Student Faculty Conference Next Week on 4/18

For the first time in four years, the 2023 Student Faculty Conference will be held in-person on Tuesday, April 18th in Ramo Auditorium. The Student Faculty Conference (SFC) is an all-day forum discussion between students and faculty. The conference is held biennially as a review of Caltech education. The feedback and suggestions that come out of the SFC shape the future of academics.

The main contributor of the event is the ARC. The ARC is the Academics and Research Committee. We are the academic branch of ASCET. Our goal is to improve the Caltech undergraduate academic experience.

The process of planning the SFC begins in fall. The ARC appoints members of SFC Committees, made up of students and faculty. The committee analyzes academics and lead a discussion on their findings at the SFC. Each SFC Committee then works to implement their recommendations and feedback concluding in a short report summarizing their work. The special topics this year are The Effects of COVID on Academics and Re-thinking Flexibility in the Core Curriculum. The Special Committee Topics in 2021 were Mental Health in Academics and Scientific Writing. In previous years the topics included Honor Code and Option Advising (2010); Computing Education and Core Curriculum (2017); Teaching Innovation and Writing Competitions (2015). Everyone is welcome and no reservations are required. More information can be found on the Caltech SFC and ARC website. Please fill out the SFC surveys sent to your student emails ASAP!

IMAGING THE BEGINNING OF TIME FROM THE SOUTH POLE

Ahmed Mohamed

My research work at Caltech is trying to precisely address the most fundamental questions that have ever been posed by a human being: “How did the universe begin and evolve into what we could see today?”

Cosmological observations in the past few decades generally support the theory that the universe is uniformly expanding and cooling down with time, suggesting that if you turn the clock backwards about 13.8 billion years, we could ‘find the beginning’—time zero—the so-called “Big Bang.” Just as my great-grandfather, the Egyptian pharaoh, left behind monuments as witnesses for one of the oldest and greatest civilizations on earth, so too did the newborn universe with the Cosmic Microwave Background (CMB), its light traveling for billions of years until today as a witness for the universe’s birth.

The CMB radiation was first measured in 1965 by Penzias and Wilson at Bell Labs. It was like in the beginning. We see today? The theory of cosmic inflation was developed in the 1980s to answer these questions. Others suggest a period of “inflationary” rapid expansion in the first few moments of the baby universe, as well as primordial gravitational waves that would imprint a unique pattern in the CMB. My PhD thesis work in the Observational Cosmology Group at Caltech, as part of the BICEP/Keck collaboration, aims to develop a very sensitive detector camera. Once built, it will allow a telescope to reach the ultimate sensitivity and search for this very faint pattern left over from the creation of the universe, revealing to us what it was like in the beginning.

(continued on back page)

Rolling is Real Winner in Dabney vs. Fleming Discobolus

Lilli Arribazabala

March 13, 2023, 8PM

The scene is set: it’s a mild winter with a soft breeze. The runners take their marks around the track, 3, 2, 1, and they’re off! Fleming House takes a slight early lead with Dabney House not far behind. The baton is passed, and Dabney takes the lead! Batons are passed again, and with them, Fleming retakes the lead. Dabney comes in strong in the last stretch, but it’s not enough to claim victory. Fleming reigns supreme and retains the Discobolus trophy for another unprecedented period of time.

After winning a battle of raw egg-eating against Rickets House the week prior, Fleming had to defend the Discobolus title against the notoriously unathletic Dabney House. As Dabney’s Athman, I knew this would be a tough battle—not just in terms of physical fitness, but also getting Darbs to show up at all.

In interhouse Discobolus, the challenging house chooses three sports: 1 conventional and 2 unconventional. They give this list to the defending champion, who then choose among the options. I solicited several sport suggestions from Dabney, and a multitude of very unconventional ones indeed were offered up—a squat song battle (a true test of endurance), salmonella (inspired by the raw egg eating contest), League of Legends, and a citrus catapult-building challenge.

