

The California Tech



tech@caltech.edu

VOLUME CXVI NUMBER 3

PASADENA, CALIFORNIA

TECH.CALTECH.EDU

OCTOBER 15, 2012

Prof. emeritus Marble honored with Chair

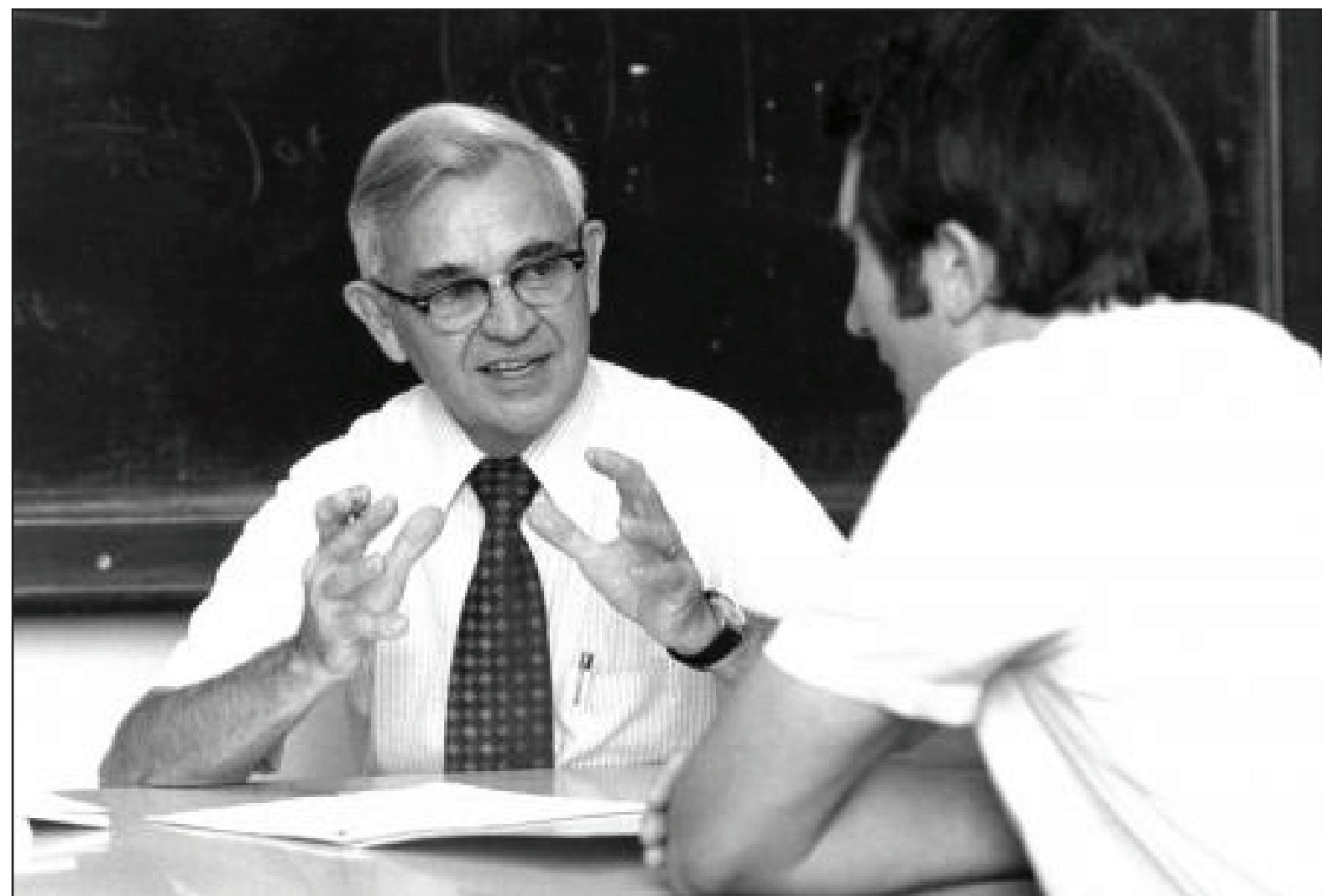
SHAYNA CHABNER MCKINNEY
Caltech Science Writer

Gifted teacher. Inspired researcher. Knowledgeable adviser. Personal friend. These are a few of the ways in which professor emeritus Frank Marble's former students describe him.

