

The LLE summer program can be a life-changing experience

“THANK YOU for launching my career! I hope you realize how many peoples’ lives you have influenced over the course of the summer internship program.”

Megan, program alumna, International Product Line Director, Raytheon

“I learned about this position from two previous interns, who both praised it as a wonderful way to experience and actively take part in scientific research.”

Program applicant

“The Laser Lab internship program is a tremendous asset to our community and represents an unparalleled investment in the development of scientific talent in Rochester youth.”

Larry, father of a program alumnus

“The high school program is a fantastic opportunity for budding scientists and engineers.”

Steven, program alumnus

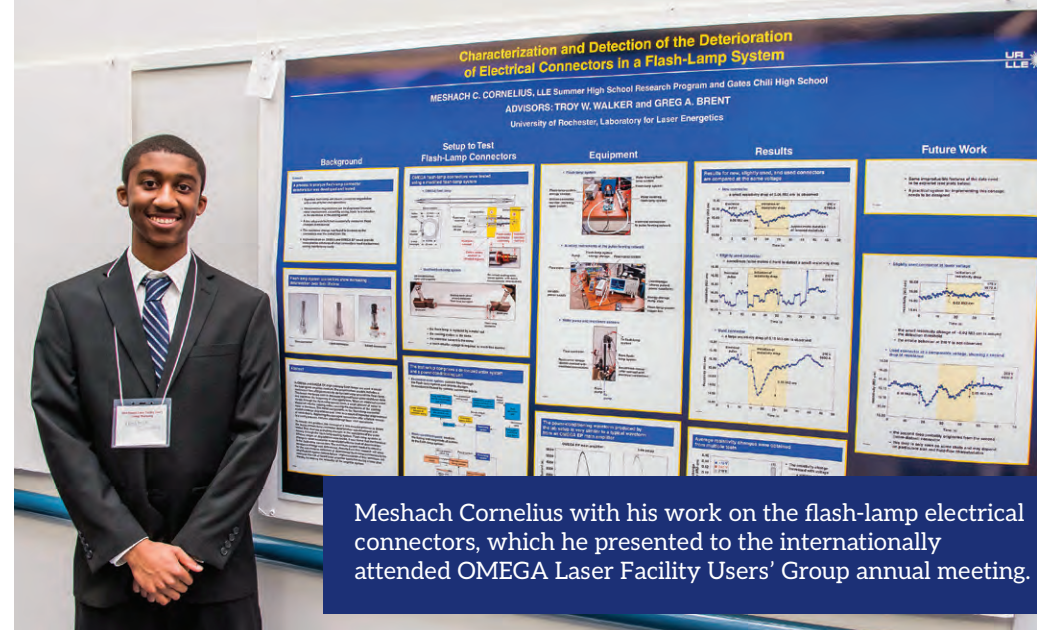
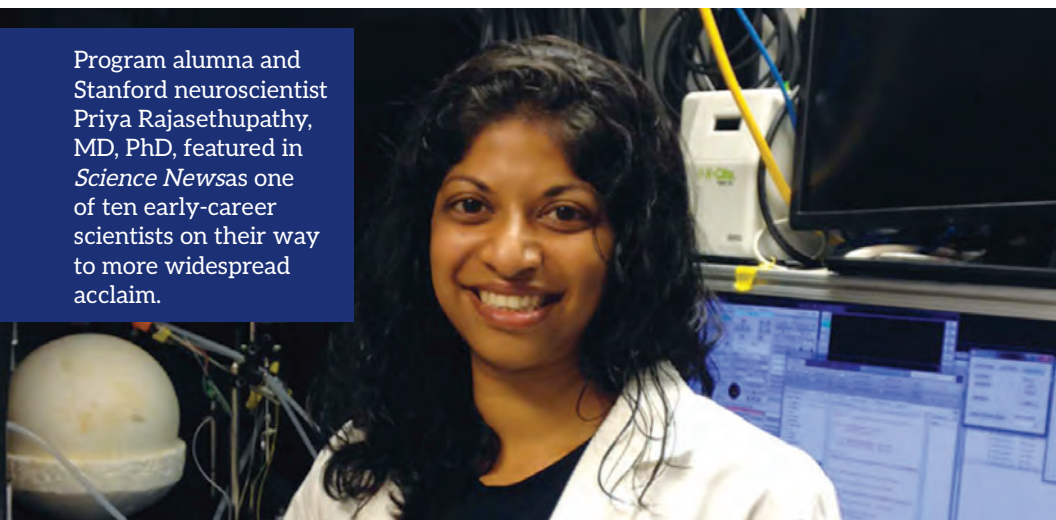
“Dave’s marvelous Laser Lab experience was a life-altering, inspirational event.”

