

# 2020 Annual Report



**In 2020, Patience, Perseverance and Science were paramount.**

As the Livermore Lab Foundation enters its sixth year of operation, we believe in finding the keys to advance great science and technology discoveries, opening the doors to relevant outreach and education initiatives and unlocking the potential of our next generation of scientists and engineers to make a difference for all of us.

We can do this thanks to your strong support.

On behalf of the staff, board and beneficiaries of the Livermore Lab Foundation, a very special thank you for your partnership. We hope you'll take a moment to peruse all our accomplishments in 2020 and meet a few of the people who are leading the charge.

**They are the keys to the future of science and we're proud to be on this journey -- with them and with all of you.**

**Girls Who  
Code - 'Big'**



**Student STEM  
Programs**



**Disease & Healthcare:  
ALS Research**



**Climate Science**



**Board of Directors**



**Growth at-a-Glance**





## Girls Who Code - 'Big'

# Harshitha Sarathy



*“ After listening to the stories of all these women and all these incredible paths and opportunities, I am really inspired! I loved this entire workshop, thank you so much! ”*

– Harshitha Sarathy, 10th grader, Livermore High School

In Fall 2020, virtual computing took on a new twist for area high school students, via [Girls Who Code - 'Big.'](#) Thanks to a special partnership with LLNL's Computing Directorate, the world of supercomputing, Lab style, became a reality. This four-day, one-of-a-kind immersion course offered students in grades 9-12 an opportunity to learn about parallel computing, high performance applications, scientific visualization as well as software and hardware basics.

The Foundation was able to present Girls Who Code – 'Big' due to the leadership and volunteer efforts of more than 20 LLNL volunteers, the generous support of the Intel Foundation, the Rotarian Foundation of Livermore, and a cadre of senior women (past and present) at LLNL who are committed to supporting the next generation of young women interested in pursuing a career in STEM.

*“ These types of programs can play such a huge role in opening up the world to young students, and I'm thankful to be a part of it. ”*

– Tammy Ma, Ph.D., LLNL Experimental Physicist,  
Girls Who Code - 'Big' Volunteer



**More information:**



## Student STEM Programs

*Letrell Harris*



*“ A deep and sincere thank you to the LLF donors for enhancing my internship experience with the Lab. I cannot express enough the importance of these opportunities and the role they play in the life of aspiring students. ”*

– Letrell Harris, Senior, Morehouse College, HED Science Summer Student, 2020

While the COVID-19 pandemic prevented many of the traditional high school, undergraduate and graduate internship and learning opportunities from taking place, the Foundation was able to provide virtual access via engaging programs.

In May 2020, LLF, LLNL and the Livermore Valley Joint Unified School District (LVJUSD) launched [Ask a Scientist](#) – a collaborative program providing live, virtual presentations for local students interested in science and engineering. This four-part series connected over 120 middle and high school students with LLNL scientists who explained their work and demonstrated experiments in physics, space and planetary defense, environmental science and physical science.

A new partnership between UC Merced and LLF accelerated the Foundation’s fellowship program by providing \$15,000 each to two top-notch college seniors. Jose Garcia-Esparza and Teagan Zuniga also participated in LLNL’s Data Science Summer Institute, designed for students with a love of data and a passion for problem-solving. The fellowship provides for tuition assistance as well as access to Lab mentors through May 2021.

In August 2020, 14 of LLNL’s top summer college students shared their research via power point presentations with the Livermore Lab Retirees Association and special guests of the Foundation. The event - [Summer Slam - Special Edition](#), featured topics that ranged from chemistry, to smart phones, to physics. A lively Q&A afforded the students expert insights and suggestions for future research.

The Foundation also continued its support of High Energy Density Science undergraduates and graduates at LLNL in 2020 – offering assistance to students for tuition and living expenses so they could dedicate their full efforts to their research, schooling and post-college options.

**More information:**



2020 Summer Slam - Special Edition



# Disease & Healthcare: ALS Research

## Cathie Brown



*“ ALS gets little research attention. I’m grateful the Lab is working to make a difference in the search for a cure. ”*

– Cathie Brown, former Livermore Mayor

The Lab’s unique expertise in High-Performance Computing, Bioengineering, and Bioassays were on full display in Fall 2020, when the Livermore Lab Foundation, LLNL and the ALS CURE Project hosted a series of stakeholder discussions on ALS - also known as Amyotrophic Lateral Sclerosis or Lou Gehrig’s disease. Led by LLNL’s Dr. Amy Gryshuk, Director of Strategic Initiatives, more than 60 of the best minds in academia, government and private industry gathered to create a [‘Road Map for a Cure.’](#)

LLNL’s research accomplishments in neurological disorders like Traumatic Brain Injury (TBI), have set the stage for what might be possible with ALS. LLNL scientists and researchers are using physics-based modeling and multi-modal machine learning to provide comparative experimental and computational results, identifying the potential factors that lead to ALS and studying the populations that might be at risk.

The Foundation is honored to have former Livermore Mayor Cathie Brown as a supporter in this important cause. “My husband of 53 years, Tommie, lost his two-year battle with ALS in 2020. My family is interested in helping others afflicted with this terrible disease.”