Not too surprisingly, these sentiments also capture some of the many reasons why 20 of Marble's former PhD and graduate student advisees have joined together to honor and thank their mentor by creating an endowed professorship in his and his wife's names. They have also seeded the initial funds for a graduate fellowship in the Marbles' honor.

The Frank and Ora Lee Marble Endowed Professorship will benefit a faculty member in the Division of Engineering and Applied Science. The \$3 million professorship was made possible with a lead gift from alumnus Laurence B. Zung (MS '63, PhD '67) and his wife, Coralie, as well as accompanying gifts from other Marble advisees, and a \$1 million match from the Gordon and Betty Moore Matching Program. Another \$177,000 has also been collectively pledged to begin the establishment of what will be the Frank and Ora Lee Marble Graduate Fellowship.

"I wanted to do something so that the Marbles could both witness our appreciation and participate in it," says Zung. "The things I learned from him have benefited me throughout my life and my career."



Professor Emeritus Frank Marble works one-on-one with a student. More than a dozen of Marble's former students thanked the professor for his exceptional teaching and mentoring with a gift to Caltech in his honor.

-Caltech Archives

He trained me to learn how to learn and to learn how to think."

Marble, the Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering and Professor of Jet Propulsion, Emeritus, advised more than three dozen PhD students during his tenure of more than 40 years at Caltech (from 1948 to 1989), all the while making major fundamental, theoretical,

and experimental contributions to the fields of internal aerodynamics, combustion, and propulsion—especially with respect to gas turbines and rockets. Marble is a member of both the National Academy of Engineering and the National Academy of Science, and a recipient of the Daniel Guggenheim Medal.

"It was a privilege to learn from Dr. Marble," says Ann Karagozian (MS '79, PhD '82), who helped initiate the campaign for a graduate

fellowship in Marble's honor. "He always gave me excellent advice, whether it was on research or career choices or embarking in new directions."

With his wife, Ora Lee, Marble also helped create a "home away from home" for many of his students. The couple regularly invited Caltech students into their house for dinners and special gatherings at which they could mingle with one another as well as with professors.

"By their example, the Marbles gave us a lasting lesson on how to live a fulfilling life," says Gerald "Jerry" Marxman (PhD '62). "I hope this gift will serve as a permanent symbol of the Marbles' wonderful impact on so many others' lives, and as a reminder of the gratitude felt by all those graduate students who have benefited so much from knowing them."

Continued on page 3

In this issue

NEWS

Bits and pieces of Caltech news

3

OPINION

A primer on the importance of laundry

4

FEATURE

Amol visits the Eyeore Awards

5

SPORTS

Midnight Madness hits its third year at Caltech

7

News briefs from around the globe

Helping readers burst out of the Caltech bubble

Need to know

< **100** words about the world this week – topics sorted from good to bad

by *The Tech Eds*

Colleges start voter regis **60** colleges, at least, have sponsored programs to make voting easier [\[NYT\]](#)

Skydiver breaks Mach 1 **24** - mile jump by Austrian man is also highest freefall from balloon [\[BBC\]](#)

Libya elects new PM **1** week after predecessor removed, Ali Zidan voted in as interim PM [\[WP\]](#)

Turkey bans Syrian jets **4** days after intercepting Syrian plane with munitions, closes air [\[BBC\]](#)

Mauritania Pres. shot **2** soldiers detained for questioning, reported as accidental shooting [\[NYT\]](#)

Sen. Arlen Specter dies **82** -year-old U.S. senator represented Pennsylvania for 30 years [\[CNN\]](#)

Former Raider charged **3** slayings point towards Anthony Wayne Smith, drafted in 1990 [\[LA Times\]](#)

Food with Mannion!

*Do you like eating food?
How about free food at nice restaurants?
Ever want to tell the world exactly what you think of said food?
The Tech will be beginning a new column to chronicle the foodie experiences of new writers every other week... The Catch: They'll be going head-to-head with Tom Mannion who will be reviewing the same restaurant. If you have ever thought you were more of a gourmand than our resident master chef, now's your chance to prove it!
Email us for a spot on the list at tech@caltech.edu*

The California Tech

Caltech 40-58, Pasadena, CA 91125
advertising e-mail: business@caltech.edu
editorial e-mail: tech@caltech.edu

*Editors-in-Chief
Jonathan Schor
Stanford Schor*

*News Editor
Sandhya Chandrasekaran*

*Sports Editor
Amol Kamat*

*Staff
Nina Budaeva
Casey Handmer
Yang Hu
Jonathan Ikpeazu
Rebecca Lawler
Mary Nguyen
Eugene Vinitsky
Caroline Yu
Chris Zheng*

*Circulation Manager
Michael Paluchniak
Advisor
Richard Kipling*

The Tech is published weekly except during vacation and examination periods by the Associated Students of the California Institute of Technology, Inc. The opinions expressed herein are strictly those of the authors and advertisers.