Robert, father of a program alumnus

“It was really a very formative summer for me. You are changing lives through the program!”

Wen-fai, program alumna, astrophysics postdoc

Program alumna and Stanford neuroscientist Priya Rajasethupathy, MD, PhD, featured in *Science News* as one of ten early-career scientists on their way to more widespread acclaim.



Meshach Cornelius with his work on the flash-lamp electrical connectors, which he presented to the internationally attended OMEGA Laser Facility Users’ Group annual meeting.

For general information or to apply, visit www.lle.rochester.edu and look for Education/High School Program

Timeline

Early February	Application materials are posted to the LLE website
Mid March	Application deadline
Late March/Early April	Interviews
Late April	Selection announcements
July, August	Eight weeks of the program, starting after July 4

Questions? Please contact

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Program Coordinator

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Program Director

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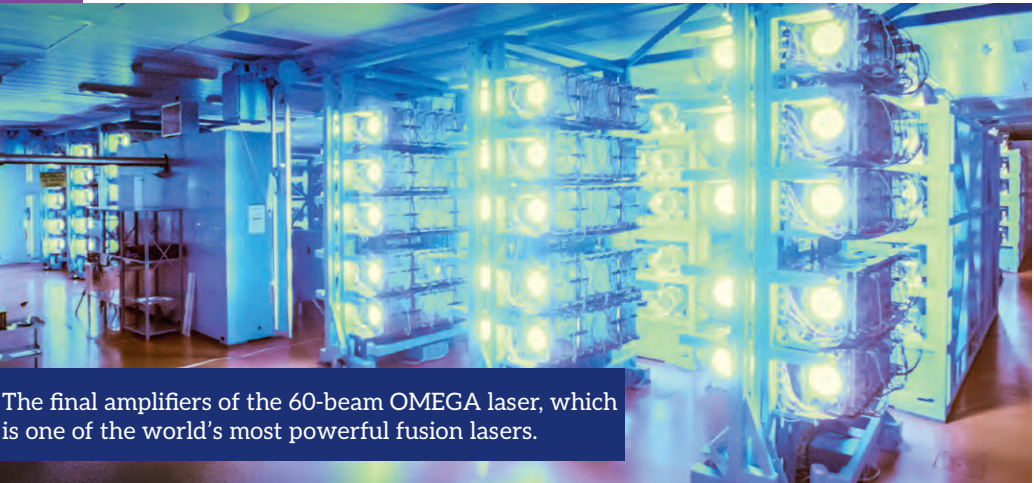


UNIVERSITY OF ROCHESTER SUMMER HIGH SCHOOL RESEARCH PROGRAM LABORATORY FOR LASER ENERGETICS

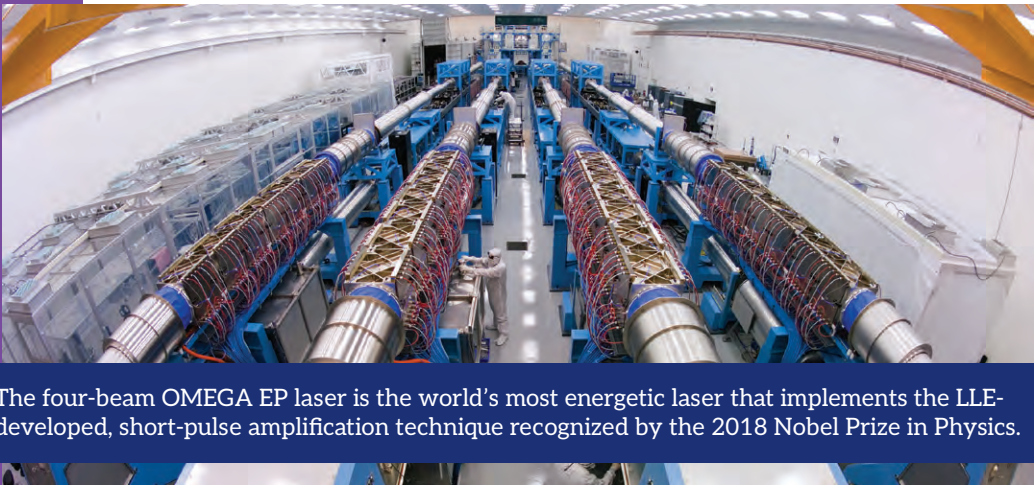


What is the Laboratory for Laser Energetics?

