Resources for Astronomy Graduate Students

Computing Resources:

As a first year (and possibly second year) you’ll be on the Astro network. Your contact for any problems is Ramon Berger (mailto:astrohelp@acg.ucsc.edu). When you get a permanent research advisor and move to the NICS network, the folks at NICS can help you with any problems you have on a NICS-managed machine. (nics@ucolick.org) For details, see handout from computer czar, Elizabeth Lovegrove.

Graduate Advising Committee:

Before you have a research advisor, your “faculty advisor” will be the Graduate Advising Committee. The 2013-14 Graduate Advising Committee is: Graeme Smith, Greg Laughlin, Charlie Conroy, and Jonathan Fortney. You’ll meet with the Committee once or twice a year during your first and second years to check in on how you are doing in classes/research/etc. This is meant to be helpful and provide a safe arena to mention any problems you and your classmates might be having as you start your graduate school career.

Quarterly Advising Form:

The quarterly advising form is a requirement for every graduate student once per quarter. This essentially provides a useful excuse to ask your advisor questions like “Are you able to pay me for the Spring and Summer quarters?” and “When do you think I should migrate to the NICS network?” as well as big-picture questions like “Do you think I’ll actually finish my first-year project paper by the deadline?” You should fill this out on time each quarter and use it as a time to voice concerns and make future plans.

Website:

You can publish a website on the UCSC/Astro network or the NICS network when you migrate over. The computer chair, Elizabeth Lovegrove, has included instructions to publish a website on the Computer Handout. When you have caught your breath, please get started on writing your own web page. It’s a great idea to have it up by the time you go to your first conference so that people can look you up. Look at web pages by other grads and other astronomers to get ideas. If you use a Mac, iWeb is a very easy program to make a professional-looking website. Get in the habit of posting interesting information about your research there as time goes on. Start keeping a CV (curriculum vitae) and post it on this page (you will need a CV to apply for jobs soon anyway and possibly for other fellowship and support applications while in grad school).
Guide to Department Talks:

Department talks and seminars provide intellectual stimulation beyond your coursework.

- **Colloquium**: You are very strongly encouraged to attend Colloquium on Wednesday afternoons. There is coffee/cookies beforehand at 3:30, and the colloquia start at 3:45.
- **FLASH**: The Friday Lunchtime Astrophysics Seminar Hour (FLASH) is at 12:30 on Fridays. You are also encouraged to attend this.
- **Colloquium Lunch**: Grad students take the Colloquium speaker to lunch on Wednesdays at the University Center. The Department treats you to lunch. Go and learn. Speak up and ask questions.
- **Colloquium Dinner**: Funds are available to help you go to dinner with the Colloquium speaker. The time and location for dinner are announced at the Colloquium. Announce yourself to the Colloquium host or send an email to that person beforehand (hosts are listed on the department Google Calendar web page).
- **Coffee**: People meet for coffee daily in CfAO at 10:45 AM during the quarter. Mondays are run by the graduate students and are devoted to discussing the work of the Colloquium speaker of the following Wednesday. Get questions and material here for a lively discussion with the speaker at lunch. Tuesdays are (newly) an informal coffee discussion, where you can hobnob with grads, postdocs, and faculty. Wednesday and Friday are discussions based on recent papers. You should vote on VoxCharta for papers you’re interested in. Thursdays are a Journal Club run by the post-docs.
- **Other field-specific groups** meet weekly (see Astronomy Department Google calendar online). Email the organizer to be added to the list. Some of the most relevant talks:
  - Cosmo cosmology seminar (Mondays): Charlie Conroy
  - Planetary Lunch (Tuesdays): Jonathan Fortney
  - SCIPP (particle physics)
  - Physics Colloquium (Thursdays)
  - EPS/IGPP (Fridays) (planetary science/geophysics)
  - Globular Cluster lunch

First-Year Project Resources

To help you find a topic, each faculty member will describe potential projects in their lectures in ASTR 205. Start talking to faculty about projects that might interest you right away. Feel free to “shop around” and talk to various professors inside and outside the department before making a decision. (Note that in addition to research opportunities in the Astronomy Department, you also have access to research in the Physics, Earth and Planetary Sciences, and Applied Math and Statistics departments. The Center for Adaptive Optics and the UCO/Lick Observing shops are additional venues for research, especially for instrumentation projects.)
Important questions to ask are: how much work is involved (you want to be sure to finish and write a paper in the first two years), whether this research might lead to a thesis, what funding is available to support your salary (including summer salary and salary for the second year), and whether thesis funding might also be available.