Letters and submissions are welcome; e-mail submissions to tech@caltech.edu as plain-text attachments, including the author's name, by Friday of the week before publication. The Tech does accept anonymous contributions under special circumstances. The editors reserve the right to edit and abridge all submissions for any reason. All written work remains property of its author.

The advertising deadline is 5 PM Friday; 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 business@caltech.edu. For subscription information, please send mail to "Subscriptions."

Write articles for the Tech

get paid up to \$30

ASCIT Minutes

Minutes for October 11th, 2012. Taken by Allika Walvekar

Officers present: Diego Caporale, Pushpa Neppala, Mario Zubia, Michelle Tang, Puikei Cheng, Allika Walvekar

Officers Absent: Christian Rivas

Call to Order: 8:38

President's Report (Diego): Freshman filled out a survey on their Frosh Camp and Rotation experience. New programs and future changes will be assessed based on their feedback. We need to start looking at changes need to be made for the year. Diego wants to remind everyone that ASCIT meetings are open to the public, this term they are at 8:30PM in SAC 15. Also, that an agenda will start to be added to the Minutes in Tech when specific topics will be brought up at the end of a meeting.

Officer's Reports:

Secretary (Allika): Updated some of the older minutes on Donut. Will be updating the Olive Walk Board and setting up an ASCIT Screening Room Reservation system on Donut

Social Director (Michelle): Events coming up for the term include Midnight Madness (10/14), Fall Harvest, Dabney Drag Show (10/26), Page Interhouse, Fleming Frosh Party, Pumpkin Drop (10/31), Olive Harvest (11/9), Big I (11/17), Ricketts End of Term Party. Pairings for Big I are Ruddock-Fleming, Blacker-Avery, Dabney-Page, Ricketts-Lloyd. Michelle informed all the houses that they should elect a Big I rep who will be meeting with her periodically.

Treasurer (Puikei): Big T was under budget so ASCIT will be donating the extra money to ensure that yearbooks are printed on time. ASCIT will be proposing a raise in dues to accommodate the deficit for future years. The Moon Festival's funding request was granted.

Director of Operations (Mario): MHF application for club lockers was granted and they have been set up in SAC9. The storage is available for ASCIT & Caltech registered clubs. Club funding will be tentatively on 10/21/2012.

V.P. of Academic Affairs (ARC Chair: Pushpa): SFL will be held on 10/17. Pushpa is planning for the SFC (on 2/14/2013) which will consist of option meetings and panels for undergraduate research and the Honor Code.

ASCIT bylaws dictate that SFC must be held in April, so Diego and Pushpa will talk to the RevComm to resolve the issue.

ASCIT will make an amendment for the future. An Honor Code survey will be sent out in January, and results will be discussed during SFC. The ARC will elect Frosh Reps in 2-3 weeks.

Meeting Adjourned: 9:48

In case you missed it: Caltech newsflashes

Caltech ranked #1 in world, 2nd time

Mazmanian gets MacArthur

MORIAH BISCHANN
Contributing Writer

The Times Higher Education, a publication of the United Kingdom, released its rankings for the 2012-2013 school year.

“

While Caltech received a stunningly high score of 99.9/100 in the ‘citations’ section, it was severely lacking in ‘international outlook’ with a score of 56/100.

For the second year in a row The California Institute of Technology has been rated as the number one university in the world.

Harvard has dropped two places to number four, replaced by Stanford and the University of Oxford, both of which tied for second place. The Massachusetts

Institute of Technology landed in fifth place, up from seventh in the prior years.

Schools across the world were ranked on five of criteria: teaching and learning environment (30%); number of research papers

In the ranking of universities by subject, Caltech still retains its spot as the number one school for engineering and technology, a position that it has held for the past three years.

Caltech’s ranking this year did not come as a surprise to many students on campus, who cited the “low student to faculty ratio,” “quality research,” and the fact that Caltech attracts students that are already interested in scientific investigation.

