

Students honored with academic, leadership awards

DEAN'S OFFICE

UNDERGRADUATE ACADEMIC AWARDS

The Housner, Froehlich, Haagen-Smit, and Zeigler Awards were presented during a luncheon at the Athenaeum, on May 13th hosted by Dean D. Roderick Kiewiet.

Siduo "Stone" Jiang, a senior majoring in biology and chemistry, will receive this year's *George W. Housner Prize for Academic Excellence and Original Research* at commencement. This award is given to a senior or seniors in the upper 20% of their class for an outstanding piece of original scientific research.

The *Jack E. Froehlich Memorial Award* is for an outstanding junior in the top 5% of the class who shows outstanding promise for a creative professional career. Adam Jermyn, a junior in physics, is this year's recipient.

Bridget Connor, a junior in chemistry, is the recipient of the 2014 *Arie J. Haagen-Smit Memorial Award*, which is given to a chemist or biologist who has shown academic promise and has made recognized contributions to Caltech.

William Hoza, a sophomore in mathematics & CS, and Tian Nie, a sophomore in mathematics, were chosen as the joint winners of the 2014 *Fredrick J. Zeigler Memorial Award*. This award recognizes students studying pure or

applied mathematics in their sophomore or junior year, who have shown excellence in scholarship as demonstrated in class activities or in preparation of an original paper or essay in any subject area.

Michael Dieterle, a senior in biology, who was unable to attend the luncheon, will receive the *George W. and Bernice E. Green Prize*. The Green Prize is awarded to an undergraduate or undergraduates in any class for original research, an original paper or essay, or other evidence of creative scholarship beyond the normal requirements of specific courses.

UNDERGRADUATE LEADERSHIP AWARDS

The Dean of Undergraduate Students hosted a lunch at the Athenaeum on April 29th to honor and recognize this year's winners of the leadership awards.

Connor Coley is the winner of the 2014 *Frederic W. Hinrichs, Jr. Memorial Award*. This award is given in memory of Frederic W. Hinrichs, Jr., who served for more than 20 years as Dean and professor at the Institute. The award bearing his name is made annually to the senior who throughout his or her undergraduate years have made the greatest contributions to the student body and whose qualities of character, leadership, and responsibility have been outstanding.



2014 Academic Award Luncheon

Photos Courtesy of the Dean's Office

Katja Luxem and Michelle Tang are the joint recipients of the 2014 *Mabel Beckman Prize*. This award is given in memory of Mrs. Beckman's many years of commitment to Caltech's educational and research programs. This award is for academic excellence and outstanding leadership skills, a commitment

to personal excellence, good character, and a strong interest in the Caltech community.

Samantha Piszkiwicz is this year's winner of the *Bibi Jentoft-Nilsen Memorial Award*. This prize is given in memory of Bibi Jentoft-Nilsen, Caltech '89, an exceptional student

Continued on page 3.

Distinguished Alumni presented with awards

NEERA SHAH
Editor-in-Chief

On May 15-18, hundreds of Caltech alumni came back to campus for the annual Reunion Weekend. The 77th annual Seminar Day was held on May 17, during which this year's six Distinguished Alumni Awards were presented. This recognition is the highest honor that Caltech awards its alumni and has been given every year since 1966 to alumni who have made achievements of noteworthy value or have led a career of noteworthy accomplishment.

The six recipients this year had a wide range of backgrounds, from cosmology to aerospace to biomedicine. Among the six, Dr. James S.W. Wong (PhD '65) travelled the farthest – coming with his family from his home in Hong Kong to accept the award.

Outgoing president of the Caltech Alumni Association Heather Dean introduced Interim President and Provost Edward Stolper, who gave the opening address at the presentation. Addressing the audience of alumni, current undergraduate and graduate students, and family members of Techers, Stolper explained, "The Distinguished Alumni Awards are to recognize those who have done unexpected things. We expect great things out of all of you – that's the norm. You all follow different paths, but you have a very special scientific and technical education that will prepare you to be citizens of the nation," and for any future career.

Upon the presentation of the awards, each of the six recipients spoke about their Caltech experience and thanked the CAA for their recognition. An echoing theme among the awardees was a sense of humility and surprise at being chosen from thousands of alumni to be recognized for their achievements.

Wong came to the United States to study math and physics at Baylor University in 1958 and found his way to Caltech for graduate school. He is currently the chairman of Chinney Holdings Ltd., the company he took over from his father after his passing, and an honorary professor of mathematics at the University of Hong Kong. Wong was recognized for his unique career which led him to make "substantial contributions in mathematics and commercial enterprise – as an entrepreneur, he transformed his family business into a leading international investment company."

Mary Baker (MS '67, PhD '72) is the president of ATA Engineering Inc. and was lauded for her "pioneering entrepreneurship and leadership in aerospace." Baker has attended almost every Seminar Day to see the Distinguished Alumni Awards every year since its inception in 1966. When she first arrived at Caltech, she was one of only seven women students (all in the graduate school). She spoke a few words in appreciation of the education she received at Caltech, as she said, "Caltech is a place with its priorities straight, where science is first and sports are for everyone to enjoy. It's science you have



Want to see more pictures from Ditch Day? Turn to page 4!

to be good at! And Caltech taught me to be tough."

Currently an Albert Einstein Professor in Science and Director of the Princeton Center for Theoretical Science at Princeton University, Paul Steinhardt (BS '74) was honored this year for his unexpected discovery of the only known naturally occurring quasicrystals. He emphasized not only his gratefulness to Caltech for the

award but also the fact that he "learned that disciplinary lines should be ignored – look for puzzles and think how to solve those challenges. If you pursue science honestly, passionately, and seriously, you'll have a heck of a lot of fun! That's what I found at Caltech."

Continued on page 3.

IN THIS
ISSUE

NEWS | PAGE 2
PARUL RECAPS DR.
JAMES WONG'S VISIT
TO CALTECH

FEATURE | PAGE 3
MONICA SHARES
EXPERIENCE WITH
ALUMNAE

FEATURE | PAGE 4
KEVIN REVIEWS LA
PHILHARMONIC

FEATURE | PAGE 7
NAILEN REVIEWS THE
SERPENT AND THE
SPHERE

Caltech Y Column

CALTECH Y

UPCOMING EVENTS

1. Abhaya "The Fearless" A Classical Indian Dance Performance

Sunday | May 18th | 3:00 - 5:00 PM | Ramo Auditorium | Tickets: Free with Caltech ID, \$10 Non-Caltech

To promote the cause of human trafficking prevention, The Caltech Y and Kalalayam Dance Company have collaborated to present Abhaya "The Fearless" A Classical Indian Dance Performance hosted by Janani Mandayam Comar, the Caltech Y Advocating Change Together (ACT) Award recipient.

