



REUs (What they are and How to get them)

Gregory Kenning



What Are REUs and What's their Purpose

- REU (Research experience for Undergraduates)
- 8-10 Week Research internship meant to mimic graduate school.
- NSF funded research opportunities for students not in D1 research Schools
- Goal to promote science and graduate degrees within the US



REU: Research Experience for Undergraduates

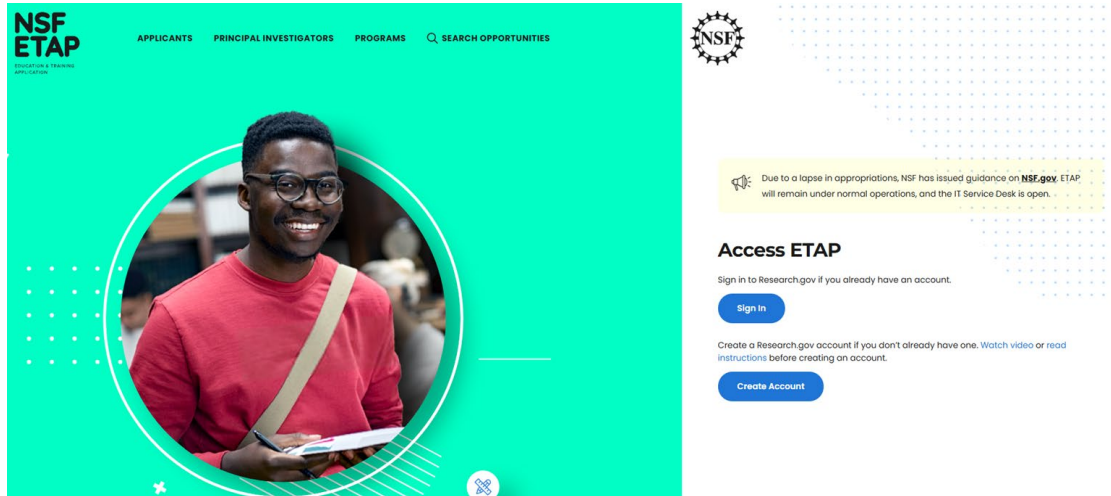
Benefits



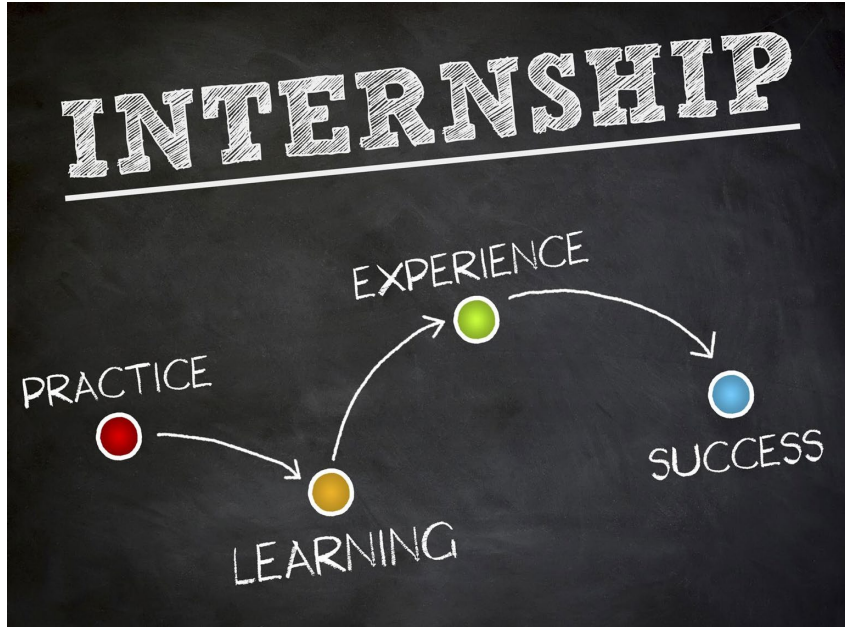
- Free Housing/Food for the Summer
- Stipend of Varying amount for you to keep (5000-7000)
- Opportunity to experience graduate life and meet many new people
- Plenty of Seminars on how to improve graduate school apps
- Looks Great on resume
- Increases your odds significantly of getting into that Specific Graduate school.

Where to Apply

- Most Schools have their own individual applications, just have to look up REU's for this year and the specialty of your choice.
- If you want to save time, set up an etap account as well. <https://etap.nsf.gov/>
- Will also allow you to more easily track application deadlines



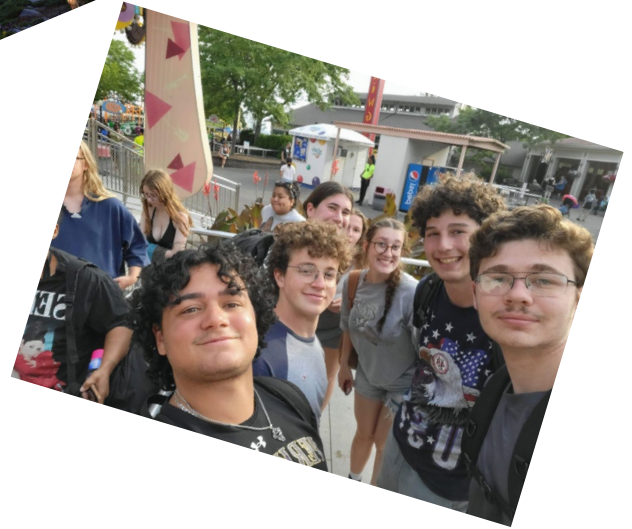
Techniques for Applying



- Try to contact the program director in advance, ask questions about the program that aren't displayed on their website
- Try to lean into the lack of research opportunities at your school
- Have good grades
- Try to do some minor research such as lab assistance during the school year
- Invest serious time into 1 application, and use it as a template for everything else
- Quantity > Quality (Avg number of applicants-600 vs. Number of spots- 12)

General Experiences Social

- They Will most likely pay for your travel expenses to and from the university or lab.
- You will be placed into a dorm with the 8-14 other students
- 1-2 trips per summer to nearby locations
- You will make many friends if you choose to take advantage of social opportunities
- Most hosting universities have many reus at the same time, meaning many people to meet.



