REU-CAAR:
You're Here!

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Auguste: Why are you telling them all that?
Bill: In academia its very important to credit past work!

Purpose of This Talk

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1. Who are the mentors?

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2. What are the projects?

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1. Who are the mentors?
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3. What is expected of you?
4. What should you expect of us?
5. Nuts and bolts of how the program works.
6. Advice on how to get the most out of this summer!

REU-CAAR

REU: **R**esearch **E**xperience for **U**ndergradutes.

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CAAR: Combinatorics, **A**lgorithms, and **AI** for **R**eal Problems.

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Discuss Find a topic within CS that this title **does not** cover?

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CAAR: Combinatorics, **A**lgorithms, and **AI** for **R**eal Problems.

Discuss Find a topic within CS that this title **does not** cover?

Systems, **HCI**, **Software Engineering**, anything else?

REU-CAAR: TEAM!

Mentors

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1. **Classical and Quantum Error Correction**:
   Victor A and Phillip F.

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   Auguste G. and Dave M.
6. **Using Markov Dec. Processes to Mitigate Climate Risk**.
   Aviva P.

Admin

- **REU-CAAR Director:** William Gasarch.

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  Wrote the grant,

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- **Help with Final Presentations:** Clyde.

REU-CAAR:
Very Brief History

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2017-2022

Big change. Projects in the fields above but also

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   (2) help **Bill** with a lot of stuff.

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4. We will share some activities with these REU programs

Program Goals and Expectations

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2. You are here **because you care** about **Quantum** or **AI** or **Bias** or **Geometry** or **Mitigating Climate Change**.

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3. So you should **want** to keep working on your projects, perhaps on a lower level, after you go back to the dorms.

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4. Talk to each other in the dorms about your projects!

What the Program Expects of You: Restart

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3. **A**ctively contribute to your research project and your team.

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Your Mentor's Role

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4. **Connection:** Help connect you to their colleagues, graduate assistants, others.

What Faculty Mentors Expect from You

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Credit Auguste thought of making the first letters spell words.

Issues that Probably Won't Arise But Need to be Discussed

Sexual Harassment and Discrimination

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1. If you feel uncomfortable, seek advice and guidance from others. **Bill**, **Auguste**, or **Furong**. (One of the REU-CAAR mentors) can offer assistance and direct you to campus resources for help. Note that in the United State there is Mandatory Reporting: if a mentor or director hears about a case of sexual harassment, they must report it.

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2. While this slide is about Sexual Harassment and Discrimination, feel free to talk to **Bill**., **Auguste** or **Furong** about **any** issue, even if it is uncomfortable.

Do Your Part

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Good News That You Know:

1. You get a stipend.

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SPACE AGE and **CAMERA**

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its finding whose to **Blame :-)**

Schedule and Activities

First Week++ Talks

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In symbols

$$(\forall p)(\exists m, d)[MENTOR(p, m) \wedge TALK(p, m, d)].$$

First Week - Lunch

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4. Bill will join you for lunch some of the first week.

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3. Research-Every day.

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5. **Unexpected things** will happen! Always expect the unexpected!

Other Things We Will Do

1. Discussion of **Ethics of Research.**
2. Discussion of **graduate school** (with the other 3 REUs).
3. **Game Nights** with Pizza!
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5. **Unexpected things** will happen! Always expect the unexpected!
   (Is that a paradox? A project for Summer 2024 REU.)

Summary of Projects and People

Victor and Phillipe Quantum Project

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1. **Classical and Quantum Error Correction**

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3. **Students** Michael, Cella, Milan

Marine-Eleftheria Translation Project

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3. **Students** Linh, Grace, Angela

Laxman Parallelism/Clustering Project

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3. **Students** Selena, Amy, David

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3. **Students** Zofia, Sally, Daniel, Carlos.

Aviva's Markov Decision for Climate Risk

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Irwin Winkler

Bill Gasarch's Mother is Pearl (Nee Winkler) Gasarch

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Why am I telling you this?

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Irwin Winkler has established a charitable foundation that gives money to (a) many worth causes and (b) our REU!

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Also, the last book was a nominee for the **National Book Award**.

Show me the Money!

Where Does the Winkler Money Go?

Things the NSF won't pay for:

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- Money for housing for non-citizens.

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None of this will matter except:

1. Google/Zhu & Iribe students will write letters of thanks.
2. KAUST may ask their students to fill out forms.
3. Unpaid students: no emails about travel or forms.
4. Non-citizens can't get ID cards.

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Questions from You?

I welcome questions now and anytime!