In a world plagued by poverty, drugs, and war, economists say that the solution to our problems lies in the hands of those that we have most neglected: women. They may make up 70% of the world's poorest, but they are definitely more than 50% of the world's brightest. Join us in exploring the powerful essence of female divinity in Hindu culture and philosophy and celebrating those who manifest their inner strength daily. More Info & Tickets.

2. Caltech Y India Cultural Trip - Applications Available Now

December 13th - 23rd, 2014 | Cost: \$950 | Applications Due Tuesday, May 20th by 5:00 PM

The Caltech Y, in partnership with the SURF Program and IIT Gandhinagar (IITGN) in India, is coordinating a trip to Ahmedabad, India. Join us for an exciting trip as we explore India as an emerging nation and its potential role as a global leader in the context of its history and culture. The Caltech group will be hosted by IITGN and discussions and trips will be led by IITGN faculty.

The trip is open to undergraduate students only - sorry no graduate students. Applications can be found on the Caltech Y website and are due by 5 pm, Tuesday, May 20th. Questions may be directed to caltechy@caltech.edu. Space is limited.

3. Memorial Day Weekend Camping Trip

Sunday May 25th - Monday, May 26th | Bandido Campground | Cost: \$20

Start off the summer camping season with the Caltech Y Outdoor Adventures group this Memorial Day weekend. We will spend the weekend in the center of the San Gabriel Mountains, camping at the Bandido Campground and hiking the nearby trails. No previous camping experience is required! The cost of the trip is \$20 and includes transportation, meals, and use of the Caltech Y camping gear. We will leave for the campground in the morning on Sunday, May 25 and return in the afternoon on Monday, May 26. Monday is Memorial Day and a Caltech holiday, so you don't need to worry about missing class. Sign up in person at the Caltech

Y. Spaces are limited, so sign up early! If you have any questions, email Jeremy Sandler at jsandler@caltech.edu.

4a. Union Station Adult Center

Saturday, May 17th | 5:30 - 9:30 PM | Pasadena

Prepare and serve dinner to the homeless at Union Station Adult Center in Pasadena. Food and materials are provided. The Adult Center provides shelter, meals and supportive services for more than 150 homeless men and women each year. For more info and to RSVP email Darius Teo at darius.teo@caltech.edu. Please note that work study is no longer being offered for this service trip.

4b. Pasadena LEARNS

Every Friday | 3:00 - 5:00pm | Madison and Jackson Elementary School | Pasadena

Come volunteer at Madison and Jackson Elementary 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 vkumar@caltech.edu.

4c. Hathaway Sycamores

Every Saturday | 1:30-4:30pm | Highland Park

Volunteer at Hathaway-Sycamores, a group that supports local underprivileged but motivated high school students. Some of the subjects being tutored are AP Chemistry, AP Physics, and AP Calculus. The service trip includes about an hour of travel time and 2 hours of tutoring. Transportation is included. For more info and to RSVP Email Josie Kishi at jkishi@caltech.edu or Ted Xiao at gxiao89@caltech.edu. Please note that work study is no longer being offered for this service trip.

OTHER ANNOUNCEMENTS - BEYOND THE CALTECH Y

Kidspace Rubber Ducky Races

Saturday & Sunday | May 24th & 25th | 480 N. Arroyo Blvd. | Pasadena

Kidspace is kicking off the summer season with their annual Rubber Ducky Races! Children will be decorating their own rubber duckies, and then taking them up into the gardens to race them down the river! Each race throughout the day will have a 1st, 2nd and 3rd place winner, who will be awarded special prizes and photographed on pedestals with their duckies at the end of the race! (All racers get a general medal for participating, too!) Around 6 volunteers are needed each day, all day, to assist with the decorating, race registration and racing. The shifts are AM: 9am - 1:30pm; PM: 1 - 5pm; FULL DAY: 9am - 5pm.

Email Brooke Applegate at bapplegate@kidspacemuseum.org to volunteer. Be sure to indicate what DAY and SHIFT you want to work!

Caltech Distinguished Alumnus Doctor James Wong on Academia and Business

PARUL PUBBI
Contributing Writer

Dr. James Wong, with over 3000 citations on 1500 papers and a multi-billion dollar business, received many requests for wisdom and advice on a talk last Friday. He proceeded to explain that "my philosophy in business, academia, and in life, rests on three foundations: truth, fairness, and freedom. I have been fortunate in that they have served me well."

Sponsored by the Caltech Chinese Association, current undergraduates, grad students, and alumni alike came to listen to Dr. Wong's advice for adapting in a changing generation. The audience was first introduced to Dr. Wong's story: he came to the US from China as a child, graduated from Baylor College in Texas in two years, and then came to Caltech to pursue a PhD in mathematics. Two days prior to his 30th birthday, Dr. Wong accepted an offer for professorship at the University of Iowa. When asked what his goals then had been, Dr. Wong replied, "in those days, the minimum ambition was to obtain a professorship while young—anyone who was anyone hoped to get one before their 30th birthday." When his father died, however, Dr. Wong went back to Hong Kong

to manage the family business. Now, Dr. Wong runs the Chinney Alliance Group, which has over two billion dollars in assets and employs over 2000 workers.

A question brought up numerous times was how Dr. Wong balanced the academic and business world,



to which he replied "I don't!" Dr. Wong went on to explain his view on how the academic life was one of public service—by contributing to the human knowledge base, one was doing civil work. "I do both because I enjoy both, but I only focus on one aspect of a time."

Dr. Wong graduated Caltech half a century ago, and thought back to his time on campus. "We didn't just have Nobel Prize laureates. We

had extraordinary Nobel Prize laureates. Back then we had Feynman teaching undergraduates how to think and Millikan—the best chemistry department in the nation. But my life was probably not that much different from your life. I spent a lot of time reading in the library." He proceeded to describe how the academic life was one that required work and commitment: you "could put the bricks together, and layer them on top, continuously getting somewhere if you put in enough time. Business really just relies on some 'smart decisions' and good fate."

For those not as lucky, however, Dr. Wong concluded with some fail-proof advice:

"if all else fails, just marry a rich man's daughter!"



Dr. James Wong imparts his wisdom concerning business onto eager listeners.

Photos Courtesy of Caltech Chinese Association

BLAC luncheon inspires community

MONICA ENLOW
Editor-in-Chief

Over Alumni Weekend in May 2012, the Black Ladies Association of Caltech (BLAC) hosted their inaugural event. BLAC was founded by group of graduate women and alumni who wanted to foster and grow the African-American community on Caltech's campus by connecting the past with the present and future. Since it's small and humble beginnings, BLAC has grown to encompass the three undergraduate women, a handful more graduate students and postdocs, a plethora of staff and community members, and a significant amount of alumni. While BLAC isn't posting numbers in the hundreds, the community created with the help of Chinny Idigo, who was the founding president of the organization, has become a support network for all members. BLAC hosts a fall tea and an Alumni Weekend mixer for all members of the community to attend.