While some students see high rankings as valuable and view them as a “point of pride,” others hold that ratings are irrelevant and biased at times due to differing methodologies.

Overall the rankings by the Times Higher Education helped boost Caltech’s international image as a world-class institute for research and education.

”

produced and research reputation (30%); citations made by other papers (30%); student’s and staff’s international outlook (7.5%); and industry innovation (2.5%). While Caltech received a stunningly high score of 99.9/100 in the “citations” section, it was severely lacking in “international outlook” with a score of 56/100.

MORIAH BISCHANN
Contributing Writer

Sarkis Mazmanian, professor of biology at Caltech, recently



-caltech.edu

Judges look for creativity, a track record of success, and the ability to kindle creativity in others when choosing fellows. Winners of this “genius” grant receive \$500,000 in unrestricted funding to spend on self-directed studies of their choosing.

Mazmanian’s research focuses on how microbial bacteria interact symbiotically with their host.

Specifically, Mazmanian is interested in how these bacteria increase the immune system’s capacity to recognize pathogens, thereby making the human body more resilient to certain ailments.

He hopes that this research will contribute to the development of alternative treatments for an even wider class of diseases.

Alums thank Prof. Marble with endowment

Continued from page 1

Marble initially came to Caltech as a student himself—earning an engineer’s degree in 1947 and a PhD in 1948 under the advisement of Theodore von Kármán. He credits much of his teaching and mentoring style—in which he encouraged students to pursue their passions, wherever they led them—to the lessons he learned from his own mentor.

“

For the family, this is a humbling experience, without a doubt. It’s a very sweet validation of what my father spent so much of his life doing. The idea that his former colleagues and friends would do something of this sort to honor him.... underscores the importance of a teacher who gets such pleasure from stirring the passions of his students.

- Steve Marble

“I will never forget what my students and friends have done,” says Marble, who considers all his doctoral students to be his “academic children.” “This is about

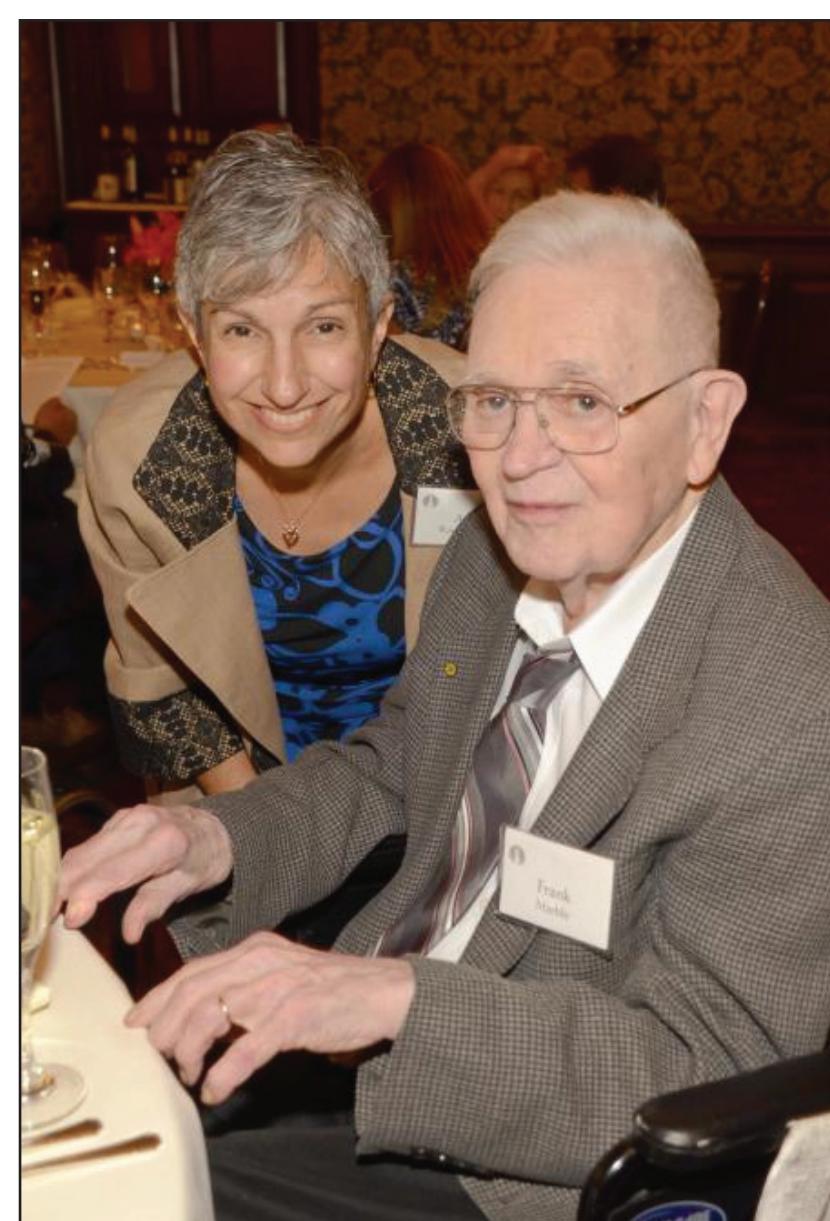
as impressive an act as I can think of. It allows the administration a significant hand in choosing faculty members who represent new fields of research and new fields of teaching.”

