What I learned in San Francisco

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The CRA-W Grad Cohort for Women Program

- 2 day workshop in SF
- For 1\textsuperscript{st}/2\textsuperscript{nd} year CS/CE female students.
- Ultimate goal of the program:
  “...is to increase the ranks of senior women in computing by building and mentoring nationwide communities of women through their graduate studies.”
- \(\sim30\%\) of male students graduating with GPA\(>3.5\) go on to grad school, \(\sim2.7\%\) of women do.
Why should you care?

- Most of what we’ve been told deals mainly with how to be a successful grad student/researcher, regardless of gender.
So what did I learn?

- Lots of advice, not all relevant.
  - What is grad school about
  - Academic career paths
  - All about research
  - Career opportunities
  - Communication skills
  - Networking skills
  - Finding an internship
  - Finding balance
  - Finding a mentor

- Very brief discussion of some ideas which sounded useful for *me*.
  - *(Yellow ellipsoids and Azure text boxes...)*
Manage your time

- Take charge of your time
  - Prioritize
  - Eliminate context-switching overhead
- Prioritize
  - Decide what is most important
  - Make time to think about and do research!
- Eliminate context-switching overhead
  - Allocate enough time per task to amortize the overhead
  - For TA duties, respond to emails in batches, rather than being interrupt-driven
  - For research, allocate several contiguous hours & eliminate distractions
Communicate technical material well

- Distill complex ideas down to a few clear, concise statements
  - Teach (TA)
  - Volunteer to present in seminars

- Learn how to make & deliver presentations
  - Practice, practice, practice
  - Prepare the “elevator pitch” (1, 5 and 15 minutes)
Growing as a researcher

- A major transition happens in grad school (often year 3)
  - Classes are finally done
  - Now, you have to define your own research agenda
  - Self-driven schedule

- Having a good support network will smooth this transition
  - Build relationships with mentors during first 2 years
  - Turn to them for support and inspiration
  - Re-introduce structure to your environment
    - reading groups
    - monthly social lunches to build a sense of community with peers
Identifying a Thesis Problem

Become an expert in the area

- Read papers
  - Start by using papers’ references to get to original papers
  - Keep an annotated bibliography of later reference
    - Main contributions
    - Open questions
    - Your assessment
    - How it relates to your problem
- Talk to experts
  - When they visit your area
  - At conferences and workshops
- Attend talks, etc.
  - Carry a notebook to record notes, thoughts, etc.
  - Look at conference proceedings of previous work and read them carefully

I started doing that and I find that it helps with my shyness w.r.t that, and it can get pretty amusing depending on the attendance. More on that if you want…

I started doing that and I find that I remember it better, I get all sorts of ideas and questions and if I also take along something to read, I can resort to that when it’s really boring.
Communication skills

- No matter how good the idea is, it won’t go anywhere unless you can get others to believe.
- Becoming a good speaker rarely comes naturally.
- Make yourself get better at it by giving more talks!
- Make yourself get better by analyzing what good speakers do.

In their slides, in the structure of the talk, what bad speakers do...
Communication skills

- A poorly written paper is one where the wrong details are included, or it asks the reader to do too much work. Make it fun to read. Provide the necessary background and materials.
Writing is Important!

- Writing was one of the most important lessons I learned in graduate school.
- It is important – spend time getting it right!
- Study from good writers.
- Practice writing – and get feedback! (At the same time, be willing to give feedback too!)

Exchange conf/journal papers before submission to get feedback?
How do you organize a talk/paper

- Start early – “There is no such thing as good writing, only good rewriting.”
- Decide what the “take home message” should be.
- Write down the important points you want to make (in any random order) – don’t forget motivation and “way of looking at the problem.”
- Spend time thinking about pictures/graphs/visual aids to help you make your points.
More on getting feedback

- Get the draft done early so you can get feedback
- Be prepared for the feedback and think of it as a blessing (grow a thick skin)
- The customer is always right (?) – controversial point
  If they didn’t get the idea at all, it means you can modify it so it’s clearer, modified draft is always better.
- Let the people reading it for you know what the criteria are
- More and more and more and more in that talk about practicing, answering questions etc.
Networking

- Lots about that, including practice sessions…
- Knowing how to engage in small talk isn’t genetic, it’s a skill. Practice.
- Networking example – at a conference.
  - Before – you can find out who the people who’ll be there are and what you want to talk to them about.
  - During the conference – …
  - After – follow up (send stuff if you promised, etc.)
During a conference

- Wear your badge visibly
- Speak! (Don’t just stand there)
- Use the dreaded microphone
- Have discussions with speakers after their presentation
- If you’re the speaker, hang around afterwards
- Talk to the person sitting next to you
- Make lunch/dinner plans
- Participate in hall talk
- Attend social activities
- Get your friends/adviser to introduce you
- Get people you’ve just met to introduce you; Introduce them
- Talk to people who come up to you
Don’t Do’s

- Don’t hang around with your friends
- Don’t interrupt heavy or private technical conversations
- Don’t be overly negative/critical
- Don’t hang on to a conversation too long
- Don’t put too much stock in a single, short conversation
- Don’t get discouraged
Slides were taken from presentations by:

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