The keynote speaker for this year's lunch was Dr. Jean Andino. Dr. Andino graduated from Caltech in 1996 with a Ph.D. in Chemical Engineering and went on to become a professor at the University of Florida, Gainesville. She currently teaches at Arizona State University, and her research focuses on atmospheric chemistry. Dr. Andino

grew up in the Bronx, and through hard work and the support of her mother, went to Harvard University for her undergraduate degree. Her story and experiences are truly inspiring. She focused on eye opening experiences she has had during her life. Those experiences were numerous, but the one she focused on was her trip to Senegal while she was an assistant professor at the University of Florida. Dr. Andino was able to go to Africa and discuss the future of research in chemistry while simultaneously learning about her past. She told of her tour to the "Point of no Return," which was the last place African slaves would be kept before they were loaded onto ships destined for the Americas. Apparently not a dry eye remained once the tour guide looked around at the African-American scientists present and said, "They took our best." Dr. Andino shared an inspirational song by Carla Harris titled "Expect to win." It was truly empowering to be told that it is completely acceptable to try your hardest and live every day expecting to win. She closed with

a remark from the President of Arizona State, Michael Crow, which expressed the outlook and the reason she found ASU to be a good fit for her to pursue her research. ASU aims to be "measured not by who we exclude, but rather by who we include and how they succeed." This is an excellent mission statement, which should



Dr. Jean Andino gives the keynote speech for the BLAC annual alumni mixer.

Photo Courtesy of Amy McCarthy

be heard around Caltech's campus. Although African-American alumni attendance was low this year, the two alumni, community members, and students present will surely carry Dr. Andino's inspiring words with them. The only way to impact diversity on the Caltech campus, is to use the words of Dr. Andino, and many others who have been invited to speak to the campus, to fuel a dynamic effort to encourage more underrepresented students to consider STEM research as a possibility for their futures.

Techers awarded for outstanding academics, leadership

Continued from page 1.

leader. After her untimely death in 1990, a fund was established to recognize outstanding student leaders.

Zach Rivkin was selected as the recipient of the *Doris Everhart Service Award*. This award is given annually to an undergraduate who has actively supported and willingly worked for organizations that enrich student life, and the campus or community as a whole, and who has exhibited care and concern for the welfare of students on a personal basis.

The Deans' Cup and Campus Life and Master's Award are presented to undergraduates whose concern for their fellow students has been demonstrated by persistent efforts to improve the quality of

undergraduate life and by effective communication with members of the faculty and administration.

Erika DeBenedictis and Rachel Deghuae received the 2014 *Deans' Cup*.

James Bern, Richie Hernandez, Julie Jester, Bryan Joel, Justin Koch, Valere Lambert & Connor Rosen were awarded the *Student Life and Master's Award*.

Jesse Salomon was selected as the recipient of this year's *Mari Peterson Ligocki '81 Memorial Award*. The Mari Peterson Ligocki '81 Memorial Award is made to one student who, through his or her personal character, has improved the quality of student life at Caltech. It recognizes the student who provides quiet support and kind encouragement to peers. This fund was established by Mr. José

F. Helú Jr. '79 to honor the memory of Mari Peterson Ligocki, '81, who possessed these qualities.

Vansh Kumar was selected to receive this year's *Frank Teruggi Memorial Award*. The Frank Teruggi Memorial Award was established in 1998 by friends and classmates of the late Frank Teruggi, a Caltech undergraduate who was murdered in Chile in 1973, during the military coup led by Augusto Pinochet. The annual award honors the spirit of Frank's life, especially "in the areas of Latin American Studies, radical politics, creative radio programming, and other activities aimed at improving the living conditions of the less fortunate."

Jocelyn Kishi was the recipient of this year's *Lucy Guernsey Service Award*. The Lucy Guernsey Service Award was established by the Caltech Y ExComm in honor of Lucy Guernsey, the Y's Executive Director from 1989-1991. The



Gary and Linda Noland (son and daughter-in-law of Robert and Delpha Noland) are pictured here with the Robert L. Noland Leadership Awardees.

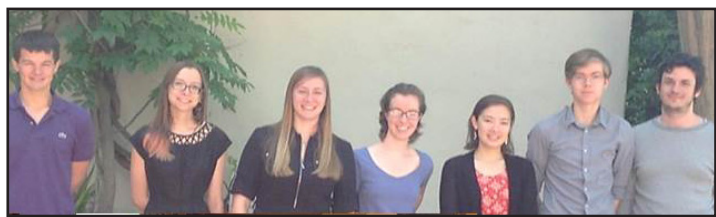
Photo Courtesy of the Dean's Office

award is given annually to one or two students who have provided exceptional service to the Y and/or the community and exemplify a spirit of service.

ROBERT L. NOLAND LEADERSHIP AWARD

Laura Santoso, Jeff Sherman, Gautam Upadhyaya, and Malvika Verma were awarded the *Robert*

L. Noland Leadership Award at a dinner presentation in the Athenaeum Library on May 5, 2014. The Robert L. Noland Leadership Award is for outstanding Caltech students who have demonstrated exceptional leadership abilities and have encouraged and supported others in realizing their own leadership capabilities.



Students receive honors at leadership luncheon.

Photo Courtesy of the Dean's Office

Caltech alumnae celebrated over lunch

MONICA ENLOW
Editor-in-Chief

In 1970, Caltech admitted women to its freshman class for the first time. This year marks the 40th anniversary of undergraduate women at Caltech, and to celebrate the Caltech Alumni Association hosted a "Celebration of Women" luncheon mixer at the Athenaeum this past Friday. I had the distinct pleasure of meeting some of Caltech's social pioneers. It's hard to imagine Caltech's campus today without any women. Though women still make up less than 40% of any given incoming class, it does not take away from their visibility. There are women in all walks of Caltech life, but to think about no women undergraduates is bizarre. I spoke with distinguish alumna Mrs. Mary Baker at the beginning of the lunch to ask her what her experience was during this time. She recounted that as a PhD student, she was so busy with her lab work that she didn't necessarily know that Caltech was undergoing such a huge change. Caltech graduated its first woman PhD candidate, Ms. Dorothy Semenow, in 1955, so while graduate women on campus weren't the majority, they had already crossed that bridge. In her opening remarks to the attendees, Professor Annelia Sargent mentioned the rhyme that boys made up when girls first arrived, humorously stating, "They rhymed 'this' with 'kiss,' if that tells you anything." It was very evident from her remarks and from the sentiments of Mrs. Baker and Professor Sargent, that the graduate women at the time were willing to reach out to the new freshmen ladies to make sure they found Caltech to be a welcoming

environment. Professor Sargent also mentioned the concerns male students have had since women were first admitted, the primary concern being: Is Caltech lowering their standards by accepting women? The answer to that question is absolutely not.