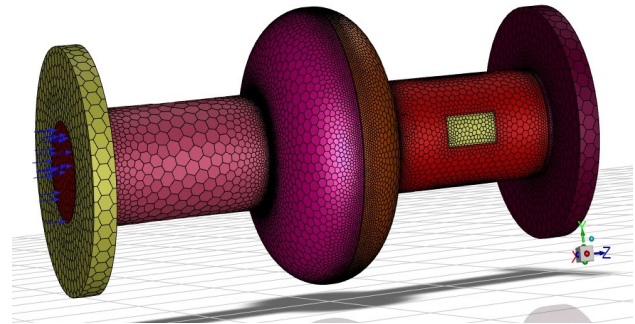
General Experiences Research

- It will be treated like a normal 9-5 job.
- You will mostly likely be given a PI (Personal Instructor) and a Graduate student to assist/mentor your project
- Weekly or Bi-weekly Info Sessions and meetings
- Many opportunities to meet with professors from varying fields
- Final symposium at end of summer where you present your work (Good Resume/CV note)



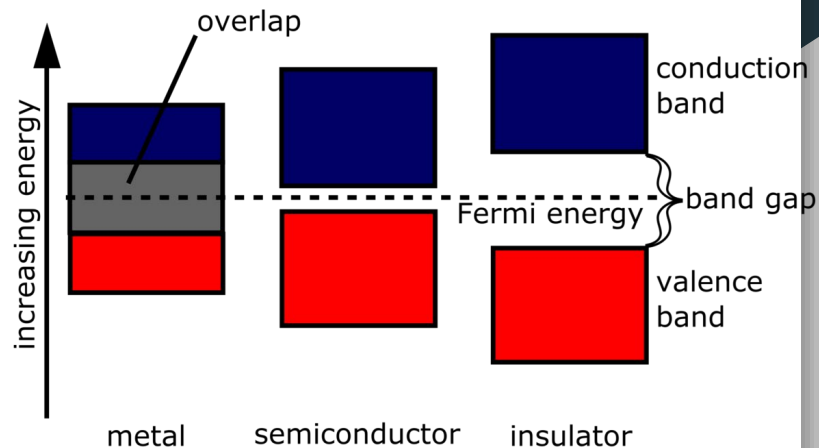
My REU at Cornell

- Summer of 2023 CLASSE REU
- <https://www.classe.cornell.edu/opportunities/students/undergraduate-research/research-experiences-undergraduates/reu-2023-projects>
- Worked under the Head of the accelerator physics program (Dr. Liepe)
- Worked on creating a simulation for the chemical vapor deposition of Nb₃Sn into superconducting radio frequency cavities
- Trips to both New York and Niagara Falls
- Many New Friends who I still talk to to this day



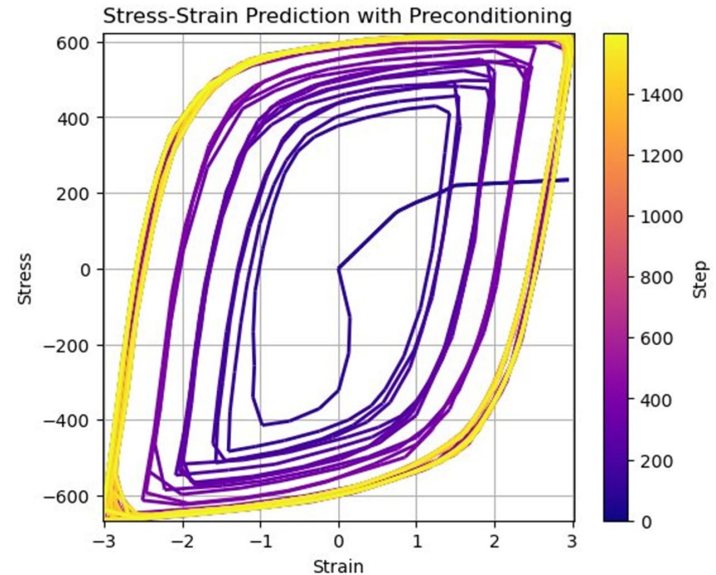
UC Merced REU

- Summer 2024 Physics REU at UC Merced
- Worked using Ensemble Density Functional Theory to analyze semiconductor band gaps with the Condensed Matter department member (Dr. Strubbe)
- Still working on this research and close to publishing
- Trip to Yosemite, along with many outings to lake Yosemite
- Fun time, though watch out for all of the cockroaches in the CA desert.



Texas A&M REU

- Online Materials Engineering REU
- Worked to build a Recursive Neural network to examine progressive loading in hysteresis loops
- Worked with Dr. LeGraverend of the Materials Science Department
- No real trips, but they did fly me out for the end of summer research symposium.



Key takeaways

- REU's are amazing opportunities to not only build your resume, but to also experience graduate life as
- You'll meet many new people.
- Applying in volume gives you the best odds
- It's like a normal internship or 9-5 job, but usually with less work and more opportunities for fun interactions



Questions?