(continued on page 3)
As many of the residents of the South Hovses are aware, the hot water system here is very inconsistent. Many times people have gone to shower only to be disappointed by lukewarm or cold water temperatures. Recently the problem has been especially concentrated in Dabney and Fleming House, as well as one shower in Ricketts House. At times it has gotten so bad that people are told to “Go to Hell [alley in Blacker]” to try to find hot water. Housing and plumbing have been trying to fix the issues, but they always seem to resurface, at least in part due to the age of the system.

The water system for the South Hovses is made up of two halves: one providing hot water to Dabney and Fleming, one providing hot water to Blacker. There’s also an extra pump supplying water to Snake alley in Ricketts. There is also a new pipe connecting the two systems that can be turned on if one of the systems goes down to temporarily borrow hot water from the other system. The pumps send out varying amounts of hot water depending on demand, and periods with great demand and tax the system too much.

There are several points of failure in the system owing in part to the age and complexity of the system. The South Hovses were remodeled in around 2004 so much of the plumbing infrastructure is also from this time and is reaching the end of its life. Many of the pipes are made of galvanized steel and are prone to rusting. This has caused problems in the past with water coming out of faucets being red or orange in color, especially after periods of low use such as after breaks. Pasadena city water is also very hard and leaves behind calcium carbonate buildup in certain spots in the system. This can cause the pipe to constrict which prevents the proper circulation of water. This leads to dead legs and showers and other faucets not getting hot enough. The age of the system also causes problems with replacing parts. Many of the parts needed are only manufactured by one company who has been experiencing “supply chain issues”, meaning that it can take months to order new replacement parts.

The water system is very large and contains around 200 valves. For example, if there is a problem with the hot water caused by a valve being bumped by accident, it can be difficult to track down — especially considering the valves are in hyperspace. The system has also had issues with the cold water supply leaking into the hot water. This can happen if both the cold and hot water taps are opened in a sink or a shower for a long period of time. This causes the hot water to cool down and can also be a difficult problem to identify.

Most recently, over spring break, Housing and Plumbing replaced a control valve for steam in the Dabney/Fleming system. These repairs took place on Wednesday March 29th, but hot water was still out for another day and the water was slightly rusty. However, in the week since then, there have not been any new complaints so the system, for the time being it’s working. The hot water system should be capable of 112-118 °F water. If you notice it lower than this, either email Housing or submit a ReAdy request if it’s during business hours. Outside of business hours, please call the Central Plant at 825-955-4717. I do also urge students to be patient with Housing in performing these repairs as the Plumbing Shop is responsible for all the buildings on campus, not just the South Hovses, and they have often been working after-hours to try to fix these issues.

Editor’s note: Remember kids, don’t drink the yellow water!
ASCIT Board of Directors
Meeting
Minutes for April 9, 2023.
Taken by Jonathan Booker.

Officers Present: Kavya Rajagopalam, Gabi Twombly, Sophie Lam, Shwetha Kunnam, Rachel Gopalan, Gabi Twombly, Sophie Swetha (Swetha)

Call to Order: 7:04

Officers’ Reports:

President (Kavya)
- Bylaw Amendments
  + BoC Amendment: Increases the number of BoC Secretaries from 1 to 4.
  + Tech Amendment: Tech funding/payment requires Board Approval.
  + Duns Amendment: Increase the dues from $33 to $40 for a term.

V.P. of Academic Affairs (Twombly)

+ Security Concerns:
  - Potential incident after Lloyd Interhouse.
  - Issues with Allied Security and their time tracking.
  - Problem debeloping to VPNA.

V.P. of Academic Affairs (Twombly)

+ Engagement is down from last year. April 8th, there was an issue with ORE not submitting their data to Covid Survey to IRB.
  - Please email the ORE and students and faculty to attend.

V.P. of Non-Academic Affairs (Swetha)

+ Appointments:
  - Committee nominations have been made.
  - Appointments will be made next week.

