UTSA CS 4593: CS-CURE

Course-based Undergraduate Research Experience in CS

Amanda Fernandez, Ph.D
UTSA Department of Computer Science

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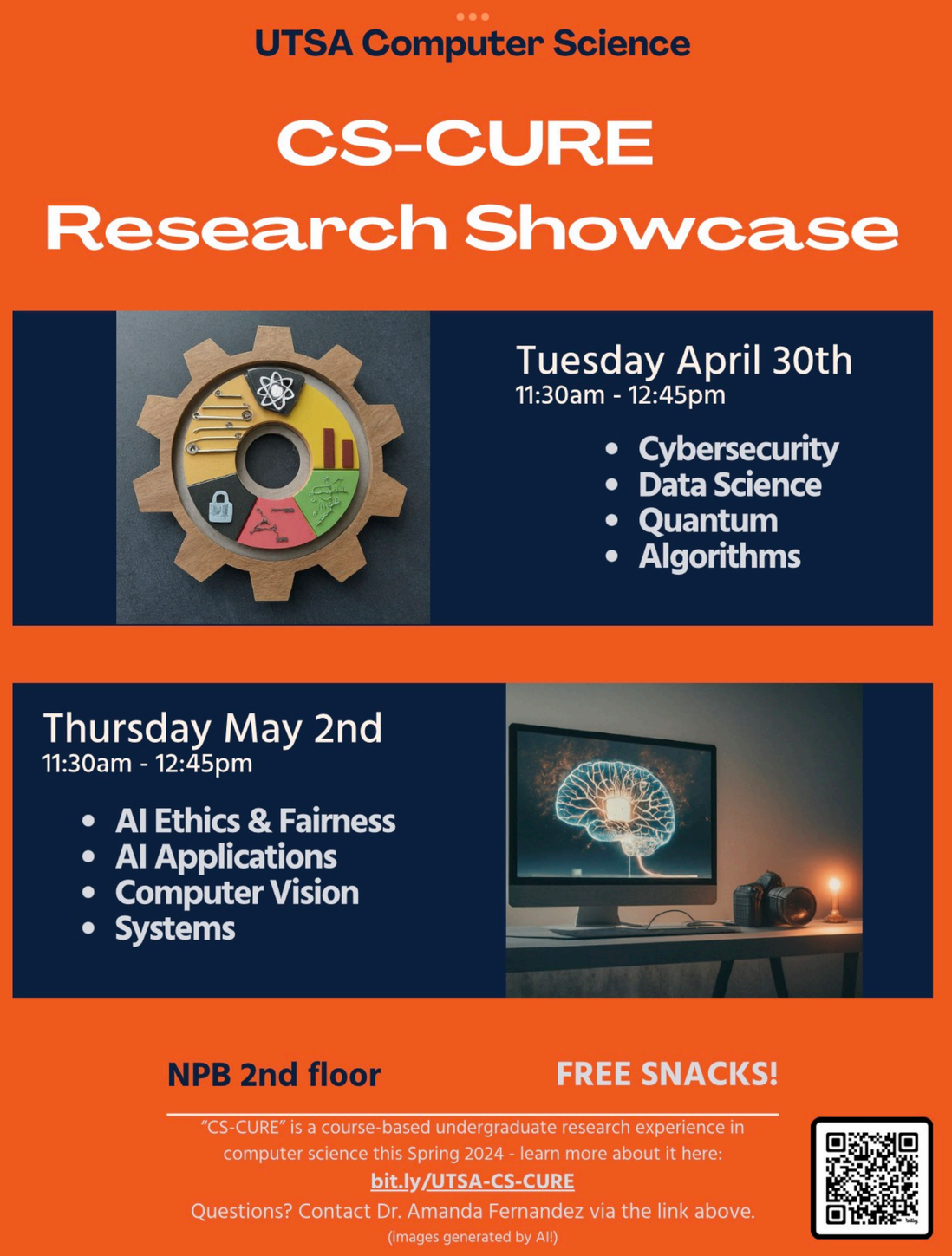
Research Presentations

Schedule

- Posters due **April 20th!**
    - *Instructor will print & bring them to your session. Don't be late!!*
- On your presentation date you must present your poster. On the other date, you will have a worksheet to complete (at the poster session).
- We will invite faculty & students.
- Questions/concerns?



Poll: Next Week (Week 15)

What do you want to see?

- “Next steps” in the research process (beyond this course)
- Grad school, URE/REUs
- My research (deep learning, explainability, computer vision, & applications in nuclear materials)

Week 14:
Communication & Technical Presentations

UTSA CS-CURE

Week 14

- Objectives:
    - Learn techniques for effectively presenting technical research
    - Design a scientific poster for research in a field of computer science

- Deliverables:
    - Research Presentation (poster) - **due 4/20**
    - Activity 9: Technical Presentations (*in-class on Thursday*)

Communicating Technical Research

Effective presentations

Summarize interesting research

Share your enthusiasm

Get feedback

Communicating Technical Research

Effective presentations

For any type of presentation…

- Follow the same format as a paper - *introduce, give background, etc.*
- Be enthusiastic - *if you don't care, why should they?*
- Know your audience

Technical Communication:
Scientific Posters

Scientific Posters

Technical Communication

Goal: concisely share your research

- NOT to outline your entire research journey (*we don't care!)*

Poster sessions are an opportunity to share research at various stages:

- Work in progress
- Published paper

Scientific Posters

Technical Communication

Common mistakes:

- “**Wall of text**” - *no one wants to read the paper in poster form!*
- Poster isn’t “**stand alone**” - *requires your explanation, without it the poster is nonsense*
- **Color** used to emphasize irrelevant info
    - And/or the **Design** is distracting from the topic/point of your research.
- Contents fall off the **template** - *not printed!*
- **Flow** - unclear what section(s) to read next
- Presenting without an **elevator pitch**.