The **Laboratory for Laser Energetics (LLE)** is the world’s largest university-based laser research center, housing the OMEGA and OMEGA EP Laser Systems. LLE is funded by the U.S. Department of Energy.



The final amplifiers of the 60-beam OMEGA laser, which is one of the world’s most powerful fusion lasers.



The four-beam OMEGA EP laser is the world’s most energetic laser that implements the LLE-developed, short-pulse amplification technique recognized by the 2018 Nobel Prize in Physics.

The Lasers at LLE Support

Fusion energy research

At high temperatures and densities, hydrogen fuses into helium. This has the potential to provide the world with virtually unlimited energy. LLE leads the world in one approach to fusion known as direct drive.

High-energy-density research

LLE’s lasers are used to study the properties of matter under extreme conditions, such as are found in dense planetary interiors and supernova explosions.

Approximately two-thirds of LLE’s laser time is allocated to users from U.S. National Laboratories and other universities. The user community includes scientists from several foreign countries.

LLE’s Summer High School Research Program

Experience cutting-edge scientific research in a realistic environment

Students work full time on individual projects advised by an LLE staff scientist or engineer. The projects are related to the advisors’ current research interests. Approximately 12 projects are available each year.

To Apply

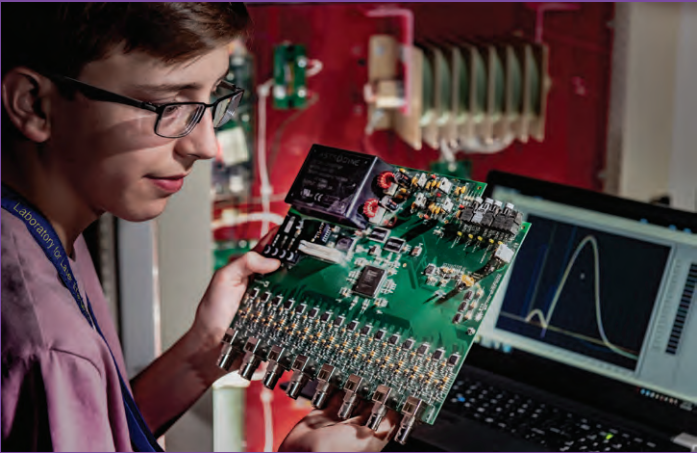
Students must submit a transcript, recent report card, and letter of recommendation; write a short essay describing their interest in science and technology; and fill out an application at www.lle.rochester.edu. Visit our website for full instructions and project reports from previous years.

Eligibility

Only Rochester-area high school students currently in their junior year are eligible.