+ Looking for nominations for IHC Athman.

Director of Operations (Swetha)

+ Alumni Website to get donations from Alumni.
  - Check on the website will be determined later this week.

Treasurer (Rachel)

+ ORE has not gotten back on the work order.

Social Director (Matthews)

+ ASCIT Formal
  - It is this Friday.
  - A lot of people have not paid.
  - Everything is set, we just have to pay for buses.

+ Social Directors / BoC will help with loading buses.

Secretary (Jonathan)

+ Tech Editor appointments have been made.

MEETING ADJOURNED: 8:00

Staff Spotlight: Sean Cutting
continued from page 1

This seems to have been the case going back several years; for example, we spoke to a senior in Page House who, during a meeting with CASS in her sophomore year, was plainly asked if she “really needed that accommodation.”

Sean chalks this up to a systemic assumption that the disabled community is much smaller than it really is. Only recently has the Student Affairs department “realized” that running the CASS office might be more than a one-person job. Indeed, perhaps hand-sorting an unorganized combination of paper and electronic documents for the 30-strong members of the Caltech community with registered disabilities MIGHT be a little much for a single employee to keep up with. Gee, if they’re not careful, that could even lead to a deep sentiment of mistrust, frustration, and confusion among students whose accommodations had requirements that seemed to have a lack of transparency and communication, were needlessly extensive, and took several months to verify.

Fortunately, Sean excitedly told us, he is determined to correct these pitfalls and streamline the workflow of the CASS office. He hopes that creating concrete and visible policies will help to increase faculty and student confidence in CASS recommendations and prevent academic accommodations from being exploitive of either party.

Sean is also working on setting up better data management systems and generalizing accommodation policies in hopes of making a more straightforward path to obtaining diagnoses or provider recommendations can be implemented within the next year. The goal is to make initiating new accommodations, updating existing services, or scheduling psych evals all accessible from a single portal on access.caltech.edu.

Often, students put off obtaining beneficial accommodations due to the high price of psychiatric or medical appointments, screening and tests, and the amount of time and effort it takes to get necessary appointments. However, Sean emphasizes that if you have a disability, then you need to justify. Permanent accommodation is Indeed required for some accommodations to be granted, but if you don’t have any, or if you’re not sure, Sean still encourages you to set up a meeting with him to find out your options.

All it takes to establish an accommodation is reasonable justification for example, if you’re taking a prescription medication related to your issue, then the label on the bottle is enough documentation for at least a temporary accommodation without having to acquire diagnostics or doctor’s letters. Sean is also working with Lee Coleman at the Student Wellness Services to push for campus providers to be able to screen students and recommend them for necessary accommodations, which would be a much more cost effective and accessible plan than having to source outside providers.

How to get started
Sean told us that the best way to get started with an accommodation request is to fill out the relevant PDF forms on the CASS website (cass.caltech.edu) and then send them to him by email (cass@caltech.edu).

If you have any questions about CASS policies or want to schedule a meeting with Sean Cutting, the best way to reach him is by email (cass@caltech.edu).

You can also directly sign up for a 30-minute meeting with him using his Calendly link (https://calendly.com/scutting-1/30min).

Thanks so much for chatting with us, Sean, and welcome to Caltech!

Writers & Artists Wanted!
CAMPUS | OPINION | HUMOR ART | PHOTOGRAPHY | COMICS | CULTURE | SPORTS | NEWS | SCIENCE | POLITICS

Minimum pay is $50 per word, $5 per photo

Email submissions and inquiries to tech@caltech.edu or join our Discord server using the following link: discord.gg/7zh4b749k3

The California Tech

Tuesday, April 11, 2023

Rolling is Real Winner in Dabney vs. Fleming Discobolus continued from page 1

But after a heated poll in our Telegram chat, it was decided that Dabney would challenge Fleming to Minecraf Hydropel Bedwars and citrus biting challenge (with shell), one of my personal favorite pastimes.