Ares Rosakis, chair of the Division of Engineering and Applied Science (EAS) at Caltech says, “Inspirational teachers and researchers like Frank Marble and his adviser Theodore von Kármán create new schools of thought which

Caltech maintain their number one position in the recently announced world university rankings.”

Several of Marble’s former colleagues, students, and their families gathered at Caltech in September to celebrate the Marbles’ enduring contributions and the establishment of the professorial chair. Both the chair and the eventual fellowship will be awarded to individuals with interests in aerospace and mechanical engineering, the fields in which Marble made his greatest scientific and engineering contributions.

“For the family, this is a humbling experience, without a doubt,” says Marble’s son, Steve Marble. “It’s a very sweet validation of what my father spent so much of his life doing. The idea that his former colleagues and friends would do something of this sort to honor him, especially in his lifetime, is profoundly meaningful for him . . . and it underscores the importance of a teacher who gets such pleasure from stirring the passions of his students.”



Alum Ann Karagozian reconnects with her mentor Frank Marble at a recent event held to celebrate the gift given in his and his wife’s name.

- Bob Paz

Caltech Couture: Perfecting the art of laundry

NINA BUDAEVA
Staff Writer

You've graduated from high school, you've flown through your pre-college summer, and you've probably already had the thought that you're more or less all grown up now. Well, even though you've already had your first Caltech

I open a washer and remove someone else's wet laundry, seemingly rainbow-colored due to all the different colors washed in one load.

After washing, I open a dryer and a pile of already-cold clothing falls out. I put the pile of wrinkled jeans, spandex, and bras on top of the dryer in order to put my own



lectures and you've vehemently defended your private life from Mom's innocent questions, you have yet to pass the one test that is the first of a long series of true adulthood trials.

Just by walking into the laundry rooms, I can tell that the childhood-graduation rate doesn't even compare to the four-year graduation rate here.

The laundry rooms are packed with containers upon containers of detergents, some with lavender smell, some with softener, some in powder form, some in liquid form, but all very unorganized.

I start the trek over to the storage shelves.

On the way, I pass dozens of sticky detergent bottles and note that there are considerably less softener bottles, and practically no bleach bottles!

“

Just by walking into the laundry rooms, I can tell that the childhood-graduation rate doesn't even compare to the four-year graduation rate here.

I'm at Caltech). I had done some occasional ironing, and when I was very little I would wash my dolls' dresses in the bathroom sink using hand soap, much to the amusement of my father.

However, this experience is not sufficient to survive as an independent college student, and I quickly discovered that I had much to learn at Caltech—besides the science of s- and p-orbitals.

Even after three years, I still cannot say that I would pass the laundry exam.

Occasionally I get stumped by less-than-perfect sweat stain

removal and I am not the most virtuosic ironer with my mini dorm-sized iron and ironing board. When things get really bad, I take the pieces with me when I go home and my mother works her magic.

I make an effort to keep my clothing in good condition which is why the laundry room is so disappointing. I do not think it is my responsibility to teach everyone here that it is bad to mix dark and light colors in the wash, that stretchy fabrics (such as spandex) should be washed and dried (if dried at all) at cold temperatures, that re-drying wrinkled clothing

is not a substitute for ironing, that bleach (color-safe!) should be used with every load to keep colors bright, and that failing to remove lint from the dryers' filters can cause fires.

