

The Hanging Gardens of Caltech: Chandler Rooftop Garden

RAMYA DESHPANDE
Page Editor

On graduation day of last year, the seeds were planted for an ambitious undertaking - an aeroponic garden on the Chandler rooftop. The brainchild of Jon Webster, Director of Dining Services, and Zach Chambers, Executive Chef, the garden is currently maintained by a small team of Caltech Dining Services staff. At its inception, the aeroponic garden consisted of twelve planting

towers, each with a base capacity of 20 gallons; fertilized water from the base reservoirs is recirculated within the tower with a pump, and introduced to exposed plant roots via gravity feed. The plants are suspended in nutrients and watered every ten to fifteen minutes, constituting an aeroponic system - plants grown in an air or mist environment through water, liquid nutrients and a growing medium. The football-field sized garden grows a variety of greens and edibles, including kale, spring mix,

lettuce, herbs, tomatoes, peppers, sweet peppers, cucumbers, squash, beans, eggplant and tomatillos; unfortunately, root vegetables like onions and parsnips cannot be grown. This year's formal dinner menu will incorporate greens from the garden in its first course, and fresh basil is already being used for pho at Chandler; rooftop yield will also be utilized for catering services and at Red Door. Chambers is ready to explore new avenues with this project - he plans to grind chilli powder, experiment with za'atar,

a Middle Eastern spice mix, and looks forward to "quietly sneaking in ingredients into regular dishes".

Webster is eager to accept student help in any form - student volunteers would be involved in harvesting, planting, wiping off towers, maintenance, pruning, cutting off tomatoes, and general farming practice. Additionally, he is determined to harness Caltech's innovative student body - "there are so many ideas and so many smart people - if the right person is going to see this and say they should do this". Webster and Chambers' ultimate goal is to create a highly sustainable, closed-circuit garden; for example, by capturing condensate from air conditioning to provide 60-90 gallons of water supply a week. Webster dreams of assembling intrepid students to reverse engineer mineral supplements and fertilizer and figure out how to create these supplies from current food waste - a prospect he considers a pipe dream; he additionally wants to parlay the large amount of water "going down the drain" into feeding the garden. The overarching goal is to efficiently use current resources, while remaining cost-effective - currently, the cost is a dollar per plant for each tower, and all of the greens come out to be as cost effective as buying from a produce supplier.

As I was listening to the two men, I could not help but awe at the enthusiasm and ambition they displayed for this undertaking: As Chambers put it, he was finally achieving something he had always wanted to do - "I've never had this in my cooking career. It's like a dream, to have it here and on the scale that we cook everyday." It is his personal mission to be able to write a menu based on a predictable growing cycle. The two have invested countless hours just to optimize the system to the state it currently is in; since its inception, they have faced difficulties with the towers running dry, experienced malfunctions, and even a caterpillar infestation, which they promptly dealt with by "picking them off and throwing them off the roof". After two to four weeks of experimentation, they were met with success and devoted subsequent hours per week into maintaining the garden. They now invite the Caltech community to tour the garden, help maintain it, and innovate it.

Students, faculty or anyone at all interested in helping out with the garden can contact John Webster at jwebster@caltech.edu. Those interested can also ask to tour the garden.



Jon Webster, Zach Chambers, and the Chandler Rooftop Garden

Photos Courtesy of Ramya Deshpande

The Siren Call of All-Freshman Housing

TIMOTHY LIU
Contributing Writer

The following piece reflects the personal opinion of the author. This piece was not written on behalf of the COUCH or the IHC.

The market for farming tools is surprisingly vibrant on campus. Simply utter the phrase "all-freshman housing" and students will immediately reach for their pitchforks or promptly order one from Amazon Prime. The oft-repeated dialogue is that the House System works so well that it would be sacrilegious to more than cosmetically change it. All-freshman housing is presumed to be a sinister ploy to undermine the House System, pedaled by the nebulous group labeled "admin" who are either ignorant, or worse, malicious.

In the fall of 2017, the IHC convened six focus groups to more objectively evaluate different

proposals for filling Bechtel. Each group was deliberately designed to include members that spanned houses and years, and were asked to be unbiased and cast aside any previous notions. I am the leader of the all-freshman housing group, and my committee has diligently put together a hefty report on all-freshman housing, which will become available in the coming weeks. The report is the product of hundreds of hours of work, dozens of interviews, and innumerable meetings. This piece is partially a reflection of my group's work, but mostly a reflection of my own thoughts (re: send angry hate mail to me, not my focus group members).

All-freshman housing has numerous attractive features. There is the potential to form a more cohesive, class wide community. Another advantage, expressed by staff members from the Title IX office and the Counseling Center, is the opportunity to address the needs of students in the same age

cohort. Several of the pitfalls of the current House System--such as fragmentation and insularity--are at least partially swept aside. With all-freshman housing, students would rotate into a house towards the end of their freshman year, after having the chance to adapt to college and form their own identity.

But like a siren calling to beleaguered sailors, the dangers of all-freshman housing are out of sight, lurking beneath the calm waves. As the extant residential life model, the House System is effectively under a microscope; all of its triumphs and failures are more visible and open to scrutiny. All-freshman housing remains a hypothetical, and both its strengths and drawbacks remain murky at best.

The Council on Undergraduate Caltech Housing (COUCH) - which is composed of the focus group leaders and the IHC - has developed a criteria of six core

values. These are ideals that we believe a strong residential life model should include, and are a useful lens to evaluate different schemes through. The core values--mentorship, diversity, identity, support, honor code, and choice--were described in a previous Tech article by the COUCH. Evaluating all-freshman housing using the framework of core values is at best a speculative exercise. But it's still worth doing, and can shed light on how all-freshman housing aligns with Caltech's values.