I had the distinct pleasure of sitting with four of these outstanding women during this



Stephanie Wong and Monica Enlow enjoy conversation with the class of 1974's Pat Tressel, John Garth, Karen Liu, Gloria Liu, Karen Garth, and Rhonda MacDonald.

Photo Courtesy of Jannah Maresh

lunch. Ms. Rhonda MacDonald, Ms. Karen Garth, and Ms. Gloria Liu were members of Ricketts and Ms. Pat Tressel was a member of Blacker. It was interesting to hear from Ricketts women about their time at Caltech. Currently, Ricketts is not one of the houses known for how many women rotate in every year. In 1970, the ladies told me that women were originally supposed to live only in Blacker and Dabney, but more women committed to Caltech than they were expecting and Ricketts warmly welcomed women living in the house. More than anything,

though, I was fascinated with how they found out about applying to Caltech. Ms. MacDonald read an article in *Seventeen* about how Caltech was finally opening its doors to women. Ms. Tressel heard an advertisement on the radio about Caltech finally accepting women. It is intriguing to think about the cultural impact it would have on Caltech's campus if Caltech

were still mentioned in *Seventeen* to encourage readers to apply.

Each of these ladies expressed how grateful they are for the time they spent here and the memories they made. While glomming became a new and ongoing problem on campus, Caltech has grown so much from chances the ladies first undergraduate women took. They decided to make Caltech what they wanted Caltech to be. Professor Sargent added that since women have become part of the undergraduate population, there has been a rise in the level of maturity. This is no coincidence.

Alumni honored in ceremony

Continued from page 1.

Yet another unique achievement recognized was one by Richard Miller (PhD '76), who is the founding president of the Olin College of Engineering. His "visionary leadership and commitment to innovation in engineering education for the benefit of society" helped lead him to create a new institution "recognized for its unique teaching methods and models." Miller accepted the award and said, "This affirmation from Caltech has filled that insecurity" that he had taken the wrong turn in his career 15 years ago when he decided to build a college.

Just as Miller took a risk as he broke away from his role in academia as a professor, Richard Scheller (PhD '80) left his successful career as a researcher to go back to Genentech (where he is the Executive Vice President for Research and Early Development) and develop new medicines for commercial use. Scheller has added millions of years of life to people as a result of his "seminal work and leadership in biological sciences,"

It was very evident hearing their memories from the early seventies that things were just as rowdy and fun as they had been, and that women (at least in Ricketts) were not outcasts but simply more people to add to the general shenanigans going on at the time. Every alumna in the room exuded a sense of pride and hopefulness

and he attributes this to his diverse Caltech education.

The youngest alumnus awarded this year was David Chavez (BS '96), the principal investigator and project leader at Los Alamos National Laboratory. His extraordinary accomplishments in chemistry, "creating versatile new synthetic compounds and processes that advanced the development of high-nitrogen energetic materials," earned Chavez a spot among the ranks of the honored alumni. Ending the awards on an inspiring note, Chavez recounted the story of his unlikely acceptance to Caltech from a small rural school where there were many hard science courses. He spoke from experience and said, "My Caltech education gave me confidence and vision to see farther than I thought I could be able to. I hope to inspire people that even when they're in a low place, there's nothing more rewarding than hard work," alluding to his challenging undergraduate experience.

These six alumni were nominated and chosen by fellow members of the Caltech community to become a part of the more than 250 Techers given the Distinguished Alumni Award.

when the current undergraduate women in attendance were invited to introduce themselves at the podium. Hearing what Caltech women have accomplished and what they are currently accomplishing only builds the anticipation for what Caltech ladies will accomplish in the next 40 years.

Wake Up Frosh! It's Ditch Day!



Angie Gui leads cloaked Moles in the quest for fun.
Photo Courtesy of Caltech Parents Facebook Page



Fleming's "Let's get Smashed" stack has a jolly time at paintball.
Photo Courtesy of Thomas Kwok



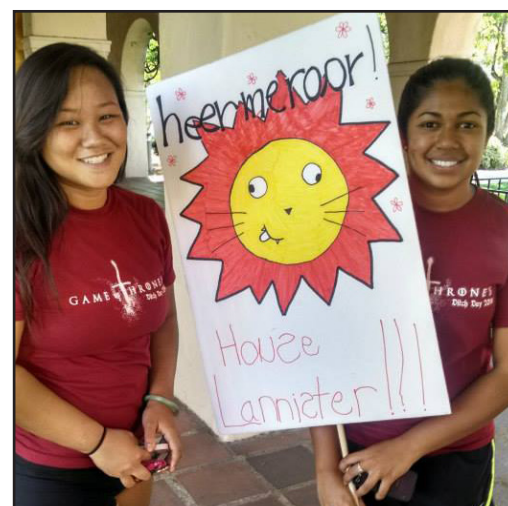
Lloydies enjoy an "Ultimate Space Vacation."
Photo Courtesy of Caltech Parents Facebook Page



Jennifer Lin and Dan Chou rest in a tree.
Photo Courtesy of Parul Pubbi



The Ricketts "Star Wars" stack embraces the force of friendship.
Photo Courtesy of Prastuti Singh



Emily Shih and Shalini Majumdar are happy frosh.
Photo Courtesy of Caltech Parents Facebook Page

Kevin reviews LA Philharmonic's performance

KEVIN SHENGYANG YU
Contributing Writer

On April 25, members of Professor Neenan's music history class (MU139) took a field trip to Walt Disney Concert Hall to listen to the LA Philharmonic. The following is a review of the performance.

The Disney Hall exuded a vibe of modern elegance, a perfect fit for the revolutionary music that we were about to observe in Bartok's and Rachmaninoff's compositions. The curved metal walls seemed to be oriented randomly spiraled around the main hall. From our bench seats, perched right above the percussions, the rest of the hall seemed to envelop the somewhat small stage, much like that of the Roman Coliseum. There was a certain fluidity to the venue that complemented the music we were about to witness.