If someone doesn't know such things, I think the best solution is for these people to swallow their pride, get their phones out, and call their miracle-working mothers and fathers (depending on how the division of labor goes down in your family).

On this note, I must conclude as I need to run off and do my laundry.



As a leading developer of human interface solutions which enhance the user experience, Synaptics provides the broadest touch solutions portfolio in the industry. We're looking for bright and passionate people to drive the next generation of human-computer interaction.

WHY Synaptics?

- Named to Bay Area News Group's Top Workplaces for 2012
- Named to Deloitte's 2011 Technology Fast 500™ List
- Named as One of Forbes' Top 20 Small Public Companies
- A technology leader with 300+ patents supporting over 1 billion units shipped

View our open positions at jobs.synaptics.com

Join your fellow alumni at Synaptics!



“

At home, I had never done my own laundry, since it was assumed that I would rather study...I had done some occasional ironing, and when I was very little I would wash my dolls' dresses in the bathroom sink using hand soap...

”

The Tech attends the Eyegore Awards

AMOL KAMAT

Sports Editor

On Friday, September 21st, The Tech attended the opening night of Universal Studio's Halloween Horror Nights and the Eyegore Awards in Hollywood. The Eyegore Awards, an annual awards show held inside Universal Studio's theme park, honors a group of celebrities for their achievements in horror films. The event was attended by a fairly random assortment of celebrities and media outlets, from Katie Featherston of Paranormal Activity fame to Trey Thompkins of the Los Angeles Clippers (he told

us he was there because he really likes horror movies) to Wilmer Valderrama from That 70's Show. We also met Corbin Bernsen, but he didn't really have much to say.

McKenzie Westmore, host of SyFy's Faceoff, hosted the award show. He began by recognizing several actors for their roles in horror films. Chad Michael Murray was recognized for his work in House of Wax and The Haunting in Georgia. Angelica Maria and Angelica Vale, a mother-daughter team, were awarded for "Mujeres Asesinas 2." The cast of NBC's Grimm, represented by Silas Weir Mitchell and Bitsie Tulloch, also accepted an Eyegore. In the main

event, Alice Cooper, who has his own maze in this year's Horror Nights, presented an award to director Guillermo Del Toro. We were also treated to a sneak peak of Del Toro's new film, Mama, which was pretty damn scary. Said Del Toro of his Eyegore Award (basically a dancing gargoyle), "This is certainly the cutest goddamn trophy I've ever gotten. He doesn't need a sword to hide his genitals... So, enjoy the night, don't get too drunk, and don't kick the monsters or the zombies."

Following the awards, we were let into the park to experience the opening of Halloween Horror Nights. We were chased by clowns

with chainsaws (I absolutely hate clowns), Mexican ghosts (I'm okay with Mexican ghosts), and

drunk USC frat boys (not part of the program). We also rode the Terror Tram, inspired by



Left: A creepy lady dressed as a Mexican ghost looking for her children strikes a pose on the red carpet. Since the event coincided with the opening night of Universal Studio's Halloween Horror Nights, many classic horror icons were in attendance at the awards show.

Right: Katie Featherston, "Katie" in the film Paranormal Activity, was among the numerous horror film stars in attendance at the Eyegore Awards.

Below: Guillermo del Toro accepts an Eyegore Award as Alice Cooper looks on.

-Blaine Matulevich



AMC's The Walking Dead, which basically converts the normal Universal Studios tour into a zombie apocalypse. We even walked through Alice Cooper's maze, Alice Cooper Goes to Hell, which was...let's say strange. All in all, it was a great time and a uniquely SoCal way to celebrate Halloween. Halloween Horror Nights runs select nights now through October 31. Visit <http://www.halloweenhorrorights.com/hollywood/2012/> for more information.

Nominate your favorite professor for the Feynman Teaching Prize!