Mentorship

Mentorship depends on upperclassmen and freshmen interacting with each other. One concrete example of upperclassmen-lead mentorship is that upperclassmen are considered important sources of information for freshman selecting their major (see Figure 1). In practice, an all-freshman Bechtel will be freshman living with a handful of upperclassmen peer advocates,

health advocates, and potentially other students in yet undefined roles. The overflow (Bechtel only has 212 beds) will be placed in Avery. Upperclassmen will hardly disappear from freshman's lives, but in an all-freshman house, their presence and mentoring role will be curtailed.

Upperclassmen can be sources of both good and bad advice, and they can be both good or bad mentors. However, the drawback of having fewer upperclassmen around freshmen is that it limits the pool of students for freshmen to use as examples. Freshmen will still know upperclassmen if they live in an all-freshman house, but the number will almost certainly be fewer than under the House System. For every bitter electrical engineer in a house, there's likely another electrical engineer who is happy with their choices, and can act as a mentor to freshmen. Limiting the pool of

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Caltech Y Column

CALTECH Y

The Caltech Y Column serves to inform students of upcoming events and volunteer opportunities. The list is compiled by Katherine Guo from information given by the Caltech Y and its student leaders.

Founded by students in 1916, the Y was organized to provide extracurricular activities planned and implemented by students as an opportunity to learn leadership skills and discover themselves. The mission of today's Y remains the same—to provide opportunities that will prepare students to become engaged, responsible citizens of the world. The Y seeks to broaden students' worldviews, raise social, ethical, and cultural awareness through teamwork, community engagement, activism, and leadership. More information about the Caltech Y and its programs can be found at <https://caltechy.org>. The office is located at 505 S. Wilson Avenue.

Upcoming Events

OASIS and Caltech Y presents

The ITT Gandhinagar Story: Opportunities and Challenges in Building a World Class Institution, a conversation with Sudhir Jain

Tuesday | November 14th | Morgan Library, Kerchkoff Lab (2nd floor) | 4:00 PM

RSVP: https://www.facebook.com/events/152950895451014/?active_tab=discussion

This talk will contextualize several new and exciting initiatives currently being implemented in Indian higher education. It will focus specifically on developments at ITT Gandhinagar, one of India's newest and fastest growing institutes of higher education. Started less than a decade ago, ITT Gandhinagar has sought to establish itself as a centre of excellence in research, teaching, and community engagement. The talk will highlight some of the novel initiatives taken by the institute in its journey to revitalize and reimagine the scope and context of a modern engineering education.

The Talk will also provide a good opportunity for those interested in a teaching and research career in India to gain a first hand perspective on new opportunities and possibilities for professional growth. As a quickly growing institute, ITT Gandhinagar is actively looking for outstanding and enthusiastic young faculty members not just in Engineering, but also in the Sciences and the Liberal Arts. ITT Gandhinagar also welcomes academics and industry veterans for shorter durations through its vibrant Visiting Faculty Program. The talk will provide a window into various such opportunities, and the following discussion session will serve as a platform to discover ways to get engaged with the institute and contribute to its bold vision.

About the Speaker:

Sudhir K. Jain received his Bachelor of Engineering from University of Roorkee in 1979, Master of Science from Caltech in 1980, and Doctor of Philosophy, also from Caltech, in 1983. He joined the Civil Engineering faculty at ITT Kanpur

in 1984 and in June 2009 moved to ITT Gandhinagar as its first Director. At ITTK, Professor Jain served in a number of administrative capacities including Head, Civil Engineering (2001-2003) and Dean, Resource Planning and Generation (2205-2008). He also set up the National Information Centre of Earthquake Engineering (NICEE) at ITTK and developed the National Programme on Earthquake Engineering Education (NPEEE), supported by the Government of India. He was elected a Fellow of the Indian national Academy of Engineering in 2003 and currently serves as president of the International Association for Earthquake Engineering.

Double Your Caltech Y Donation with United Way

Until November 17th

Any contribution made through the United Way campaign by all Caltech employees will be matched by the Institute from October 13 to November 17, 2017! If you are a Caltech faculty or staff member and would like to make gifts to the Caltech Y, we strongly encourage you to make your donation through the United Way campaign.

Pledge online by going to <https://access.caltech.edu/> and click on "United Way".

We encourage you to give through United Way. You can make a huge difference in the services the Caltech Y is able to provide to Caltech and the surrounding community!

Day Hike: Malibu Creek State Park

Saturday | November 18th | 8:00 AM to Late Afternoon | Bring your own lunch

Come join the Caltech Y-Outdoors on a day hike in Malibu Creek State Park in the Santa Monica Mountains. You will explore stream-side oak woodland, chaparral ecology, and the site of the filming of MASH! We will be leaving campus at 8 am on Saturday November 18 and returning mid to late afternoon. Bring your own lunch and plenty of water!

Costa Rica Alternative Spring Break Trip

Saturday, March 17th through Sunday, March 25th (9 days) | Cost: \$950

Applications Due: by Noon on November, 22nd

The Caltech Y is excited to seek applicants for our 2017 Alternative Spring Break trip to Costa Rica. Join other Caltech students for a conservation focused spring break trip this year. On the Costa Rica trip we will be working with a host organization OSA Conservation www.osaconservation.org – which is dedicated to protecting the globally significant biodiversity of Costa Rica's Osa Peninsula. Don't miss out on this fantastic opportunity to explore another part of our planet and make a tangible difference in the world.

Trips fees include transportation, lodging, and most food. The Costa Rica Alternative Spring Break trip is

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Caltech Astronomy
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coordinated by the Caltech Y and has been made possible thanks to generous funding from the Frank and Elsie Stefanko Fund, the George Housner Fund, Caltech Student Affairs, and the Caltech Y. Spaces are limited.

Visit http://caltechy.org/programs_services/areas/asb/ for applications and more information.

