What is Research?

December 4, 2014.  7PM
Event sponsored by Women in Physics
Why do physics research?

• Learning opportunity beyond the classroom
• Helping to create new knowledge
• Chance to be paid for your brain!
• Improve oral and written communication
• Helps you discover your interests
• Prepare for future career (both in physics and other disciplines)
What can you do?

Research on Campus
• Become involved with an on-campus project that interests you
• Develop a close relationship with faculty and graduate students on campus
• Opportunity to do research during the year

Research Experience for Undergraduates (REU)
• Opportunity to meet other scientists at all stages in their careers
• Summer research internship at a different campus
• Often involves some conference or end of summer presentation of work
Research on Campus - How to Apply

- List of subjects that interest you
- Decide what you want to gain from working on a project
- Look into faculty and research webpages to figure out who you might want to work for
- Contact professors with information about you, your background, your interests, and your availability

http://www.physics.ucsb.edu/education/undergrad/research

- Worster Summer Research Fellowship
- Materials Research Lab
- Center for Science and Engineering Partnerships
- Undergraduate Research and Creative Activities (URCA)
REU- How to Apply

- Decide the program(s) you want to apply for, each has own application
- Generally will need to send transcript, letters of recommendation, some description of interest and background
- Applications are typically due between end of December and mid-February

- Science Undergraduate Laboratory Internships (SULI): [http://science.energy.gov/wdts/suli](http://science.energy.gov/wdts/suli)
- Caltech SURF website: [https://sfp.caltech.edu/programs/surf/program_description](https://sfp.caltech.edu/programs/surf/program_description)
International Research Opportunities

• Summer and study abroad opportunities, generally don’t pay for flights but have stipend

• Germany: Research Internships in Science and Engineering (RISE) https://www.daad.de/rise/en/

• Switzerland: University of Michigan- CERN https://sites.google.com/a/umich.edu/um-cern-reu/apply-now
Physics Subfields

• Astrophysics
• High Energy
• Atomic, Molecular, Optical
• Hard Condensed Matter
• Soft Condensed Matter
• Bio-physics
• Quantum Computing