Other resources to help you find a research project:

- A general overview of research being done in the Department and affiliated units is given on the Department research webpages [http://astro-research.ucsc.edu/](http://astro-research.ucsc.edu/). This includes pages for astronomers in other departments (Physics, AMS, EMS). You are highly encouraged to work with these people. They can be your research supervisor and thesis advisors.
- Certain courses include a research project as part of the work. We are making an effort to coordinate these better so that you will be able to continue work on a project that you have started in a previous course. If you have any problem coordinating research projects with class work, please contact the Chair.

Teaching resources:

- For some teaching ideas, talk to Adriane Steinacker, Adjunct Professor and arguably our most accomplished teacher on the faculty.
- Participate in programs run by the Institute for Scientist and Engineer Educators (ISEE, Lisa Hunter director [office in CfAO]) like the Professional Development Program (PDP in Hawaii!)
- Collaborate with faculty running special teaching/mentoring/outreach programs, e.g.:
  - LAMAT for Hispanic Students (Ramirez-Ruiz)
  - prison education (Mark Krumholz)
  - community college students transferring into Physics (Adriane Steinacker)
  - Science Internship Program (SIP) for high school students (Raja Guhathakurta).
- Grads can actually teach summer classes (only after qualifying, unless you get a special exception). This is a great opportunity to design your own curriculum, and gain valuable teaching experience. Contact Patti in early November to request a course.

Ergonomics Resources:

The Astronomy and Astrophysics Department takes the health and welfare of its graduate students very seriously. The campus and department have a preventive program for very potential ergonomic injuries. Please see the Ergonomics Czar (to be elected) to find out more about completing the online assessment provided by the campus. The department will work with Physical and Biological Sciences Facilities Office to ensure that you have the proper computer setup to prevent ergonomic injuries, but you have the first responsibility of monitoring yourself and responding instantly to the warning signals your body sends you.
Library Resources:

The library can provide off-campus journal access and other resources.

http://library.ucsc.edu/

Other Resources:

- Two astrophysics initiatives have been established at UCSC: The Next-Generation Science Institute (NEXSI, Piero Madau, director) and Theoretical Astrophysics Santa Cruz (TASC, Enrico Ramirez-Ruiz, director). Both of those have research programs, visitor programs and resources for graduate education. For a list of affiliated centers see the Related Links on the left side of the Department home page.
- Basic info: The Astronomy Department web page has lots of information. If you cannot find your answer there, please let us know so we can add it. The most relevant section is called "Graduate": http://www.astro.ucsc.edu/graduate which has the subpage "Information for New & Prospective Graduate Students": http://www.astro.ucsc.edu/academics/graduates/new_prospective/index.html
- In addition our graduate students have started their own Wiki page which can be found here: http://astrogradsucsc.pbworks.com/
- There is also a wiki about applying for fellowship and other forms of financial support, including successful/unsuccessful past applications. http://slugnsfwiki.pbworks.com/
- Other useful websites: the following by no means exhausts all the information that you can find on the web. However, these are sites you should be aware of that provide useful resources:
  - AAS Job Register: http://members.aas.org/JobReg/JobRegister.cfm
  - CADC International Conference List: http://cadcwww.dao.nrc.ca/meetings/
  - Cornell Fellowship Database (comprehensive for grad fellowships; also includes postdocs): http://www.astro.cornell.edu/academics/gradguide/g-funding.html
  - AAS travel grants: http://aas.org/grants/itg.php
  - AstroBetter is a blog with lots of useful information about being a successful astrophysicist: http://www.astrobetter.com/

Best wishes for a delightful and productive stay at UCSC!