Pasadena LEARNS

Every Friday | 3:00 - 5:00 PM | Pasadena

Come volunteer at Washington Middle and Elementary STEAM School! We are partnered with the Pasadena LEARNS program and work with their Science Olympiad team or do regular tutoring along with occasional hands-on science experiments. Transportation is provided. For more information and to RSVP, contact azhai@caltech.edu. Eligible for Federal Work Study.

Hathaway Sycamores

Every Monday | 5:45 - 8:00 PM | Highland Park

Volunteer at Hathaway Sycamores, a group that supports local underprivileged but motivated high school students. There are a variety of ages and subjects being tutored. The service trip includes about 40 minutes of travel time and 1.5 hours of tutoring. Transportation is included.

For more info and to RSVP email Elisabeth at egallmei@caltech.edu. Eligible for Federal Work Study.

Mentors for L.I.F.E

Volunteer times: 2:45 - 5:00 PM at various locations in Pasadena

Stressed out by school? Step outside the Caltech bubble and mentor tweens who've yet to even consider college. Things you could do: Build a baking soda and vinegar volcano, read a book aloud, play sports or board games, teach the alphabet of another language, do a craft. Having a mentor makes an at-risk student 55% more likely to attend college, 78% more likely to volunteer regularly, and 130% more likely to hold a leadership position. Interested? If you have 180 seconds, you can watch this video and be inspired. If you have an hour a week, you can mentor someone and be their inspiration. If you feel unqualified, don't worry. Ultimately, mentoring is about being a consistent, dependable friend—not a surrogate parent or psychiatrist. To get started, contact noelle@caltech.edu.

Resistance to Change Will Doom the House System

Continued from page 1

upperclassmen for freshmen to take as mentors breaks this already fragile safety check, since there are fewer upperclassmen to “balance” each other out.

Formal mentorship programming in an all-freshman house could circumvent this problem, and peer advising was one of the projects I worked on as ARC Chair. Even so, Caltech has had chronic struggles with developing formal mentoring and advising programs. The performance of the faculty advising program has been spotty at best, and a top-down attempt at peer advising for the freshman class that matriculated in 2013 was terminated after a single year. Expecting a formal advising network that doesn’t exist to fill the mentoring role that the current ad hoc system fulfills is a risky gambit.

Diversity

By some metrics, an all-freshman house excels at exposing freshmen to students from diverse backgrounds. Living with (almost) all other students in an year gives freshmen the full range of interests and personalities within a class. The houses compartmentalize and sort students into groups that are, while far from homogenous, a fairly small subset of the Caltech community.

However, class diversity will plummet in an all-freshman house. Houses are by far the strongest source of interclass interaction (see Figure 2), and data suggests that all other sources are secondary. In effect, an all-freshman house still separates freshmen, only now by year rather than by house. Class diversity and diversity across other dimensions is critical because it fosters support and mentorship, as discussed earlier. If a metric could be made to measure overall

diversity, an all-freshman house is perhaps a toss-up compared to the House System.

Identity

Ideally, a residential system will allow and encourage freshmen to develop their own identity. College is meant to be a formative period, when students learn what they believe in and what interests them. Because of its nebulous nature, identity is one of the most difficult core values to evaluate all-freshman housing through.

In interviews, several RAs expressed concern that houses stifle individual development of identity. While houses offer students examples of different identities, it’s often a small, or fairly homogenous set of examples. Instead of developing their own identities, freshman may instead develop an identity that matches that of their house.

A counterargument is that houses simply bring out the traits already present in freshmen. There isn’t one “true” identity for each person to find. Rather, personal growth is a meandering path that can go many ways. Removing freshmen from the pressures of the houses may encourage students to develop their own identity, but even in this already speculative exercise, this is an exceptionally fragile conclusion.

Support

A supportive community can develop in two ways: organically or by design. The House System includes both elements. However imperfect and incomplete, the House System offers a supportive community, much of it through unofficial resources. While UCCs and RA provide a critical role in helping students, a large amount of support, probably the majority, comes from students

simply looking out for each other. Not because it’s their job or responsibility, but because students care about each other.

An all-freshman house makes a programmatic support network easier to implement. Instead of having to duplicate informational sessions and panels across 8 houses, programs can be put on once, for the entire freshman class living in Bechtel. The ratio of RAs to students in Bechtel is also more favorable; there are 7 RA apartments in a building for 212 students.

However, even with peer advocates and a sprinkling of upperclassmen living in Bechtel the support network will likely be weaker for freshman. Much of the present safety net comes through unofficial and informal means; removing RAs and the UCC role from houses today would leave the supportive environment mostly intact. Peer advocates and RAs will play an important role in Bechtel, but depending on freshman to support each other often draws comparisons to the blind leading the blind. It’s often more effective to seek comfort from someone who has already gone through a similar experience, something that will be challenging in a majority freshman house. So much of the current safety net depends on informal support from other students, and relying solely on formal programming may leave the safety net in Bechtel dangerously frayed.

Honor Code

The Honor Code is one of the cornerstones of Caltech, and it is an institutional practice passed from one class to another. A commonly repeated concern is that without upperclassmen to teach freshman about the Honor Code, the Honor Code will fragment and be eroded. Like identity, this is a very difficult core value to evaluate, given the scarcity of hard data.

Interviews with past IHC members found opinions on all sides of the spectrum. One former IHC member asserted that, “Being in the Houses is very important for reinforcing the Honor Code to students who haven’t been in a place as “trusting” as Caltech.” At the other end, another past

IHC member largely dismissed how important this role is, stating that “If you don’t have freshmen rotating at the start, you also don’t get the opportunity (potentially) to instill the Honor Code as strongly, but I think it’ll still work. Frosh are pretty into rules, so I think the Honor Code would be fine.” The House System helps educate freshmen about the Honor Code, but how well the Honor Code would fare in an all-freshman house is something that could be argued endlessly without clear resolution.

