How to Apply

Upper division undergraduate students and early graduate students in all scientific disciplines are encouraged to apply. Students must be U.S. Citizens or have a work authorization through an accredited U.S. university with a minimum GPA of 3.0 for undergraduates and 3.2 for graduate students on a 4.0 scale.

To apply:

- Submit a current resume (state citizenship)
- Letter of intent describing your
  - research interests and experience,
  - computational/computing experience,
  - interest in the program, and
  - overall strengths and goals.

Apply at:

https://tinyurl.com/LANLParallel2021

or

Email: apply-parallelcomputing@lanl.gov

Applications open Oct 1st, 2020

Application Deadline January 15, 2021

Notification by early-February 2021

Those selected will be required to reply stating their acceptance and provide official transcripts.

Program is planned on-site, but may be remote if circumstances prevent an on-site location.

Compensation

Los Alamos National Laboratory offers very competitive compensation:

- 10-week salary of $7-13K (based on education and experience)
- Reimbursement for approved travel costs

See https://tinyurl.com/LANLSudentPrograms for more information on student programs.

NNSA National Nuclear Security Administration

LA-UR-15-28310

High in the mountains of Northern New Mexico, the parallel finger mesas of Los Alamos provide a fitting location for Parallel Computing Summer Research.

Los Alamos, New Mexico provides the perfect backdrop for a summer of hiking, biking, rock climbing, running, and immersing yourself in cutting-edge HPC.

Sponsor

The Parallel Computing Summer Research Internship is funded by the Information Science and Technology Institute (ISTI) at Los Alamos National Laboratory. ISTI facilitates scientific collaboration and scholarship.

Visit isti.lanl.gov to learn about other summer programs in data science, co-design, clusters, and computational physics.

ISTI Information Science & Technology Institute

Los Alamos NATIONAL LABORATORY EST.1943

2021 Parallel Computing Summer Research Internship

Solving complex scientific and national problems on next-generation supercomputers.

http://parallelcomputing.lanl.gov

The Parallel Computing Summer Research Internship is an intense 10-week program aimed at providing students with a solid foundation in modern high performance computing (HPC) topics integrated with research on real problems encountered in large-scale scientific codes.

Description

During the 10-week program, students will receive training and lectures on modern topics in HPC and software development, including

- parallel programming,
- programming models,
- algorithms,
- hardware architecture and its impact on code design choices,
- high-quality software development in collaborative environments,
- visualization and workflow.

Students will collaborate in teams to identify and investigate different computational problems within the scientific focus area, and implement solutions guided by mentors with scientific and computational expertise.

Students will work on cutting-edge HPC hardware and gain hands-on experience.

Students will gain experience in communicating their work through posters, oral presentations, and/or technical reports.

More information and past student research can be viewed at http://parallelcomputing.lanl.gov

Students

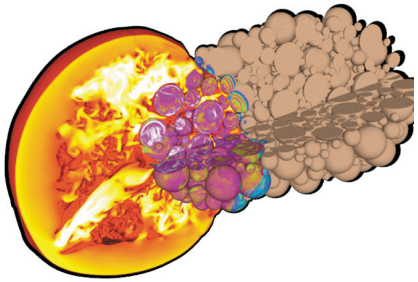
This highly-selective program is designed for upper division undergraduates to early graduate students from all STEM fields. As a general guideline, students should have moderate experience with a compiled scientific computing language, such as C, C++, or Fortran and with the Linux operating system.

Duration & Location

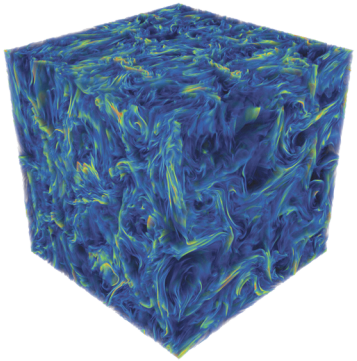
The program will last ten weeks, June 7 through August 13, 2021 and will be held at Los Alamos National Laboratory. Students must be available to live and work in Los Alamos, New Mexico.

Program is planned on-site, but may be remote if circumstances prevent an on-site location.

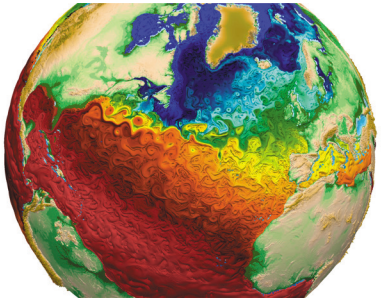
Solving Next-Generation Science @ Extreme Scales



How would the detonation of a nuclear energy source affect an incoming asteroid?



How do turbulent plasmas behave in star formation?



How are global water-surface temperatures changing?

Los Alamos National Laboratory *provides cutting-edge supercomputers to solve complex scientific and national problems. Trinity, pictured here, provides 10^{16} floating point operations to enable scientific discovery and innovation.*