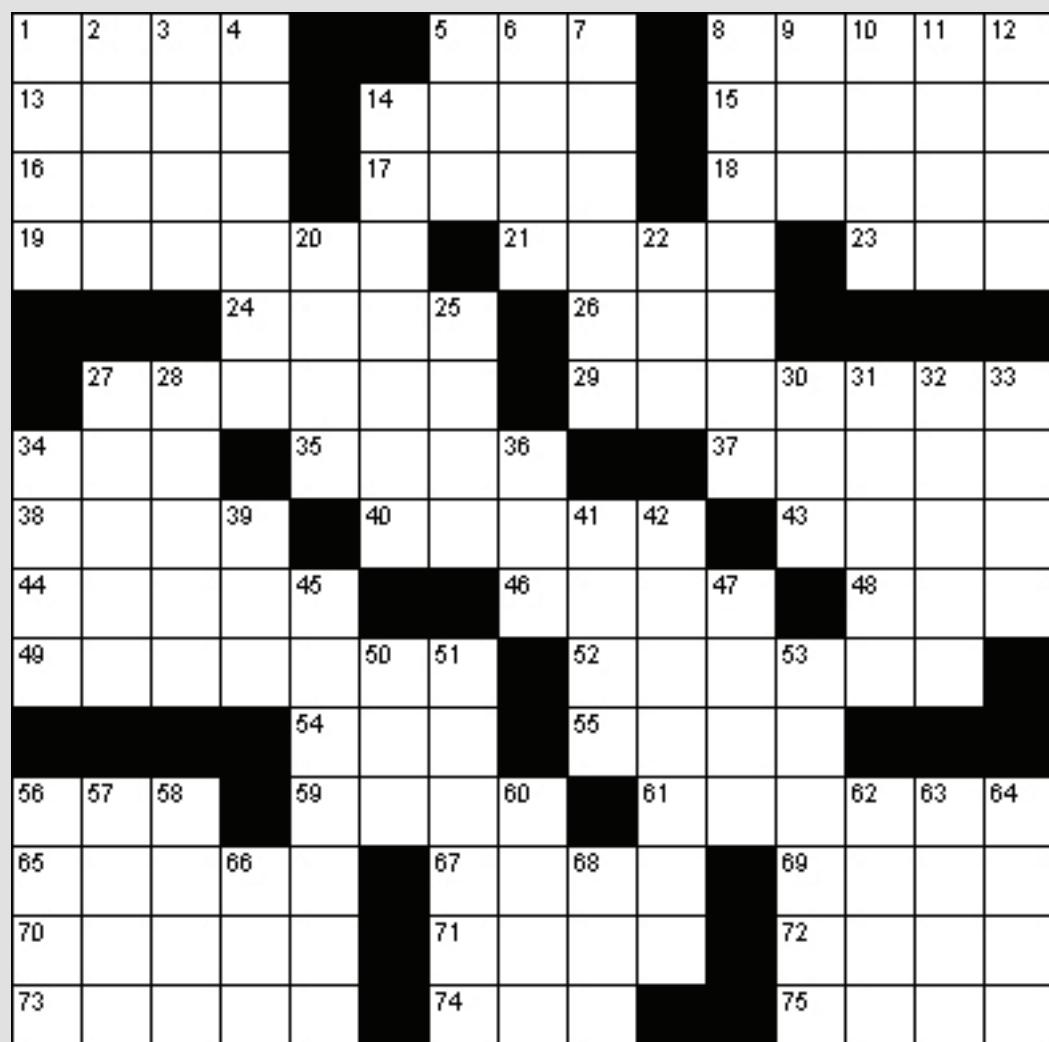
Here's your chance to nominate your favorite professor for the 2012-13 Richard P. Feynman Prize for Excellence in Teaching! You have from now until January 2, 2013 to submit your nomination package to the Provost's Office to honor a professor who demonstrates, in the broadest sense, unusual ability, 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, post-doctoral 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 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 January 2, 2013.

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

Today's Puzzle: Crossword



[<http://www.puzzlechoice.com/>]

Across

1. Manufactured
5. Fairy
8. Prickle
13. Wild goat
14. Ellipse
15. Scoundrel
16. Chair
17. Currency of Mexico
18. Spooky
19. Flashing light
21. Moved through water
23. Finish
24. Boxing platform
26. Self
27. Type of balloon
29. Associated
30. Clip
31. Male offspring
32. Musical drama
33. Group of three
34. Legendary creature
35. Drawn tight
36. Worship
37. Small lake
38. Health spring
39. First book of the Old
40. Testament
41. Talisman
42. Haul
43. Proceeds
44. Part of a circle
59. A single undivided whole
61. Detection device
65. Stringed instrument
67. Strikes lightly
69. Donate
70. Church officer
71. Hint
72. Woody plant
73. Poised for action
74. Female bird
75. Group of animals

Down

1. Failure to hit
2. Assist or encourage
3. Expensive
4. Obtain by intimidation
5. The night before
6. Young girl
7. Bloom
8. Vibrato
9. Garden tool
10. Fiend
11. Spoil
12. Requirement
14. Aperture
20. Prejudice
22. Historic period
25. Smile
27. Swarm
28. Vegetable

The Tech encourages all students to vote in the coming election. Plan ahead if you need to register for an absentee ballot, and be sure to check the deadlines for your individual states. Remember, it's not about whom you vote for, but rather that you fulfill your civic duty!