Upon arriving, we saw the smaller orchestra was setting up for Gil Shaham's performance of Bartok's violin concerto. There is a certain air of professionalism: unspoken laws between the orchestra and the audience. As the concertmaster finished tuning, a nasty and suspenseful minute of silence ensued as we waited anxiously for our guest conductor and soloist. For what seemed like eternity, Stéphane Denève, the conductor for the Stuttgart Radio Symphony Orchestra and Shaham arrived on stage. The musical

accomplishments between these two men are quite impressive. A graduate and prizewinner of the Paris Conservatoire, Denève is one of the most celebrated conductors of our time and the Frenchman has performed as a guest all over the world. Shaham, a winner of the prestigious Avery Fischer Prize, is one of America's master violinists. The two men having worked together multiple times seemed to have synergy in their performance as they worked together throughout the piece. The Bartok was quite a scene: the large fiery haired and quite emotional Denève – his cheeks often rippling from the beats – starkly contrasted the smaller and elegant Shaham who was busily coaxing the music out of his 1699 "Countess Polignac" Stradivarius.

The Concerto began with much anticipation with the gentle strumming of the strings. From then on, for me it became a two-man show as the show was transfixed on Shaham and Denève. The twelve-tone theme seemed to welcome some forms of dissonance from the orchestra to complement the smooth and melodic theme from

the soloist. The soloist was given many opportunities to express his talents, as there are various sections of difficult passages, winding up and down the scale. By the end of the first movement, the Shaham had more than a couple loose bow hairs and he had to retune his instrument before the



Stéphane Denève leads the Boston Symphony Orchestra.
Photo Courtesy of Stu Rosner (<http://www.classical-scene.com>)

second movement could begin. Throughout the entire performance, Shaham's face was all smiles; his musicianship was infectious to the entire orchestra. In the passages where the orchestra echoed Shaham's melody, he would sway back and forth and interact with the violins. Although most of it was spectacular, there were some disappointments in the performance. It seemed particularly difficult

to hear the clarity of the solo especially during some of the faster and rhythmic sections. Perhaps it was due to our location in the hall but even with the smaller orchestra – more musicians arrived for the Rachmaninoff's symphony, Shaham was sometimes overwhelmed. Overall, the Bartok was a tremendous performance by the violin virtuoso.

An intermission ensued after the Bartok. The demographics of the hall was somewhat of a surprise to me. I would have expected the age ratio to favor the older age group but I was surprised to see many young people at the hall. There is a certain air of sophistication in the hall but there was some sort of artificiality to it. Some were genuinely passionate about the music but others from their conversation were there for the sake of being there. Anyways, the large portion of the audience did enjoy the performance.

As Denève returned to the stage for the Rachmaninoff, there is a different feeling in the air as the size of the orchestra has increased significantly for this piece. Rachmaninoff begins the piece very dramatically with a very gradual rise in volume. There

is a certain contrast between the various movements. The first movement slowly picks up the music and the second movement is elegant and dance-like. The slow romantic mood set by the third movement transitions to the final movement seems to wrap the melodies from the first three movements as the orchestra races to the finish line. The musicianship and the executing by the players were flawless. Denève at points would very vehemently try to adjust the contrasting volumes especially during the oboe solos when the orchestra could not seem to quiet down. Other times it seemed as Denève waved a magic wand and that every flick of his wrist called for the sounds to bend in exactly his way. The percussion section, closest to my seat, was quite interesting as these artists would patiently wait for over three hundred measures before painstakingly join in. There were particularly interesting methods of sound making that I cannot imagine could be described in the sheet music: the cymbals were being drummed on by a different player while also being clapped together but the musician holding it. This was certainly interesting to see as for most performances, the focus is on the strings and melody and not this intricate background – often unseen. Overall, it was an enlightening experience at the Disney Music Hall. A "Disney" moment as one would call it.

Former scholar athletes honored for excellence

MONICA ENLOW
Editor-in-Chief

This past Sunday Caltech Athletics hosted its first annual Hall of Honor Induction Ceremony. Caltech's Athletics department has a long history of outstanding athletes, and Betsy Mitchell, along with the rest of Caltech Athletics, made the Hall of Honor a reality. Professor Rod Kiewiet gave the opening remarks and set the stage for senior athletes Albie Lavin and Rebekah Kitto to take the podium. Even at the beginning of the program there was a very clear theme arising: balance. Albie and Rebekah's comments appeared to resonate with every former Caltech athlete in attendance. The ceremony honored Caltech's best and Caltech's pioneers who exemplified the role of a scholar athlete.

he said, "Then I guess I'll see you on Monday." Angie realized she missed having people to talk to in the locker room, and was taunted occasionally by other teams, so the following year she started the first women's club basketball team. She was honored with the Pioneer Award for her dedication to implementing change in athletics.

In the Coach Category, Tom Gutman was honored for his excellent leadership in coaching wrestling (1966-78) and football (1968-79). He won a total of three SCIAC championships during his coaching tenure at Caltech. Coach Gutman believes, "The best way to teach is to learn from your students."

The team honor was awarded to 1969-1970 wrestling team. They won the SCIAC title in 1970, and each member agreed with the sentiment that a unique team

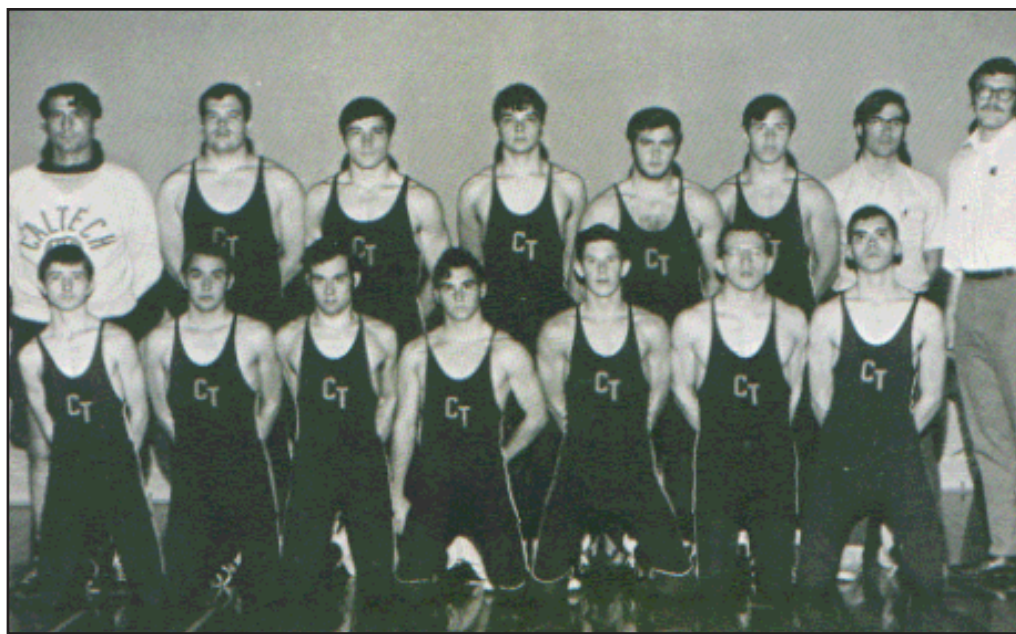
support of the current athletic direction, and is confident that every Caltech team will have the ability to compete at whatever level they make it to.