**More information:**



ALS CURE’s Mike Piscotty with LLF Board Chair Dona Crawford and LLF Executive Director Sally Allen



## Climate Science

# Roger Aines



*“ The response to our recommendations from [Getting to Neutral](#) has been tremendous. The conversation is robust and relevant, and the number of people willing to act makes us hopeful that the climate crisis can be solved. We believe an outcome of negative carbon emissions is in sight and we’re grateful to be part of the conversation. ”*

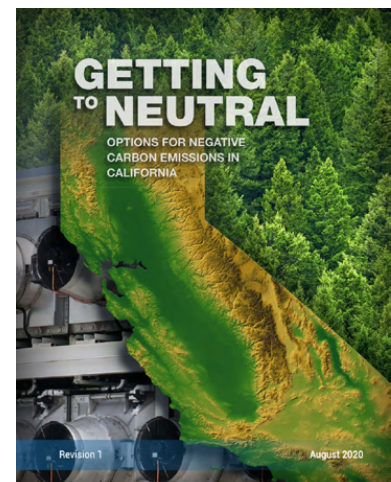
*- Roger Aines, Ph.D. Chief Scientist - LLNL Energy Program*

**In early 2020**, thanks to a grant from ClimateWorks, the Foundation assisted in the launch of LLNL’s groundbreaking report, [Getting to Neutral](#), an unbiased, trendsetting analysis of how California can reach carbon neutrality by 2045. With the state, nation and world all moving towards carbon neutral economies, LLNL’s carbon team is front and center and partnering with LLF to create a communications and educational toolkit.

Funding from the Clean and Sustainable Energy (CASE) Fund allowed the Foundation to survey more than 1,200 residents in the San Joaquin Delta region and Kern County on their views on climate change, carbon neutrality and carbon capture storage. Both of these areas represent some of the most suitable locations for long-term geological storage of CO<sub>2</sub>. The results are now shaping an important outreach toolkit designed to provide stakeholders, community leaders and educators with the science behind carbon neutrality as well as the societal benefits.

The Foundation’s expanding [climate and carbon initiative grant portfolio](#) is also forging new academic partnerships, fellowships and alliances. Look for additional announcements in 2021!

**More information:**





# Board of Directors

*Emily Wu*

*“ I was delighted to join the board of directors of the Livermore Lab Foundation in 2020. One of the roles of the Foundation – to open the doors for the next generation of scientists and engineers, is near and dear to my heart. I am equally impressed with the Foundation’s research initiatives and partnerships. ”*

*- Emily Wu, LLF Director, Managing Director, First Republic Bank*

**Dona L. Crawford**

*Board Chair and Former LLNL Associate  
Director of Computation*

**Greg Suski**

*Board Secretary/Treasurer and LLNL Associate  
Deputy Director for Science and Technology*

**Catharine Baker**

*Former State Assemblymember  
Special Counsel, Hoge Fenton Jones & Appel*

**Michael Carter**

*Former LLNL Program Director for DoD  
Technology Programs*

**Bill Goldstein**

*Laboratory Director, LLNL*

**Brett Henrikson**

*Director, National Laboratory Governance and  
Chief of Staff, UCOP*

**James “Buck” Koonce**

*Former UC, LLNL and LBL Manager*

**Craig Leasure**

*Vice President for National Laboratories, UCOP*

**Emily Wu**

*Managing Director, First Republic Bank*

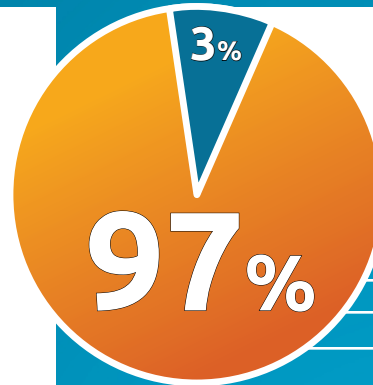


## Total Funds Raised in 2020



2020 Revenue  
**\$1,226,280**

2019 Revenue  
**\$575,527**



**\$42,000**  
Unrestricted

**\$1,184,280**

Restricted

ALS Research

Climate Research

STEM Student Programs



Donor retention  
from 2019

55%



Increase in # of individual  
donors to LLF

33% Growth in newsletter  
subscribers in 2020



*“ I just finished my first semester at UC Berkeley and was thinking back on everything/everyone who led me to where I am today. I’m so incredibly appreciative of the LLF scholarship. I look at where I am now and know that I have you and that Lab internship to thank for it. ”*

- Avni Vacchani (left), 2019 LLF/LLNL High School Summer Intern,  
with LLNL mentor Stephanie Brink

The University of California Office of the President generously provides operational support to LLF so that all dollars raised directly support our programs.

# Science has long presented many doors to open. Challenges remain. Discoveries await.

At the Livermore Lab Foundation, we believe the key to opening those doors begins with leveraging the fundamental platform of science and engineering excellence found at the Lawrence Livermore National Lab.



In 2021, we'll expand our **Reach** to support more outstanding men and women who are making a difference with their research accomplishments. We will continue to focus on **Relevant** programs and new opportunities in climate change, carbon management and ALS research, and we'll foster the **Resilience** of the next generation of students and thought leaders poised to take on society's greatest challenges.

**It's about the science. And it does matter.**

We're honored to have you as a partner. [Contact us](#) to learn more.

**Sally Allen**

*Executive Director*

**Dona Crawford**

*Board Chair*



**Livermore Lab**  
FOUNDATION

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