And, as Discobolus challenges are required to include one conventional sport, we chose a 4x100 Relay. This was for 2 reasons: the first being that Dabney House has two members of the track team (one of the few sports any active Darbs plays), and the second, because we hoped that this fact would dissuade Fleming from choosing it. Alas, that game theory did not work out. To the disappoint- ment of all the Darbs who had been practicing their citrus biting, Fleming chose the Relay. Their motive seems to have been that they did not entirely understand what citrus biting would entail, but cause we hoped that this fact would dissuade Fleming from choosing it. Additionally, there was a striking absence of any Flems will- ing to play Minecraft.

Due to scheduling concerns, especially regarding Fleming Interhouse the weekend before March 19th, the relay was scheduled for finals week. This was evident to an astute ob- server in the turnout of each of the courses, but for different rea- sonable ways. Fleming, who usually shows up in large numbers, was unable to muster quite as many people; and Dabney, who almost always forfeits because I can never recruit more than 3 people, had at least 8 people there! This is so many more than I can usually! I attribute this to two factors: first, the Dabney propaganda which I Caltech spread around the house tell- ing people to come play sport; and second, the usual Darbs “I have sets” draft-dodging tac- tic was no longer viable.

In the end, although Dabney may have lost, I had a lot of fun and would like to thank Fleming and Fleming’s Athman, Shelby Scott (ME’23, Fleming), for helping organize the a- tivity. As a bonus, I will present the results of an experiment the Darbs ran after the race was over. We were discussing the fastest form of movement on all fours, and the hypothe- sis was that rolling is faster; however our experiment might have been flawed, as our sample was not large and the person rolling was already faster than the rest of the compet- itors. Perhaps an aspiring Caltech student will pick up where we left off and redo the experiment with better design parameters.

There will be more Discobolus this term along with the regular interhouse sports of basketball and soccer.

Lilia Arrizabalaga (Ay’25, Dabney) is the Athman for Dabney House where they at- tempt, usually unsuccessful- ly, to persuade Darbs to play sports. In their free time, they enjoy participating in casual and competitive citrus-biting events, with a personal record of 7.

To you have some woes in your personal life and just need to get some advice? Caltech Quail is here! Feel free to contact the Califor- nia Tech Quail. Quali is here to answer your questions and help you with advice, really! Contact us during your time at Caltech. All submissions are anonymous, and will be answered in the Califor- nia Tech’s Quail column.

Submit your questions to this Google Form.

https://forms.gle/sa2YiE1QkQGkRWSv7
Springtime Comes to Campus

“Parrot on Jog Walk” | Arden Shia

“Campus Flowers” & “Yellow Daisies from the California Superbloom located in Chino Hills State Park”

“The sunlight shining across the trees is the highlight of these photos. The annual DC Cherry Blossom Festival is very popular. Tourists around the country come and view the spectacle. I just happened to be in the area.” | Abraham Belayneh
THE SUNRISE FROM THE MOON

Is a fascinating glimpse into humanity’s future revealing that certain human characteristics do not change with the passage of time.

Enter Annaliese Gardner, a young woman who has survived a catastrophic collapse of a moon colony and is the sole survivor. She has lived ten years years in isolation surviving on books, music and food rations. She is brought back to Earth with the hopes of reintegrating her into society... but then things get complicated as it often does when dealing with the human psyche.

The race for the colonization of space continues but what about the race for her heart? This is a story of both the challenges of space exploration and the challenges of inner space. A desperate search for love that dwells within each of us. A search for that beautiful sunrise from our personal moon.

