

Summer internships

Why do an internship?

- Research experience gained very different from classroom teaching. Get a taste of what professional research looks like, and if you like it.
- Usually receive individual mentoring, on *research skills*.
- Is very sought-after item on CV/resume (employers and phd program admission committees pay particular attention to internship experience)
- Internship mentor is ideal letter-writer or reference for future job applications / PhD applications
- Some internships are very well paid (but some less so, and some not at all).

What types of internships

- Academic:
 - REU (Research Experience for Undergraduates)
 - Working in a lab with faculty at UCSC
- Federal employers
 - NASA
 - National Laboratories (DOE, DOD, ..)
 - USGS, NOAA, etc..
- Industry

REUs

- REUs are funded by the National Science Foundation and hosted in many different universities over the summer.
- Interns are paid to do research with faculty
- Applications are usually in January or February. Apply to each REU separately.
- Search for REUs at

https://www.nsf.gov/crssprgm/reu/reu_search.jsp

Working with a PI

- If you are interested in a MS thesis in your MS year, consider starting to work with a PI as soon as possible (i.e. during Spring quarter).
- Your summer internship could be paid (this depends on the PI), and kick-start your MS research.

NASA

- NASA offers internships at all levels (including undergraduates), at various sites in the US. NASA Ames is a very large host site.
- Applicants must be US citizens
- Application requires letters of recommendation (I can provide one)
- Deadline is usually Late February/Early March (but start early)
- <https://intern.nasa.gov>

National Laboratories

- Most National Laboratories offer undergraduate and graduate internships. See for instance
- <https://www.energy.gov/jobs-national-labs>
- Applications for undergraduate research experience at the Department of Energy usually done through the SULI program (deadline usually early January)
- <https://science.osti.gov/wdts/suli>

National Laboratories

- Los Alamos offers internships in the Computational Science and Physical Science program (deadline usually early January)

See for instance

- <https://www.lanl.gov/org/padwp/adx/computational-physics/summer-workshop/>
- <https://www.lanl.gov/careers/career-options/student-internships/undergraduate/index.php>

Federal agencies

Various federal agencies offer internships, though there does not appear to be a single ‘one-stop-shop’ to find them. See, e.g.

- NOAA / NCCOS

<https://coastalscience.noaa.gov/about/internship/>

<https://www.noaa.gov/education/opportunities/student-opportunities>

- NCAR
- <https://ncar.ucar.edu/opportunities/internships>

Internships in industry

- See <https://careers.ucsc.edu/student/jobs-internships/index.html>
- Search sites:
 - Indeed.com
 - Glassdoor.com
 - LinkedIn.com
 - Mathjobs.org

Different sites have different search capabilities/ jobs on offer, so use all of them.

Career workshops / fairs

- Upcoming events at the UCSC career center will help you find internships, prepare job applications, etc.

See

<https://careers.ucsc.edu/student/events-workshops/index.html>

Career preparation

- UCSC Career center offers Career coaching, to help you with various aspects of career preparation:

<https://careers.ucsc.edu/student/coaching/index.html>

- Also provides vast online help for every step of job applications

<https://careers.ucsc.edu/student/resources/index.html>