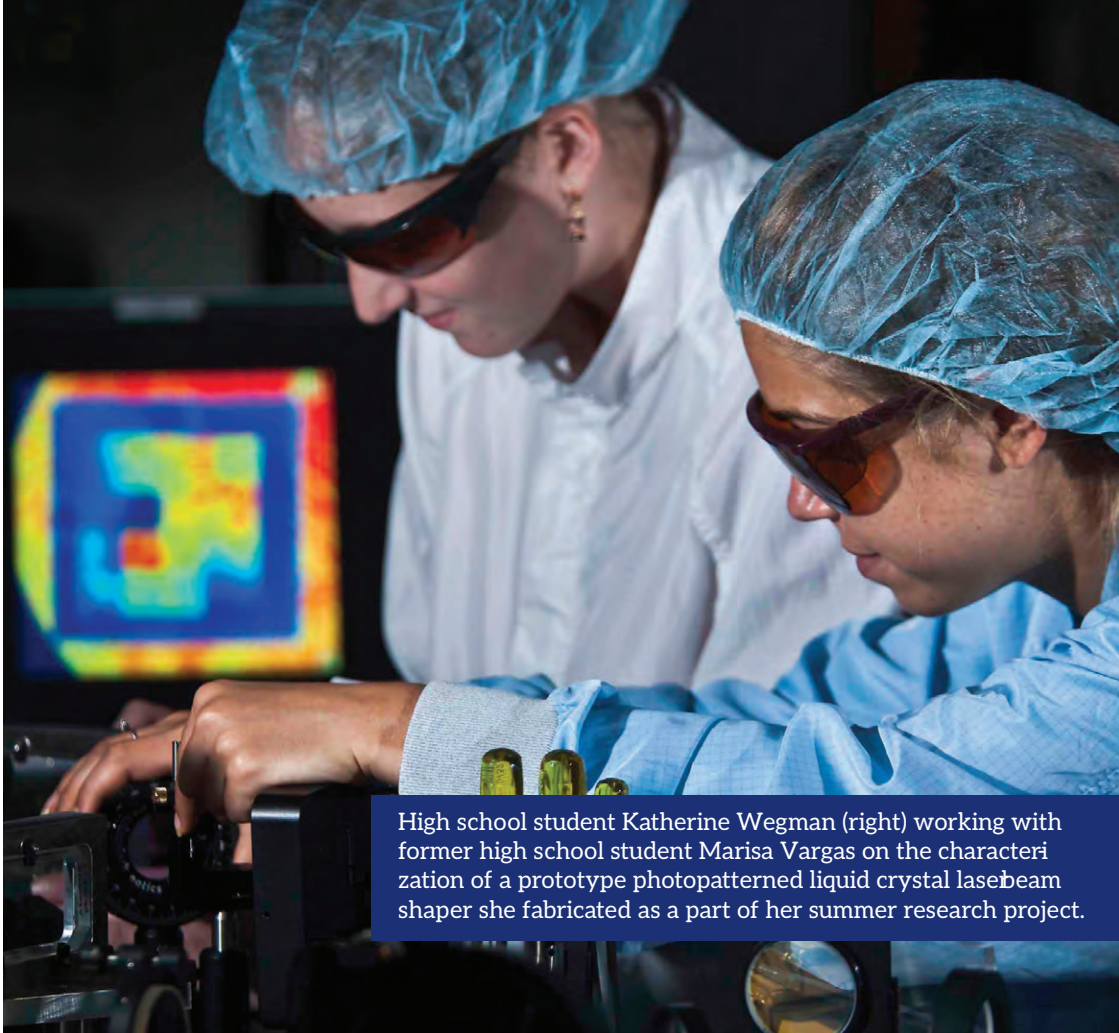
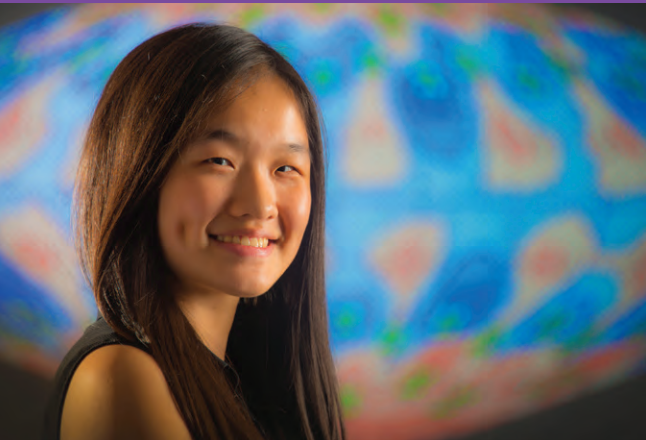
Compensation

Participants work 40 hours per week and receive an hourly wage.



Steven Booth with a power-conditioning-unit circuit board of the type used on OMEGA and OMEGA EP.

Yujia Yang pictured with her design for a future experiment on the National Ignition Facility. Yang was selected as a scholar in the nationwide Regeneron Science Talent Search for her work.



High school student Katherine Wegman (right) working with former high school student Marisa Vargas on the characterization of a prototype photopatterned liquid crystal lasebeam shaper she fabricated as a part of her summer research project.

Projects

Previous projects have been carried out in the following areas:

- laser physics
- computational modeling of implosion physics
- experimental modeling and data analysis
- optical design
- diagnostic development, characterization, and modeling
- cryogenic target characterization
- experimental, computational, and physical chemistry
- tritium capture and storage
- laser system modeling and diagnostics
- web-based application development
- electronics
- imaging of biological samples

LLE holds a symposium at the end of the program at which students present the results of their projects to an audience including parents, teachers, and LLE scientists.