Choice

A residential life system should allow students to have choices with regards to where they live. By this metric, all-freshman housing performs poorly. Not just freshmen, but perhaps even more worryingly, upperclassmen have their choices curtailed by an all-freshman Bechtel.

The current House System places virtually all freshmen in one of eight houses. Freshmen both have an abundance and a paucity of choices. They have eight houses to choose from, but they are effectively restricted to living in a house. After freshman year, the current system offers a wide variety of choices: Marks/Braun, a house, an off campus alley, the Chesters, and so forth.

In contrast, all-freshman housing gives freshman exactly one choice: Bechtel (with a small probability of Avery). Bechtel is perhaps a generally more palatable choice than what’s currently offered, but it’s still exactly one choice.

However, the situation for upperclassmen is surprisingly grim. The number of options under all-freshman housing is to either live in house, in one of the sixty beds in Marks/Braun, or to take one of a handful of upperclass spaces in Bechtel. Combined, there will be perhaps 90 beds for upperclassmen who do not wish to live in a house.

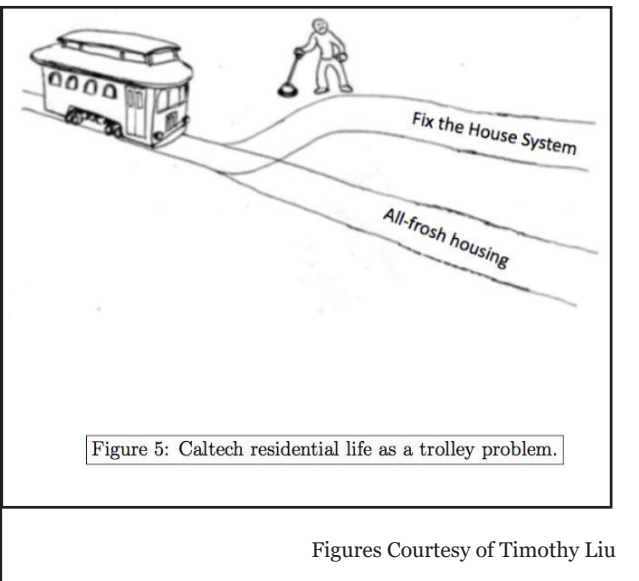
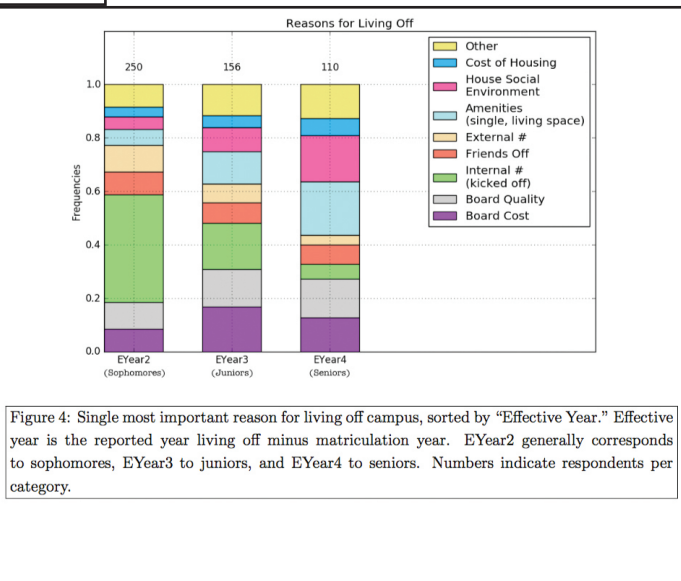
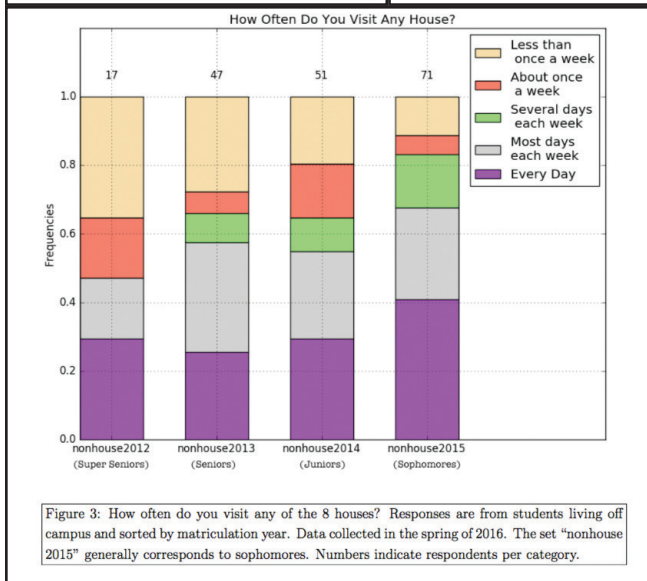
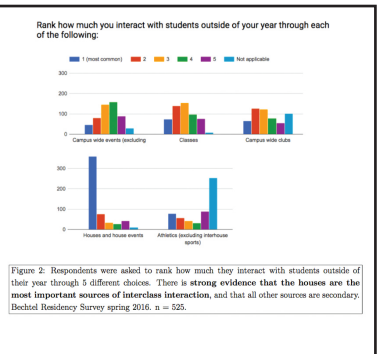
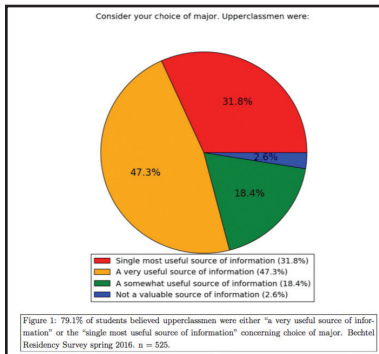
Enthusiasm for the houses shrinks as students progress through Caltech, which makes forcing the bulk of upperclassmen into houses wildly sub-optimal. Seniors living off campus are

less likely to visit any house than sophomores living off (see Figure 3). At least in Avery and Ruddock, the number of upperclassmen participating in rotation falls steeply after sophomore year. In general, seniors are more likely than sophomores to want the flexibility and space that comes with moving out of the houses (see Figure 4). An all-freshman house effectively denies upperclassmen the flexibility they crave. The lack of choice for upperclassmen may be one of the sharpest drawbacks of an all-freshman house.