“SPACE, LOVE, LOSS, JELLYFISH, AND LOTS OF VANILLA COKE”

STARRING
Asmat Kaur Taunque as ANNALIESE
Skye Lee Mare as MINA
Matthew Torres as CHARLIE
Jane Brucker as CALVIN
Sahangi Dassanayake as THE REPORTER

Rates
Black & White Ads: $3 per sq. inch
Color Ads: $5 per sq. inch
+$10 flat processing fee

The advertising deadline is Friday at noon the week before publication; all advertising should be submitted electronically or as camera ready art, but The Tech can also do simple typesetting and arrangement. All advertising inquiries should be directed to the business manager at tech@caltech.edu.
Well folks, let me tell you something: this thing’s ter-
rible that the stupid FRICKS at Ricketts House have been hiding. Gerard Decker (’26, Richmond) said that the greatest
ally great guy, was robbed, yes robbed, of becoming the Uni-
lateral Excomm of Ricketts House. The current Excomm, who de-
ecided it was too radical to allow Gerard to become Ex-
comm and instead they pre-
tended that Meg Robertson (GPS ’24, Ricketts) and the rest of Ricketts Excomm won the votes for their positions when they DIDNT. Can you believe it? It’s unbelie-
viable folks.

Now let me tell you, Gerard, who’s a winner, a real winner. He would have been the best Excomm Ricketts House has ever seen, believe me. But you know what happened when they established, they couldn’t handle Gerard’s success, they were scared of him. They were scared of his big ideas, his re-
mendous plans, and his in-
credible leadership skills.

But let me tell you some-
ting, Gerard is a fighter. He
won’t back down. He won’t let the system stop him from doing what he needs to do. For The First Time. No sir, he won’t.

So to Meg Robertson, I say this, you better watch out, be-
cause Gerard Decker is coming for you. He’s coming for you, and he’s going to win. He’s going to win big, and there’s nothing you can do about it. That’s right folks, we’re not just going to sit back and let the government get away with robbing Gerard Decker of his right position as the uni-
lateral Excomm of Ricketts House. No way, we’re taking
action.

On May 69th, we’re plan-
ing a protest in the Ricketts House courtyard. It’s going to be huge, the biggest protest Ricketts House has ever seen. We’re going to stand up for what’s right, and demand that Gerard gets the position he de-
serves.

Now let me tell you, this is not just about Gerard. This is about all of us. This is about taking back Ricketts House from the crooked government, and making it a place where everyone can succeed.

So I urge all of you to join us on May 69th, and make your voices heard. Let’s show the bourgeoisie that we’re not going to back down, we’re not going to be intimidated, and we’re not going to let them get away with this.Together, we can Make Ricketts House Great For The First Time. Let’s do it folks!

Editor’s note: The following is an excerpt from a state-
ment Gerard submitted to the Tech. The full statement can be found on our website at tech.caltech.edu.

I am throwing my hat in the ring for all of the upper Excomm positions, simul-
taneously. I’m the obvious choice for Ricketts President. As Ricketts House President, I will remove the RA and RLC positions from the house, have no more poets, no more ex-
ams, no more classes, open Kitchen will be open 24/7, and most importantly, no more Lily Coffin (sic). Without me at the helm, Ricketts House is like a ship without a captain, ultimately doomed. So I urge
you to vote for me as President of Ricketts, or face the conse-
quences of a house in ruins.

Editor’s note: Ricketts Ex-
comm elections were held last February. The count has long since been stopped. Meg Robertson addressed this in a statement today, which can be found on tech.caltech.edu.

In a time when gamers are more oppressed than ever, this film stands as a light in the darkness, an inspir-
ing creation that is hopefully the van-
cing of Ricketts, or face the conse-
quences of a house in ruins. It’s going to win big, and there’s nothing you can do about it. You won’t be disappointed.