C. Alan Beagle, class of 1970, was honored for his accomplishments in wrestling and football. He believes in the balance that athletics helps promote a sound body to foster a sound mind. Alan Beagle understands the rigor that Caltech athletes experience during practice and games, in addition to the classroom, which is why he values the perseverance and resilience he gained from his time as a student



Phil Conley during his event, javelin.

-gocaltech.com



1969-1970 wrestling team honored with team award.

The first honoree was Angie Bealko, class of 1996. Angie was the founder of Caltech's women's basketball program as we know it today. She was able to attend to accept her award, and told the audience about her journey. She joined the women's club volleyball team when she was a freshman, and realized she missed playing basketball once volleyball had ended in the fall. Angie asked the men's basketball coach the next year if she could play for the team, and he remarked that everyone on the team had to wear the same shoes. "I wear a nine and a half men's," I told him, and

spirit formed, one that encouraged individual success in addition to wanting to be competitive as a team.

Fred Anson, class of 1954, was honored for his talents and accomplishments as a scholar athlete in basketball. Fred told of his experience after the men's basketball team won the SCIAC championship in 1954. When the team went to the athletic director at the time to ask if they could go on to the next level of competition, they were told there was not enough money, so their competition season ended sooner than it should have. He was incredibly pleased to see the

track and field, football, basketball, and his participation in the 1956 Olympic Games. Accepting the award on Phil's behalf was one of his teammates, Bruce Kennedy. Bruce told everyone that Phil didn't want to be the best; he wanted to improve on what the best was supposed to be. Phil believed in succeeding as an individual, but he also believed in the dimensions of an athlete that come from team sports. He was ASCIT president during his time at Caltech, and believed in giving students the opportunity to participate in non-academic activities to build a

well-rounded multi-dimensional person.

Glen Graham, class of 1926, was honored for his accomplishments in track and field. He participated in pole vault during the 1924 Olympic Games in Paris. His athletic accomplishments in 1924 would be amazing even by standards in 2014.

Lynn Hildemann, class of 1980, was honored for her accomplishments in swimming and diving and volleyball. She was unable to attend the ceremony, but she sent a few remarks to Betsy. She recounted how easy it was to be a multi-sport athlete in the late 70s because there were only about 40 women undergraduates. Lynn reflected on the conversion of visiting men's facilities to women's

athletes who continue to strike the balance between academic rigor and athletic excellence.

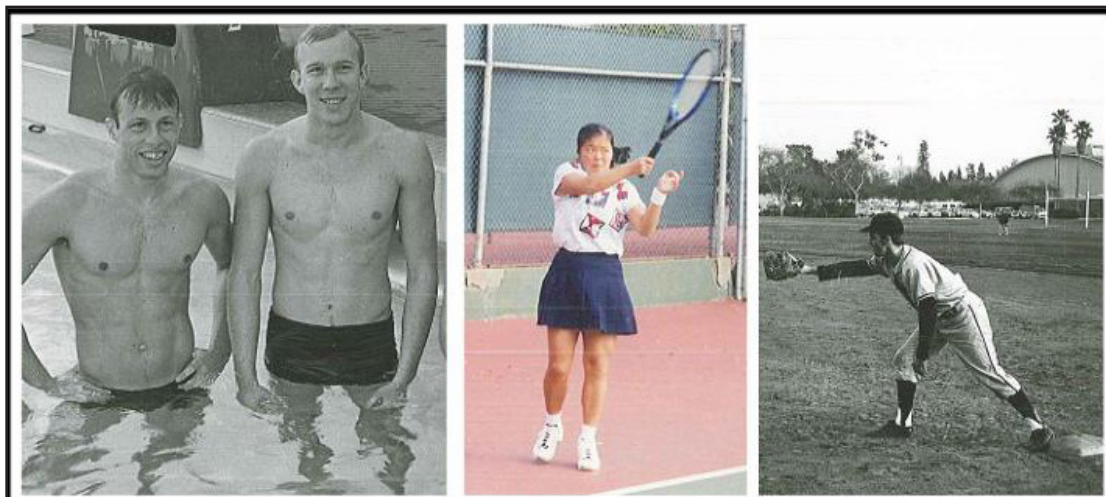
Celia Peterson, class of 1981, was honored for her brilliance in cross country and track and field. Celia's was honored posthumously, so her siblings sent videos of kind remarks to accept the award on Celia's behalf. She was an incredible athlete, setting an age group record in the marathon in 1978. Her siblings described her as so modest that even they were unaware of how accomplished she was as an athlete. Every year the SCIAC honors a cross country runner in her name.

Dick Van Kirk, class of 1958, was honored for his performance in basketball, football, and track and field. Dick thanked his family



Caltech football 1969.

Photo Courtesy of The California Tech, 1969



-gocaltech.com

facilities, and expressed how happy she is to see how far the support for women's sports teams has come.

Fred Newman, class of 1959, was honored for his accomplishments in baseball, basketball, football, soccer, and track and field. His son, Lance Newman, accepted the award on his father's behalf. Fred Newman passed away in February of this year. Lance recalled memories of his father, and how his father constantly encouraged him to balance academics and athletics. Lance believes that his father would have wanted to express his support for current Caltech

for their constant support, and offered words of encouragement to current athletes. He believes that the precedent set by former scholar athletes provides the catalyst for present and future accomplishments. He encouraged current students to continue to maintain the balance that so many before them have striven for.

Caltech athletes past and present continue to strike the balance between academics and athletics. The Hall of Honor now provides an excellent forum for celebrating Caltech's great non-academic accomplishments.