Rising Tides

An all-freshman house is perhaps the most contentious scheme for filling Bechtel, and is viewed suspiciously as a threat to the House System. Even without the planned opening of Bechtel, the House System is sitting at a crossroads, and its situation is precarious. There are a plethora of drawbacks to the status quo which are becoming increasingly difficult for administrators and faculty to accept. The present system takes an already small community and divides it even smaller. Houses can be insular and relatively isolated from each other. Rotation, a cornerstone of the House System, institutionalizes and normalizes the systematic judgement of an incoming class.

Regardless of what happens with Bechtel in the fall of 2018, calls for all-freshman houses won’t recede. If students are unable to address the challenges the House System faces, then the temptation to create an all-freshman house as an alternative will grow until it reaches a tipping point. There are two choices for students: openly acknowledge and address the problems with the House System, or dig in and be swept aside by the rising waters. Fighting any and all proposed change to the House System will only yield short term Pyrrhic victories. Blindly resisting change is the surest way to doom the current House System. The burden of choice and the responsibility that comes with it largely rests in student hands (see Figure 5). If students wish for the House System to survive in the long run, then we must become its sharpest critic.



Figures Courtesy of Timothy Liu

Procrastination workshop

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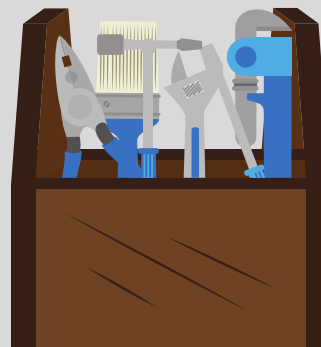
Get better at knowing what you're feeling, and see how your thoughts and feelings affect each other. **October 9th and 16th**

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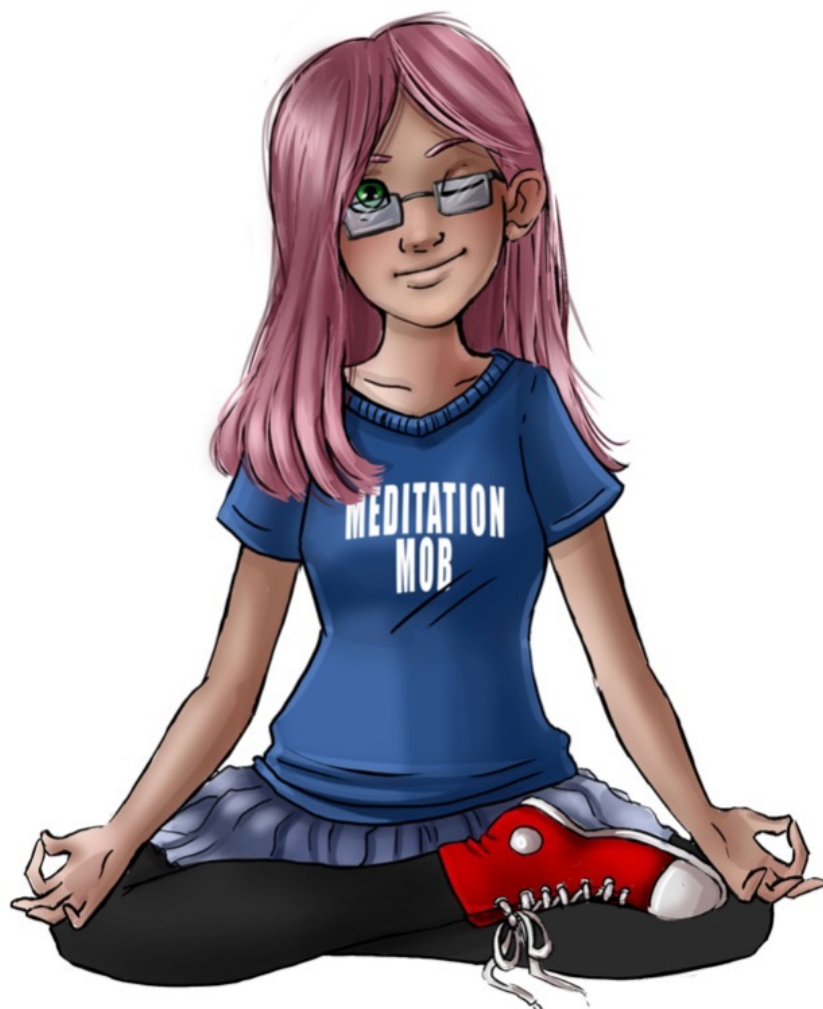
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Mailing list and MP3 archive:
counseling.caltech.edu/students/meditation



Women's Basketball Set to Begin New Era

GOCALTECH.COM
Actual Sports Content Editor

PASADENA (Nov. 15, 2017) – The winds of change are in full effect for the Caltech women's basketball program in the 2017-18 season.