Scientific Posters

Technical Communication

The Worst* Posters:

- Printing the paper and hanging it up.
- Font sizes not visible more than 4ft away.
- Posters not matching the size of others in the session. *(e.g. 8.5x11in at a 36x48in venue)*
- Language does not reflect the conference requirement.

Scientific Posters

Technical Communication

Where to start

- Get the **template & recommendations** from your conference.
    - *This dictate what is allowed, sizes, provide guidelines/requirements for design, etc.*
    - *Some communities prefer more visuals, others want the whole paper reproduced..*
- Draft your **elevator pitch** and use it to organize the outline.
- Focus on **figures.**
- Tip: Zoom **out** - *what is most visible?*

Your affiliation logo

Title

Conference logo

Author(s)

Abstract

Introduction / Background

Related Work

Figure (diagram)

Proposed Method / Contribution

Figure (comparison)

Results

Figure (results)

Future Work

QR code (website, code, video)

Acknowledgements

References

Scientific Posters

Technical Communication

Resources:

- YouTube video on good & bad examples
- IEEE webinar on presenting a “winning poster”
- Guidelines from the CRA
- https://guides.nyu.edu/posters
- https://mitcommlab.mit.edu/eecs/commkit/poster/
- Creating posters in **LaTeX:** https://www.overleaf.com/gallery/tagged/poster

Scientific Posters

Technical Communication

Need it printed?

- UTSA has ***free printing*** for students!
    - Ask your department first
    - G.R.A.D. Space https://graduateschool.utsa.edu/current-students/grad-space/
    - Downtown Print Shop https://ceid.utsa.edu/dtmakerspace/print-shop/
- UPS Store, FedEx, etc.
- spoonflower.com prints on fabric (~$20)!

Tip: Printing **always** takes time! Plan ahead, you'll need at least 5-7 business days!!

Technical Communication:
The Elevator Pitch

The Elevator Pitch

Technical Communication

1. Concisely introduce yourself & your research/interests

2. Follow up by **listening** to your new colleague and connecting with them

Who are you?

(Full name, major, year)

What solutions are there, typically?

What is the problem, & why is it important?

(Provide short relevant background)

What is something <u>interesting</u>?

(about the problem, solutions, or anything you've found in the research)

The Elevator Pitch

Technical Communication

Try writing it out!

- 1 sentence maximum for each (combine if possible!):
    - Who are you?
    - What have you been researching, & why is it important?
    - What solutions are there?
    - What is something interesting you have found/learned in your research?

Technical Communication:
Technical Talks

Technical Talks

Communicating Your Research

Goal: get them interested in your research!

- NOT to outline your entire research journey (*we don't care!)*

Where to start:

- What is the **length** of the talk? (Includes Q&A?)
- Who is your **audience**?

Technical Talks

Communicating Your Research

Outline:

- Introduce yourself, your research team
- Outline the talk (a high level sentence about your research)
- Background & related work
- Methods
- Experiments & results, if applicable
- Conclusions & discussion
- Q&A

Technical Talks

Communicating Your Research

Common mistakes:

- Outline slide is **too generic** (e.g. states “Introduction”, “Related work”, etc)
- “**Wall of text**” - *too much to read means they are not listening to you.*
- Irrelevant visuals on the slides (*distract from the message)*
- *Talking:*
    - Too fast or slow
    - Without a microphone (*some audience may be online or watching the recording)*

Technical Communication:
Collaborative Research

Communicating with **a Research Team**

Sharing technical research

- **Learn lab dynamics** *and follow them*
    - Use the same communication methods (e.g. email, Teams, in-person, ..)
    - Regular meetings for updates
    - Seek help when you need it (*don't wait for a meeting*)
- **Active listening** (*even if you aren't on someone's project*)
- Communicate updates **concisely**
    - Document what you did, and evaluate it with standard evaluation metrics.

Communicating with **a Research Advisor/PI**

Sharing technical research

- **Prepare for meetings**
    - Proactively problem solve - research potential solutions
    - Plan for 10-30 minutes, be on time, bring necessary materials.
- **Clear & concise communication**
    - Concisely state what happened, evaluation of experiments, identify roadblocks.
- **Create a shared resource** - overleaf for notes, drive for documents, etc.
- Do not expect a code review

Communicating with **External Peer Researchers**

Sharing technical research

- **Be professional and concise.**
- **State your purpose clearly.**

- ***Don't:***
    - Ask for anything you can get online (e.g. a paper that can be found on IEEE).
    - Expect a response - *between spam filters and busy schedules, you may not hear back. It is ok to follow up after 1 week, but explore other options.*

Wrap-Up

Tuesday

- Learn techniques for effectively presenting technical research
- Design a scientific poster for research in a field of computer science

- <u>To Do</u>:
    - Research Presentation (poster) - **due 4/20**
    - Activity 9: Technical Presentations (*in-class on Thursday*)

See you Thursday!

Activity 9:
Effective Presentations

Activity 9: Effective Presentations

Communicating your research

- **The Elevator Pitch**
    - Concisely & effectively introducing yourself and your research/interests.

- **Scientific Posters**
    - Visually conveying an interesting research idea.

Wrap-Up

Thursday

- Learn techniques for effectively presenting technical research
- Design a scientific poster for research in a field of computer science

- <u>To Do</u>:
    - Research Presentation (poster) - **due 4/20**
    - Activity 9: Technical Presentations (*in-class on Thursday*)

See you next week!