Welcome!

• Welcome to the CSE Early Research Scholars Program!
• What is CS Research Anyway? Write down the first 5 things that come to your mind when you think of CS research.
Course Goals: In this course (and over the next 4 quarters) you will learn how to...

- Identify and formulate research problems
- Read research papers
- Work effectively in a team
- Perform a literature searching
- Engage in self-guided learning
- Design research studies
- Perform data analysis
- Perform effective time management, goal setting and activity logging
- Communicate about research, both orally and in written form
About me

• BA, Dartmouth College (Computer Science)
• MS and PhD, MIT
• Visiting Professor, USD
• Assistant-Associate Professor, Harvey Mudd
• Lecturer with Security of Employment, UCSD
My research history

- First research project: As a freshman, in some kind of engineering...?
My research history

• First research project: As a freshman, in some kind of engineering…?
• Junior year: Summer program at University of Washington: Flight safety
My research history

• First research project: As a freshman, in some kind of engineering…?
• Junior year: Summer program at University of Washington: Flight safety
• Senior year: Robot navigation
My research history

• First research project: As a freshman, in some kind of engineering...?
• Junior year: Summer program at University of Washington: Flight safety
• Senior year: Robot navigation
• Graduate work (and since): Sketch Recognition
Current research: Educational programs

- You are now research subjects…
- Your rights and activities as part of the “study”:
  - Informed consent (read and sign forms now)
  - Focus groups and surveys
About You…

• Look around, what do you see?
• This community of people will be your close colleagues over the next year+
Introductions

• Turn to your neighbor and tell them:
  • Your name
  • Your college
  • What you’re most looking forward to in CSE ERSP
  • About a time when you’ve felt uncomfortable/left out like you don’t belong/etc. in a CS class, the lab, or any other CS-focused setting

• After your partner shares with you, repeat back to them what you heard them say
Your responsibilities as an ERSP Participant

- To participate in the ERSP program actively and fully for the full 4-quarter duration of the program. Each quarter you are expected to register for the course associated with the ERSP program as instructed and to complete all work associated with that course.
- To attend class and group meetings regularly and punctually (starting this week!)
- To behave professionally toward your ERSP group members and the faculty and students who comprise the research group you are placed with.
- To complete the assigned work for the ERSP course in a timely fashion, and to "pull your weight" with all assigned group projects.
- To keep an open line of communication between yourself, the members of your group, and Prof. Alvarado. In particular, you must let (Prof. Alvarado) know if any issues arise, as soon as they arise.
- To balance your time so as to maintain success in your other courses, as well as in the ERSP program.
Attending research group meetings

- In both group meetings and in class, we will take attendance
- In class, I will take attendance
- In research group meetings YOU will take attendance
  - Each week one group member will enter the attendance for all of their group members into a shared google document.
  - Your group is responsible for designating a recorder each week
  - This role will be recorded in your log (more on this next week)
  - In order to share this document… let’s collect google addresses
To pass CSE 91 this quarter you must

• Attend every week's class period, on time, and participate actively in these class sessions.

• Attend your group research meeting, on time, every week.

• Complete all of the assigned pre-class activities *before* class time. (Next week’s pre-class activity will be posted by tomorrow)
Now, the moment you’ve been waiting for…
research group assignments!

<table>
<thead>
<tr>
<th>Project</th>
<th>Students</th>
<th>Group meeting time and place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embedded Systems</td>
<td>Stephanie Ting, Huang Li, Lucerito Gutierrez, Ilse Tse</td>
<td>Wednesdays 1-2:30pm, CSE 2217</td>
</tr>
<tr>
<td>Evidence-based Security</td>
<td>Aaron Hurtado, Tiffany Allen, Kelsey Ma, Andrew Jabasa</td>
<td>Wednesdays 1:30-3pm, CSE 3109</td>
</tr>
<tr>
<td>CS Theory</td>
<td>Steven Stone, Asha Camper Singh, Rachel Keirouz, Raina Ahuja</td>
<td>Fridays 2-3:20pm, CSE 2109</td>
</tr>
<tr>
<td>REACToR</td>
<td>Luis Sanchez, Edgar Lopez, Huayin Zhou, Mingshan Wang</td>
<td>Wednesdays 10-11am (no meeting week 1), CSE 3109</td>
</tr>
<tr>
<td>Brain-Computer Interface</td>
<td>Mayreni Abajian, Rachel Lee, Emma Roth, Xiaokun Li</td>
<td>Saturdays 1:30-3pm, CSE 2109</td>
</tr>
<tr>
<td>Synthesizing Electronic Gadgets</td>
<td>Jennifer Tran, Yue Wong, Joyce Kang</td>
<td>Wednesdays 11am-noon, CSE 2209</td>
</tr>
</tbody>
</table>
What do you think the research group meeting will be like?

• Discuss with your new ERSP research group. Introduce yourself first.
Expectations for Research Group Attendance

• The first meeting (this week, for all but one group), introduce yourself
• Listen, pay attention, and **take notes**
• Don’t worry if you don’t understand much (or anything)
• Get to know the culture of the group, and try to fit in
• Talk to the grad students and faculty, but be respectful of time and etiquette
Break (5 mins)
Understanding Research: Video of a Research Talk

- Dafna Shahaf: Faculty candidate at UCSD
- Watch the talk. Anytime you have a question, write it down. When you want to stop and ask your questions, just raise your hand and we’ll stop. Don’t be shy!
- I might also periodically stop you
Research video debrief

- What were the elements of research that you saw in the video?
- What surprised you? Is this what you expected research to be?
- What was the most confusing aspect? What questions do you still have?
- How do you think this compares to what you’ll see in your group meetings?
- Looking ahead: What problems did she face and solve? Can you articulate these problems at different levels?