Beavers are returning a dynamic sophomore back-court pair in SCIAAC Newcomer of the Year Grace Peng (San Ramon, Calif. / California) and Samantha D'Costa (San Jose, Calif. / St. Francis). The Beavers leaned on Peng heavily as a freshman, as her 38.8 minutes per game positioned her as the third

so she will be asked to take on a brunt of the responsibility in the paint with the potential to become a scoring force against physically overmatched teams. Haleftiras, meanwhile played the role of one of the Beavers' most efficient shooters and judicious ball handlers last year but an arm injury forced her out of

she will be kind of our 'bench mob leader.' As for Alexa, I love having her. You can feel her energy both vocally and physically and it elevates our team to compete."

Not to be outdone, the Beavers are bringing in a three-woman freshman class, all of which are expected to play key roles in the team's success this year. Kali Drango (Lake Oswego, Ore. / Lake Oswego) can play several different positions and comes to the Beavers as a four-year varsity letterwinner at Lake Oswego High School. Her versatility will make her a key component to Reyes' vision for the program. Lauren Suezaki (San Ramon, Calif. / California) played with Peng at California High School and while shorter than Drango also offers some positional flexibility in addition to some added physicality. Amy Wang (Colorado Springs, Col. / Pine Creek) will provide the Beavers with key depth scoring and can do some damage with her jump shot.

"I really like our freshmen this year," Reyes said. "Kali is a high-basketball IQ kid, works hard and is able to make basketball plays when things break down. She is vocal, doesn't back down and we're lucky to have her. Lauren is tough, physical and vocal and should be able to play any position for us. Amy comes in with not as much experience but gets better every day in practice and works hard in her off time."

Last year's Beavers won four games and took two SCIAAC games from Pomona-Pitzer Colleges in addition to pushing the University of La Verne to quadruple overtime back in January. As much as Lewis' contributions will be missed, she is the still the only graduating loss for the program. Moreover, Caltech will not graduate a single senior this season, which means Reyes will have plenty of time with added benefit of next year's recruiting class to foster a winning culture in this group of women.

The team's combination of size, leadership, skill, athleticism and growing mental toughness and competitiveness should go a long way towards winning games in the short term and long term. Reyes believes the desire to win is inside each of them and that it is her job to bring it out of them on gameday.

"The positive of getting to work with this exact group for two years is they are going to know exactly what I want and how I want it done," Reyes said. "I do think we have a good foundation of leaders both in upperclassmen and underclassmen and I just think if we can be consistent and compete every day we can give ourselves a chance in every game we play. That's the ultimate goal. We want to take our opponent into the last five minutes of the fourth quarter and give ourselves the best chance to win.

"That's why we play the game. We don't play the game to show up on the court. We play to compete."



The winds of change seem to be present in this photo as well

-gocaltech.com

For a second consecutive year, the Beavers will be down a leading scorer. Kate Lewis '17 departs the program as the second all-time leading scorer with 1,245 career points and second leading rebounder with 768 rebounds over a four-year career. The prior year saw the departure of Stephanie Wong '16, the program's all-time leading scorer. While Lewis chasing Wong's scoring record in 2016-17 made for a compelling storyline, a new narrative unfolds for the women's team in 2017-18, a year that will bring new leadership on and off the court.

Bridgette Reyes became the Beavers' new women's basketball head coach on May 12, 2017 and has since established herself as a no-nonsense basketball mind. A Vanguard University graduate, Reyes places great emphasis on defense, strong character and fundamentals but above all else believes in the talent and individuals she is getting the opportunity to work with.

"This group is a special group," Reyes said. "They have a lot of potential and I think that we are not going to be the same as we were. We want to build on the foundation laid in the previous years and give ourselves a chance to compete with every other team in the league on a wide scale.

"We have what it takes. These kids are the most intelligent kids in the country but they're also really skilled athletically. They can have both. This group has the potential to be all it can be and it is our job as coaches to get them to where they can do both and compete every day."

The cupboard is far from bare for Reyes and Assistant Coach Reyes Zaragoza. The

most active player in the entire NCAA while playing every minute in every SCIAAC game, the only player in the conference to do so. The point guard's 14.6 points per game and 2.0 steals per game also accounted for top-five conference finishes. D'Costa played a similar role, seeing 36.8 minutes per game as more of a slashing combo guard. She tied for fourth in the conference with 2.9 free throws per game and found a way to contribute to the Beavers in nearly every statistical category.

The next step for the duo will be allowing their play to influence the team around them and Reyes is eager for the chance to make good on their potential.

"Sam and Grace have to take a step up in their performance," Reyes said. "They had great freshman years but it's not just about them and it's not just about points. It's about how are we elevating everyone else around us and how are we becoming better leaders and better teammates. I think Grace particularly has only gotten better vocally and emotionally for our team. People don't expect it out of her because she is more of a quiet type but she is speaking more in practice and that is super exciting."

Juniors Elizabeth Eiden (White Plains, N.Y. / Holy Child) and Nika Haleftiras (San Diego, Calif. / Our Lady of Peace) will also be asked to take on more of a leadership role as the team's two oldest players. The 6-foot-3 Eiden primarily came off the bench to begin the year but slowly began to earn more starts and had no trouble making her presence felt even when serving a limited role. She led the SCIAAC with 2.6 blocks per game and tied for third with 7.9 rebounds per game. The junior will not find an equal in the SCIAAC to her size

the team's final 10 games. The guard will continue to look for high-percentage shots and hopefully get to the free throw line early and often, as she led the team in free throw percentage as a sophomore (.769%).

"Nika and Liz and are like our team moms and awesome leaders already," Reyes said. "I also think they have a lot of potential as players. I think they have skill and desire and I really have to push them not only so they realize their potential but bring the competitiveness out of them so they can reach a new level."