Caltech soccer loses a heartbreaker in overtime against California Lutheran

AMOL KAMAT
Sports Editor

On Saturday, the Caltech soccer team took on the Cal Lu Kingsmen at home. Fresh off a close loss to La Verne, the Beavers came out swinging, with freshman Alec Sands scoring on Cal Lu goalie Rey Rivera-Ramos, who has quite the name. From now on, he shall be referred to as Triple-R. Neither team scored for the remaining of the half, marking a rare first-half shut out by the Beavers defense.

Cal Lu finally scored in the 54th minute when Salvatore Baldi (pronounced baldy) slipped one past Caltech's Wesley Swank, who returned this week from a shoulder injury. The Beavers, in a valiant effort to get a game winner, employed what has been dubbed "the hail mary" play in which our midfielders kicked through balls in the air to our forwards in an effort to catch Triple-R by surprise. This almost worked several times, driving the away team moms crazy, but failing to cause a goal. There were actually several almost goals throughout the game, a couple

from Kunmi Jeje, a couple from Mitchel Arene, one particularly interesting "cross/shot" from Alan Menezes that almost fooled Triple-R. Jeje had an opportunity in the 78th minute when Triple-R went to ground and Jeje tried to chip him, but it didn't go so well.

The game went to overtime, and both sides had opportunities to end it with a golden goal, but ultimately, Cal Lu was successful. Despite the loss, Caltech played a great game and, in my completely unbiased opinion, deserved to win. They outplayed Cal Lu, and really were just unlucky. Captain Nicky Zhang disagreed, saying, "It was baaaaaaaaaad."

I can say with some certainty that our fans were much classier than theirs (it's the really ridiculously small victories). Really, it was just one woman who insisted on yelling the entire game. The range of topics: tissues, a call to 911, and bananas. Actually, bananas and 911 were in the same rant. Nicky Zhang had just cramped or something, and she yelled: "Somebody call 911, he forgot to eat his bananas!" Just thought I'd share.

Midnight Madness Rankings

Tied for 4th and 5th: Blacker and Page,
40% attendance
(each get \$500)

Tied for 3rd: Ruddock and Lloyd
70% attendance
(each get \$1000)

2nd: Ricketts
84% attendance
\$1000 and 100 movie tickets

1st: Fleming
95% attendance
\$2000



Alec Sands had the best game of his freshman career on Saturday when he scored Caltech's only goal against Cal Lu. Take notes, Kunmi.

-gocaltech.com



Caltech volleyball lost 3-0 to Pomona-Pitzer.

-gocaltech.com

Weekly Scoreboard

Men's Water Polo
vs. Connecticut Col.
L, 15-9 Final

Men's Soccer
vs. Cal Lutheran
L, 2-1 Final - 2OT

Men's Water Polo
vs. Pomona-Pitzer
L, 12-5 Final P-P Split Squad

Women's Volleyball
at Pomona-Pitzer
L, 3-0 Final

Women's Volleyball
vs. Chapman
L, 3-0 Final

I LOVE COKE ZERO

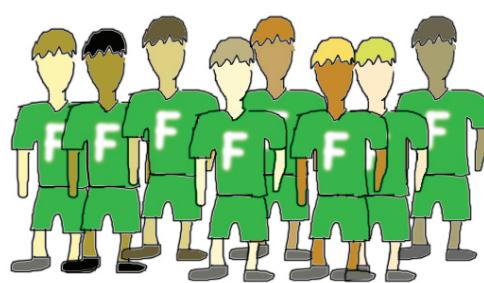
BY REAL COKE TASTE AND ZERO CALORIES



Acquired Taste

EMBARASSING
MISHAPS OF
PAST
ROTATIONS

1964: Fleming got an entire class of color blind people



1985: Ricketts got someone who cares.



1993: Avery got someone cool.



*For more photos,
videos, and archives
of previous issues,
check out the Tech
website!*

tech.caltech.edu

The California
Tech
Caltech 40-58
Pasadena, CA 91125