Editor’s note: Justin Toyota wrote this piece a week before the movie was released.
The California Tech

Tuesday, April 11, 2023

TCT CROSSWORD – “DEMONYMS”

ACROSS
1 A one or zero
5 Taxi
12 Radius’s pair
13 Spanish for to tie
15 The terrible Tsar
16 A Blackor member’s favorite chip topping
18 Slightly larger than a C-battery
20 To go on and on
22 Rainforest branch
dwelling snake
24 Dishonest people
25 A Fleming members’
favorite bird, might be part of a militia
29 Equine insect
32 Perfect condition,”Good _____” (2 words)
33 General water hardness measure, abbr.
34 Short cry or yelp
40 People who naysay or contradict
44 A Venerable members’
favorite type of diagrams
47 ”Dr. Dean _____”
49 Cake or Cookie topper
52 What you might do to come to college (2 words)
54 Conflict of interest, abbr.
55 ’Frankly, my dear, I don’t give ______’ (2 words)
57 A Dubney members’ favorite bird, its woody
59 Small or tiny
60 Mother of Kim Kardashian
61 Down payment for a poker game
62 Electrical / band
63 Sound of disgust, like Gah!
64 Shakespearean expression of surprise
65 Small or tiny
66 Parrot or parakeet
67 Shortened form of Abigail
68 “Strawberry Wine” singer Carter
69 National Institute of Aerospace, abbr.
70 Hospital departments that deal with emergencies
71 Looking with interest
72 Back part
73 Like Shrek
74 Western area of Germany along a river
75 Type of scinet table
76 Particular to a region
77 “Indiana wants me” singer Taylor
78 PPE to protect against flames
79 Fossilized tree resin
80 Color space with tint
81 Elvish crypts.
82 Know it alls, smart
83 Sig. other, informally
84 Ask me anything
85 Ex. Websters, abbr.
86 “From then on” (2 words)
87 Looking with interest
88 Look like, sound like
89 Like Shrek
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245 Like Shrek

DONW
1 Zero, or year between 2000 and 2009
2 What lapis and cobalt are to teal
3 Asinine or insubstantial
4 Toe and Tic’s triplet
5 Didn’t stay on (2 words)
6 To sing without harmony
7 Sans hair
8 Antacids, informally
9 From then on (2 words)
10 Girl, informally
11 Weekly live comedy show
14 A Kingdom or Domain

TANGRAM

ONLY 1% OF PEOPLE CAN SOLVE THIS PUZZLE

Match the shape!

Last week’s Crossword Solution

Killer Sudoku

Rules
1. Only 1 number can be placed in each cell
(You can’t attempt to squeeze a 1 and 2 into a single cell to complete the puzzle.)
2. Each row, column, and nonet can only contain unique numbers.
(You couldn’t have two 4’s appearing in the same row, column, or nonet. This is the standard rule for Sudoku.)
3. The sum of the numbers inside of a cage must equal the clue number
(A Cage with two Cells and a clue of 3 must contain the numbers 2 and 1.)

6 3 2 4 8 8 9
1 4 9 9 1
2 6 7 1 3
1

Imaging the Beginning of Time from the South Pole

These observations are very important in fundamental physics because they open a new window to probe the energy scale at the beginning of time — when the universe was a mere fraction of a second old. Our team is leading the latest phase in our experiments, and inflationary gravitational waves. The BICEP Array telescope represents the latest phase in our experiments, and will search for inflationary gravitational waves with unprecedented sensitivity levels over a wide range of radio frequencies. We successfully designed and deployed the first low-frequency BICEP Array receiver to the coldest place on Earth: the Amundsen-Scott South Pole Station, a place where the atmosphere is extremely cold and dry, and consequently transparent at millimeter wavelength. I went to the South Pole twice and stayed there for about 6 months total. It was an unforgettable experience for me.

I also became the first Egyptian scientist to raise the Egyptian flag twice at the South Pole — in -60 °C — which made me something of a celebrity back home. I delivered science outreach events to various STEM schools around the world about our daily life and our science experiment while I was at the South Pole. These videos have reached millions of views on social media. It was really happy that my story inspired many of them to love and engage more in science. One of these schools awarded me an appreciation prize during my visit to Egypt.

and more diverse demographic. I was really happy that my story inspired people, especially kids, to love and engage more in science.