The Beavers will also need production out of the rest of the returners, junior Madeline Schemel (Westport, Conn. / Staples), sophomore Alexa Lauinger (Ortonville, Mich. / Brandon) and junior Madelyn Stroder (Springfield, Mo. / Greenwood Laboratory). At 6-foot, Schemel played a role in a Beavers front court that also featured two six-footers. With Lewis gone, Schemel will be asked to work in tandem with Eiden to make up for Lewis' numbers beneath the glass. Similarly, Lauinger will be asked to handle a similar role. A three-sport athlete and current holder of the Caltech single-season kills record in volleyball, Lauinger's strength down low and competitive spirit should continue to pay off in spades. Stroder, a two-sport athlete who participated in the women's soccer team's inaugural season brings with her a similar team-oriented mindset.

"If [Schemel] comes to compete every day we are going to be a great basketball team," Reyes said. She has the potential to get double-doubles and do the little things. It's just up to her to step up into that role. Stroder works hard every day, wants to learn and is very coachable and

NOMINATE YOUR FAVORITE PROFESSOR FOR THE FEYNMAN TEACHING PRIZE!!!

Here's your chance to nominate your favorite professor for the 2017-18 Richard P. Feynman Prize for Excellence in Teaching! You have from now until December 15, 2017 to submit your nomination package to the Provost's Office to honor a professor who demonstrates, in the broadest sense, unusual ability, creativity, and innovation in undergraduate and graduate classroom or laboratory teaching.

The Feynman Prize is made possible through the generosity of Ione and Robert E. Paradise, with additional contributions from an anonymous local couple. Nominations for the Feynman Teaching Prize are welcome from faculty, students, postdoctoral scholars, staff, and alumni.

All professorial faculty of the Institute are eligible. The prize consists of a cash award of \$3,500, matched by an equivalent raise in the annual salary of the awardee. A letter of nomination and detailed supporting material, including, but not limited to, a curriculum vitae, course syllabus or description, and supporting recommendation letters should be emailed to kkerbs@caltech.edu or directed to the Feynman Prize Selection Committee, Office of the Provost, Mail Code 206-31, at the California Institute of Technology, Pasadena, California, 91125. Nomination packages are due by December 15, 2017.

Additional information including guidelines for the prize and FAQ may be found at <http://provost.caltech.edu/FeynmanTeachingPrize>. Further information can also be obtained from Karen Kerbs (626-395-6039; kkerbs@caltech.edu) in the Provost's Office.

VICE PROVOST OFFICE HOURS

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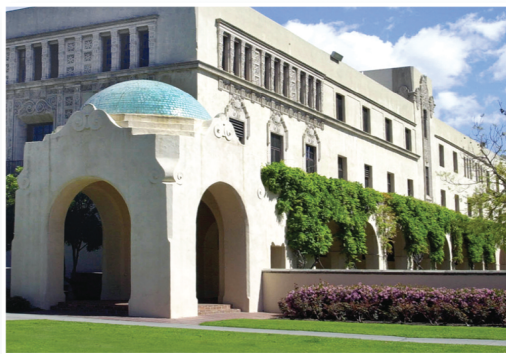
THERE ARE FOUR 15-MINUTE APPOINTMENTS AVAILABLE PER OFFICE HOUR. SIGN UP IN THE OFFICE OF THE VICE PROVOST, PARSONS-GATES ROOM 104, EXT. 6339 OR BY SENDING AN EMAIL TO DLEWIS@CALTECH.EDU. WE LOOK FORWARD TO HEARING FROM YOU!

STUDENT OFFICE HOURS FOR FALL TERM 2017:

11/21/17 TUESDAY 10:00-11:00 A.M.

11/27/17 MONDAY 10:00-11:00 A.M.

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ASCIT Minutes

Meetings are every week in SAC 13

ASCIT Board of Directors Meeting

Minutes for November 17, 2017. Taken by Alice Zhai.

Officers Present: Sakthi Vetrivel, Rachael Morton, Sara Adams, Sarah Crucilla, Alice Zhai

Guests: Robert Eng, Joshua Chen

Call to Order: 10:06 am

President's Report (Sakthi):

- Had VPSA meeting last Friday
- Midnight Donuts is next Tuesday
- Had budget meeting with Big T treasurer and Sarah Crucilla to discuss funding for Yearbook and increasing student dues
- Considering to assemble an ASCIT Financial Committee to look over our budget. Signups will be posted soon

Officer's Reports:

V.P. of Academic Affairs (Kavya):

- Drop day and registration happened yesterday.
- Git software Seminar went well on Thursday
- Arc retreat is this weekend
- Student Faculty Lunches are on 11/27 and 11/28, signups close 11/19 at 11:59pm

V.P. of Non-Academic Affairs (Rachael):

- Bechtel town hall meeting was last Tuesday. Attendance was about 70, including a decent amount of faculty.
- Notes from the meeting will be distributed.

Director of Operations (Sara):

- Page asked for ASCIT lights for their Interhouse.
- Many clubs have filed their club registration. Waiting for Club Steering Committee to vote on them

Treasurer (Sarah):

- Budget meeting went well
- Having difficulty working with administration on reporting expenses and filing reimbursements

Social Director (Alice):

- Signed contract for holding ASCIT Formal at City Club Los Angeles on Saturday, April 7th from 7-11PM.
- Alternate event for Page Interhouse is happening at Tom's house. Will be asking for volunteers to help set up.
- Planning an ice skating event at the Pasadena Ice Skating Center at the end of the term.

Secretary (Dana):

- Not in attendance.

If anyone has any questions or concerns about a section of the minutes please email the appropriate officer. We are happy to answer any questions.

Meeting Adjourned: 10:26 am



Totem Caltech's Literary and Visual Art Magazine

HAIKU AND PHOTO CONTEST

DEADLINE: JANUARY 5 • 11PM

This is a pair challenge! We'll still consider submissions from individuals, but we highly encourage you to find a friend to submit a haiku and photo together. Photos must be taken during the period between contest announcement and deadline.