ASCIT Minutes

ASCIT Board of Directors Meeting

Minutes for 13 May 2014. Taken by Sean McKenna

Officers Present: Catherine Jamshidi, Nima Badizadegan, Connor Rosen, Connie Hsueh, Patrick Nikong, Annie Chen, Sean McKenna

Guests: Elliot Simon, Margaret Lee

Call to Order: 10:05 pm

President's Report (Cat):

- **Committee Appointments** Cat proposed some changes to the delegation of Student/Faculty committee appointments, dividing between ARC, IHC, and ASCIT. She is writing a resolution which will be voted on by the BoD.
- **Strategic Identity Committee** The committee is looking to redo the new "secondary logo" (currently the C surrounding the torch), and they would like student input for the revision. Undergrads will be consulted in the near future.
- **ASCIT subsidized Zipcars:** Cat suggested subsidies for student trips to events nearby (Pasadena Playhouse, for example). Debated whether transportation is really an issue which undergrads need solved. Action is postponed until further notice.
- **ASCIT Events for 2014-2015** General support for hosting a concert, continuing the Olive Harvest, funding the Field Day event, hosting Kip Thorne at a screening of "Interstellar." Big I will happen again next year; Annie will set the date for it soon. Discussed the possibility of the return of Midnight Madness in the form of a fall athlete recognition / midnight madness / welcome the president event. Discussed the possibility of a visit to Huntington Gardens.
- Cat and Derek (South House RLC) planned a Red Solo Cup team art contest for Memorial Day (May 26th)
- **Faculty Board Meeting** happened yesterday. Paul Asimow reported that the undergraduate self-governance committee is still working on recommendations.
- **Donuts:** Cat is proposing a resolution to order weekly donuts through CDS while still using Donut Man for Midnight Donuts once per term.

Officer's Reports:

- **V.P. of Academic Affairs (ARC Chair: Nima):**
 - **ACM 95** Working proposal to split ACM 95abc into two 2-term courses (potentially 95ab and 96ab). ACM 95 would continue to include complex analysis, ordinary and partial differential equations. The new course would focus on applied linear algebra and deeper statistics than Math 3.
 - Bi 1 survey is still up on Donut
 - Three ARC reps at large will be selected on Sunday the 18th. Committee appointments will be made on the week of the 25th.
 - **CS 0 A** survey was sent to prefrosh. Some version of CS 0 will happen this summer.
- **V.P. of Non-Academic Affairs (IHC Chair: Connor):**
 - **Orientation** Planning is in the works; not much will change. A survey will be sent to current students to discuss their perceptions about rotation
 - Student Life and Housing Committee will meet to discuss the new MOSH on Friday.
 - The waitlist process for the frosh class should be finished by June 1st.
 - **Gym hours** Currently trying to get extended Braun Gym hours instead of late night gym in the SAC.
- **Director of Operations (Connie):**
 - Nothing to report.
- **Treasurer (Patrick):**
 - Email was sent out with new reimbursement form.
 - Many reimbursements are left from the transition, so Patrick will continue this weekend.
- **Social Director (Annie):**
 - **Spring Formal** Overall, it went well. People liked that it was nearby. The bus company provided poor service, so we're looking to get money back from them.
 - An alum may be giving away stuff at Chouse next week.
 - **Blown Out Reunion Concert** Saturday at 8:30 pm at TACIT house
 - **Six Flags** Event is postponed to next year to make room for other end-of-year events.
 - No ASCIT Formal will happen next year. This will put us back in the pattern of having Big I and Formal in offset years.
 - Annie will look into the possibility of summer social events.
- **Secretary (Sean):**
 - I will be posting Patrick's new reimbursement form to Donut soon.

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: 10:52 pm

News briefs from around the globe

Need to know <100 words about the world this week

Mars One crew selection underway

4 candidates to be selected by interview from 705, already narrowed from 200k [CNN]

Star Wars VII filming starts

1st day of filming was last week in Abu Dhabi, publicized by director J.J. Abrams' tweet [BBC]

Stem cell therapy emerges for MS

10-day wait for mice to walk again after receiving stem cell treatment for multiple sclerosis [CNN]

Teen cities on rise in US

100 such homeless encampments have formed, only 8 legally; many to be evicted and bulldozed [CNN]

Vietnam sees violent protests

100 Chinese citizens injured in anti-Chinese riots due to Chinese presence in South China Sea [CNN]

Disaster hits Turkish miners

301 killed due to mining explosion in Soma, Turkey; 24 arrested in ensuing protests [BBC]

Another World Cup worker killed in Brazil

23-floor apartment building collapsed due to unsafe building; government issues apology [CNN]



**Drop in
and
talk to us.**

Counseling Center

The Caltech Counseling Center is now offering confidential, drop-in counseling 3 nights per week. Mondays, Tuesdays, and Wednesdays

7pm-10pm at the Health Education Office (CSS 248) enter through the 2nd floor stairwell on east side of building

For appointments or questions, please call the Counseling Center at x8331

The California Tech

Editors-in-Chief
Monica Enlow
Liz Lawler
Neera Shah
Nehaly Shah

Photography Editor
Alex Hsu

Web Editor
Aditya Bhagavathi

Circulation Manager
Michael Paluchniak

Advisor
Richard Kipling

Contributing Writers
Nailen Matschke
Parul Pubbi

Caltech 40-58, Pasadena, CA 91125
Contact tech@caltech.edu

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 tech@caltech.edu. For subscription information, please send mail to "Subscriptions."

Calendar of events for the week of May 20- May 26, 2014

TUES. 5-20	WED. 5-21	THURS. 5-22	FRI. 5-23	SAT. 5-24	SUN. 5-25	MON. 5-26
Taco Tuesday at Chouse!	Drop Day 3:00 pm - Caltech Library Workshop - "Overview of Library Resources" (SFL) 6:00 pm - Artist Talk: Steve Kurtz (Baxter 25)	8:00 am - Registration for Fall Term 11:30 am - Temp Agency Fair (San Pasqual Walk) 5:00 pm - All Sports Banquet, Braun Gym	Yay! Friday!	6:30 pm - OASIS Annual Show 2014 (Ramo Auditorium)	10:00 pm - Fleming Interhouse (Fleming Courtyard)	Institute Holdiday (no classes) <i>The Tech</i> will come out on Tuesday 5/27

The Serpent & The Sphere: a good mix of post-rock, black metal



NAILEN MATSCHKE
Contributing Writer

-<http://agalloch.bandcamp.com>

on May 13, *The Serpent & The Sphere* is some of Agalloch's most restrained and deliberate work yet, full of powerful chords and energetic but carefully constructed metallic grooves. While this results in a few moments where the album gets a bit slow, the band still does an impressive job of keeping the listener's attention for all 60 minutes of the record's length, and it should by all means be considered another solid addition to Agalloch's catalog.

The Serpent & The Sphere opens with the second-longest song on the album, "Birth and Death of the Pillars of Creation." After starting off with a single clean guitar playing a few slow,

bleak notes, the rest of the band makes its entrance a bit over a minute in with a sinewy, spine-chilling chord. As the track progresses through an acoustic transition and into a loud and heavy dirge, we get to hear how the group's switch to producer Billy Anderson has affected the texture of their sound. Unlike other black metal artists (i.e. those whose fans apply the term "kvlt" and aren't ironic about it), Agalloch has never been too invested in the trend of making its production as raw and basic as possible; its earlier work has plenty of elements of that style, but it's never been prevalent enough to make it difficult to follow the music. On *The Serpent & The Sphere*, however, the band's sound is much more carefully mixed so that the guitars are rich across their entire range, the bass is noticeable but never overpowering, and the drums are full enough to sound like they're being played in a concert hall instead

of a recording studio. This creates what is, as far as I can tell, the perfect sound for Agalloch's music, making every moment of the record easy and enjoyable to get lost in, which is exactly what I want from an album as emotional and dark as *The Serpent & The Sphere*.

