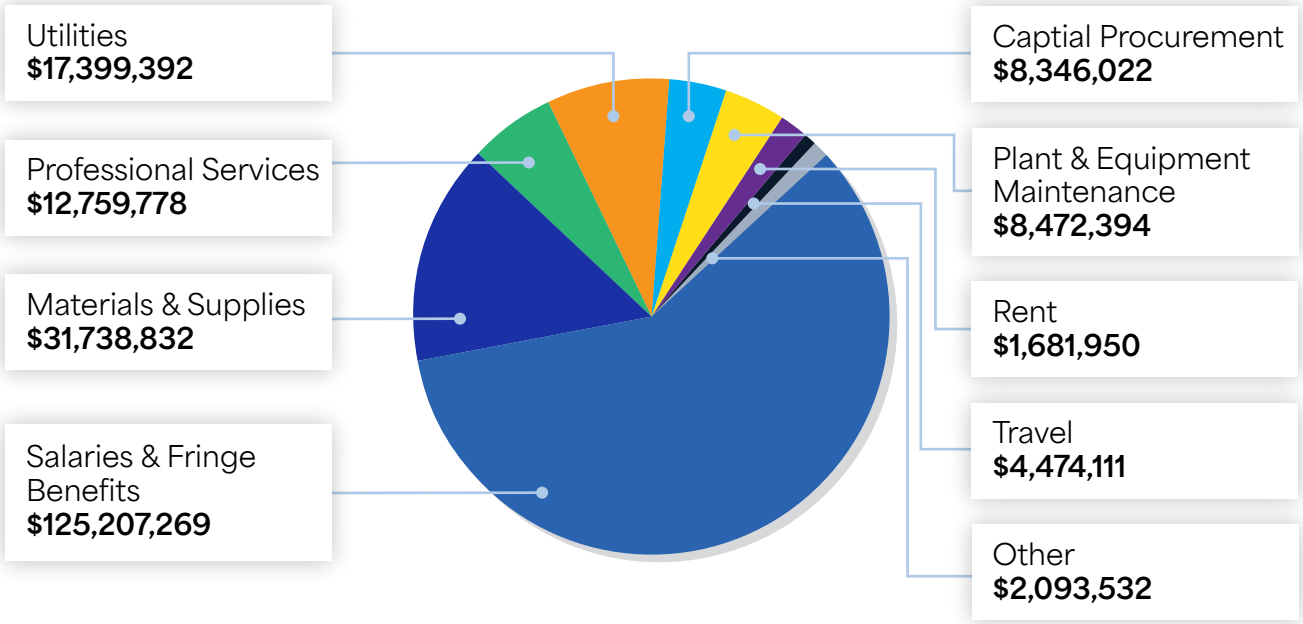
WILLIAM ALLAN JONES, JR. MBA, CGMA, CPA
Controller and Interim Chief Financial Officer and Treasurer

SURA

FY23 Revenue and Support



FY23 Expenses




SURA
MEMBERSHIP


ASU Arizona State University
AUBURN UNIVERSITY
THE CATHOLIC UNIVERSITY OF AMERICA
CHRISTOPHER NEWPORT UNIVERSITY
CLEMSON UNIVERSITY
Duke UNIVERSITY
FAU FLORIDA ATLANTIC UNIVERSITY
FLORIDA TECH
FIU FLORIDA INTERNATIONAL UNIVERSITY
FLORIDA STATE UNIVERSITY
GEORGE MASON UNIVERSITY
GEORGETOWN UNIVERSITY
Georgia Institute of Technology
Georgia State University
HAMPTON UNIVERSITY
Idaho State University
INDIANA UNIVERSITY BLOOMINGTON
JMU JAMES MADISON UNIVERSITY
LSU
Massachusetts Institute of Technology
MISSISSIPPI STATE UNIVERSITY
NORFOLK STATE UNIVERSITY
We see the future in you.
NC STATE UNIVERSITY
OHIO UNIVERSITY
OLD DOMINION UNIVERSITY
RICE
TEXAS A&M UNIVERSITY
THE GEORGE WASHINGTON UNIVERSITY WASHINGTON, DC
Tulane University
THE UNIVERSITY OF ALABAMA
UAB
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE
UNIVERSITY OF ARKANSAS
UCF UNIVERSITY OF CENTRAL FLORIDA
UNIVERSITY OF DELAWARE
UF UNIVERSITY of FLORIDA
UNIVERSITY OF GEORGIA
UNIVERSITY of LOUISIANA LAFAYETTE
UNIVERSITY OF MARYLAND
UNIVERSITY of MARYLAND BALTIMORE
UNIVERSITY OF MIAMI
THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL
The UNIVERSITY of OKLAHOMA
University of Regina
UNIVERSITY OF RICHMOND
UNIVERSITY OF SOUTH CAROLINA
THE UNIVERSITY OF SOUTHERN MISSISSIPPI
UNIVERSITY OF SOUTH FLORIDA
TEMPLE UNIVERSITY
THE UNIVERSITY OF TENNESSEE SYSTEM
TEXAS The University of Texas at Austin
University of Virginia
VANDERBILT UNIVERSITY
VCU
VIRGINIA TECH
VSU VIRGINIA STATE
West Virginia University.
WILLIAM & MARY

SURA is a consortium of universities with a mission to advance collaborative research and education and to strengthen the scientific capabilities of its members and our nation. It was established as the Southeastern Universities Research Association in 1980 to design, build, and operate what is now Thomas Jefferson National Accelerator Facility - a U.S. Department of Energy science laboratory. Jefferson Science Associates (JSA) , a wholly-owned SURA subsidiary, now operates the lab. SURA also facilitates collaboration with government agencies and researchers to advance information technology, understanding of coastal and environmental phenomena, space science and technology, and to promote scientific discoveries that impact our lives.

SURA

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