Prizes: \$25 Amazon gift card per person for the winning haiku + photo submission.

Send submissions to totem@caltech.edu. For more info about Totem, please visit our FB page or totem.caltech.edu.



Crossword

Across

- Friends and acquaintances
- Male title
- Desert haven
- Notion
- Quote
- Written form of musical composition
- Block
- Tournament for professionals and amateurs
- Fruit of the gourd family
- Soap opera
- Short note
- Conclusion
- Jog
- Fuel
- Relating to bears
- Descriptive word or phrase
- Large Australian bird
- University administrator
- Leather with a napped surface
- Skilled and qualified to do things well
- South American cud-chewing animal
- Jokes
- Dairy product
- Yawn

- Examine carefully
 - Kind of hawk
 - Card suit
 - Large body of water
 - Tubing
 - Not in use
 - Slender
 - Slanting typeface
 - Form of defense
 - Indication
 - Travel by horse
 - Relating to the kidneys
 - Give off
 - Trampled
 - Marsh plant
 - Lair
 - Showing vigorous good health
- Down**
- Osculation
 - Not in active use
 - Laceration
 - Customs
 - Small drink
 - Detail
 - Fail to fulfill an obligation
 - Kind of diffusion
 - Hot shot
 - Part of the foot
 - Golf club
 - Transmit
 - Military rank
 - Desiccated

- Chart
- Type of duck
- Shadow
- Measuring stick
- Small powerful boat
- Throw with great effort
- Borders
- Trial
- Apiece
- Old horse
- Sense organ
- Mixture of ground animal feeds
- Assign a duty
- Projectile
- Direction
- Fish
- Elevated
- Paucity
- Paddles
- Run away
- Discover
- Act without words
- Former Italian currency
- Object of worship
- Surrender
- Container
- Liquor flavored with juniper berries

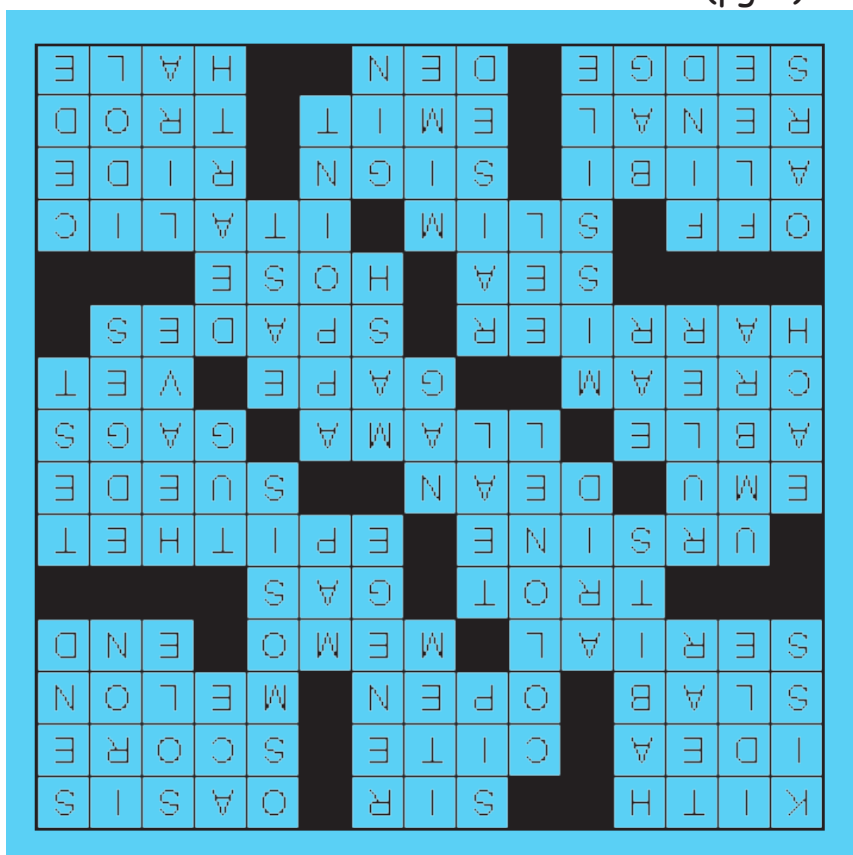
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POKEMON LEAGUE

BY DAVID GINOLA

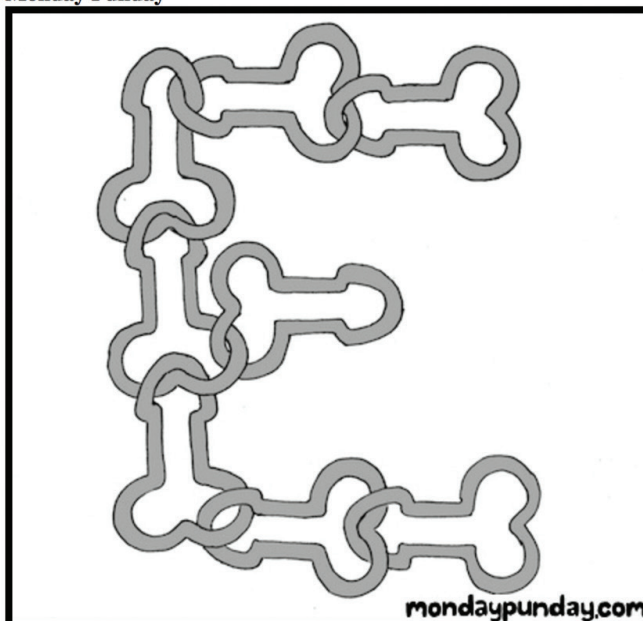


Answers to current crossword (pg 7)



-<http://puzzlechoice.com>

Monday Punday



This picture represents a common phrase, title, or person.

Think you know the answer? Take a guess at mondaypunday.com/336

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