Of course production doesn't mean anything if the album doesn't deliver musically, but luckily Agalloch has that covered. After "Birth and Death of the Pillars of Creation" builds up to a towering wall of black metal screams, post-rock tremolo picking, and crashing chords that taper off into oblivion, "(serpens caput)" (several of the tracks on the album are named after parts of the Serpens constellation) gives us our first acoustic guitar interlude of the album, with ambient and mysterious sound effects in the background to add to the atmosphere.

Next, we get "The Astral Dialogue," which wastes no time getting into a bass pedal-laden metal assault, until about halfway through the track when one guitar part breaks off and does its own thing, marking the song's transition to its more progressive second part.

After spending some time exploring ideas such as a dissonant acoustic riff and plenty of tremolo picking, the album moves onto "Dark Matter Gods." More atmospheric than its predecessor, the track turns up the reverb to give the guitars an almost ethereal quality as they trade straight power chords for clean fills that fade in and out above the rest of the music. Most importantly, Agalloch not only is aware of the fact that it has two guitars, but also puts both of them to full use. Whenever one is supplying the meaty, driving chords of the music, the other is intricately weaving in passages derived from all of the band's influences, ensuring that the band's sound is

always full-bodied and complex.

The album's final four tracks round it out nicely, slowing the pace of the record down without sacrificing any of its novelty. "Cor Serpentis (the sphere)" is another short acoustic interlude, which is followed by "Vales Beyond Dimension," a track which is very much a metal song while taking it easy on the blast beats and faster tempos that marked the earlier songs. Loud and heavy to its end, the track gradually fades out to make way for "Plateau of the Ages," the album's longest song and, in my opinion, also its best. Starting from nothing but a quiet, sustained chord, "Plateau of the Ages" builds momentum with increasingly complex guitar duets until it reaches a deceptive lull in the middle with just some tremolo-picked notes played by a single guitar. Agalloch then starts over with this, adding more and more to it until the track's final triumphant finale, a Red Sparowes-like chorus of every instrument playing at max volume, culminating in another tremolo-picked chord that diminishes into "(serpens cauda)," the acoustic closer for the album.

The Serpent & The Sphere is hardly a large departure from Agalloch's previous records, though it does introduce some new things. The band's post-rock influences are as apparent as ever, and the improved sound quality of the record further removes it from the more black metal-oriented sound that was featured on their other work. But make no mistake: *The Serpent & The Sphere* hasn't lost any of the dark, gloomy, and atmospheric elements that make Agalloch's music so engaging, and their songwriting has only improved with time. There aren't many bands that can do what Agalloch does, and I definitely recommend giving this album a listen.

Crossword

1	2	3	4		5	6	7	8	9		10	11	12	13
14					15						16			
17					18						19			
20				21		22					23			
24					25			26		27				
				28			29	30		31				
32	33	34			35			36		37		38	39	40
41				42						43		44		
45			46			47					48			
				49		50		51			52			
	53	54				55			56			57	58	59
60					61		62	63		64				
65					66				67		68			
69					70						71			
72					73						74			

Across

- The most outstanding or excellent
- Fastener
- Rib section of veal or pork
- Report or maintain
- Large artery
- Eagerness
- Rescue
- Sound of a sheep
- Painful
- Paragon
- Den
- Concentrate
- Detection device
- Inform
- Drama set to music
- Hard-shelled seed
- Fish-eating diving bird
- Birdcall
- Whiskers
- Possess
- Height
- Twenty-four hours
- Harvest
- Ascend
- Catch with a lasso
- Owed
- Pursue
- Bushy
- Test for acid or alkali
- Fake
- Artifice
- Copy of a movie on film
- Molten rock
- Enthusiastic approval
- Not in favor of
- Kitchen appliance
- Frighten
- Metal money
- Moved away
- Fur of the marten
- Long and difficult trip

Down

- Foundation
- Elude
- Square root of forty-nine
- Subversiveness
- Taxi
- Be lazy or idle
- Length by width
- Tarnish
- A regular customer
- Reprieve
- Remote in manner
- Transport
- Leg joint
- Cut off
- Remainder
- Hollow cylindrical shape
- Bellow
- Caper
- Captain's journal
- Nocturnal bird
- Single
- Sudden rapid flow
- Fuss
- Blame
- Used for staining
- Cosy
- Actual
- Intransigent
- Recant
- Emerge
- Small drink
- Cut closely
- Shelter
- Evergreen plant
- Not of legal age
- Unfasten
- Stench
- Decelerate
- Block
- British peer ranking below a marquess and above a viscount
- Golf peg

HUMOR

Gingham Style

Leo Kraggman



Why?

Lauren Niu



Really Big Sudoku

6								3
		5	9		8		4	
	1			6		9		
	8				5		3	
9				3		2		7
		1	4					
				2		8		
5		4						
					3		1	

Answers to last week's crossword

T	O	S	S	A	T	O	M	P	O	L	E	
O	B	O	E	C	A	R	E	T	E	V	I	L
L	E	A	N	E	L	I	T	E	S	E	L	F
L	Y	R	I	C	C	E	R	E	M	O	N	Y
	O	R	B		L	O	N	E				
D	E	R	A	I	L	S	A	N	D	A	L	
S	I	P	G	A	U	D	Y	L	A	R	V	A
A	V	O	W	S	L	O	O	P	B	O	O	M
L	O	C	A	L	L	E	G	A	L	L	I	P
E	T	H	N	I	C	A	G	E	O	L	D	
	E	L	A	N		E	A	R				
C	A	R	N	I	V	A	L	F	A	B	L	E
L	O	B	E	M	E	D	A	L	N	E	E	D
I	D	L	E	B	R	I	N	E	G	A	N	G
D	E	E	D	T	R	E	E	E	D	D	Y	

Answers to last week's Sudoku

7	3	4	2	9	8	1	6	5
9	1	6	7	5	3	8	4	2
5	2	8	4	1	6	9	7	3
2	9	3	8	6	7	4	5	1
6	5	1	9	4	2	7	3	8
4	8	7	5	3	1	2	9	6
3	7	9	1	8	5	6	2	4
1	6	2	3	7	4	5	8	9
8	4	5	6	2	9	3	1	7

The California Tech

Caltech 40-58
Pasadena, CA 91125