Caltech Men’s Basketball attended the Caltech/Oxy Thanksgiving Classic over Thanksgiving break, finishing with a loss to Stevens Institute of Technology and a win against the University of Dallas. This puts them at a 2-2 record for the season thus far, making it their best start to a season since 1997. Pictured above is sophomore Todd Cramer, mid-shot in a closely lost game against Vanguard College.

Sandhya ChandraSekaran
News Editor

As Techers, we take pride in our cognitive ability and intelligence. While we may not consider ourselves different on a fundamental level, past studies have shown that a person’s IQ may have a genetic basis, and research currently underway at BGI Cognitive Genomics seeks to elucidate this theory.

Overview
BGI Cognitive Genomics is an interdisciplinary research group at BGI (Beijing Genomics Institute), which has quickly grown to become one of the largest genomics institutes in the world. By using the rapidly developing tool of DNA sequencing technology, the group hopes to answer questions about how the brain functions, how genes affect cognitive ability, and how genes and the environment interact to produce human intelligence and personality.

Recently, the team launched a new project: “A Genome Wide Association Study of Intelligence.” The study makes use of the empirically demonstrated correlation among performance on different cognitive tests to define a parameter called the General Factor of Intelligence, or g. This g has shown to be not only stable, but also heritable on multiple accounts. Additionally, g has a sort of predictive power, as it positively correlates with academic and job performance, income, and longevity when other variables such as social class are controlled.

The Caltech Connection
The project hits closer to home than one would imagine. Steve Hsu and Christopher Chang, both Techer alums, are integral members of this initiative. Both Hsu and Chang had been following the Techer alums work to decode intelligence for a very long time. Hsu explains, “This study is something I had been thinking about since I was a kid. I’ve been waiting impatiently for the technology to get to the point where we could do it. I was going on sabbatical in Taiwan last year, and noticed a bunch of press coverage -- big articles in Nature and the Economist -- on this new, ambitious genomics lab in China.

Continued on page 3

Techers alums work to decode intelligence

Helping readers burst out of the Caltech bubble

News briefs from around the globe

Need to know
< 100 words about the world this week – topics sorted from good to bad by Sam Barnett – links to full stories available at barnett.caltech.edu/news

New shopping record $52.4 billion
Black Friday weekend sales – 226 million consumers

Mars rover launched 1,982
Pound robot to look for signs of life – cost $2.5 billion

Basketball season saved 66
Games (versus 82) – players, owners will split revenue 50-50

Sanctions against Syria 19
(9 of 22) Arab League nations vote to limit trade with Syrian regime

Misspent financial aid $5.3 billion
(> 20%) given to students who do not need help

Rising violence in Iraq ≥ 11
Killed in recent bombings as US forces prepare to withdraw

Political tension in Egypt 42
Protesters killed – 3,250 injured – elections forthcoming
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

CHILLAX – A relaxation group for stress management

Mondays 12-1; October 24 – November 28, Winnett Lounge
FREE

Health education and the counseling center are proud to sponsor a 6 week to educate and teach students how to manage their stress. The group will cover time management, muscle relaxation, getting great sleep, mindfulness meditation and dealing with holiday and exam related stress. Lunch is not provided but there will be participation prizes and giveaways.

November 28 – Coping with holiday and exam stress

Are you stressed about finals? What about going home for the holidays? If yes, this final stress management group is for you. Come join Chillax, Monday November 28th from 12-1 in Winnett Lounge.

This will be the final class of this series. Prizes awarded to any participant who has come at least 3 times.

Feynman teaching award nominations

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

Here’s your chance to nominate your favorite professor for the 2011-12 Richard P. Feynman Prize for Excellence in Teaching! You have from now until January 2, 2012 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 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, 2012.

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; kkkerbs@caltech.edu) or Stacey Scoville (626-395-6320; staceys@caltech.edu) in the Provost’s Office.
Hsu, Chang seek link between genome and intellect

Continued from page 1

So I contacted them about doing the study. They were interested and we put together a team of people to go there and give a set of lectures on the subject. Meanwhile, Chang had been a loyal follower of Steve’s blog for a long time prior, and when news of such a study reached him, he was more than eager to jump on board. Interestingly enough, both Hsu and Chang completed their educations in specialties markedly different from the psychometric project they are currently pursuing. Hsu has a strong background in theoretical physics; he is a professor at the University of Oregon doing research on particle theory and cosmology. He was also a startup founder in Silicon Valley and almost went into quantitative finance like his Caltech roommates, prior to his career in academia. Chang has more of a mathematical rearing — first a software engineer at Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate — first a software engineer at Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft after his undergraduate education, he eventually pursued mathematics in his graduate studies and went on to work for Microsoft. But, in reality, the study was more of a feel for, after being in academia for some time, is to what extent one can measure brainpower and make (statistical) predictions using test results. That plays a big role in this research.”
THE PALLADIUM BOOTS STORE
NOW OPEN AT GLENDALE GALLERIA

20% OFF YOUR FIRST PAIR
OF BOOTS WITH THIS AD
FEATURE

Dispatches from the cultural front: Laszlo Fassang

CASEY HANDMER

Staff Writer

Last Sunday noted Hungarian organist Laszlo Fassang gave a recital at Walt Disney Hall in downtown LA, and I was fortunate enough to be in attendance. A former student of Olivier Latry (who is due to give a recital here on February 19th) at Notre-Dame de Paris, Fassang has distinguished himself over the last decade in both recital and improvisation. Organ improvisation is an art that dates back centuries, even millennia, to the origins of its precursor, the hydraulis, in Ancient Greece. In particular, several Persian churches and organs have dynamic compositional and improvisational traditions stretching back to perhaps the greatest organ builder of all time, Aristide Cavaillé-Coll, who revolutionized the capabilities of the instrument contemporaneously with the French chromatic period. At Église Saint-Sulpice, there were Widor and Dupré; at Notre-Dame de Paris; Viener was followed by Choron, Lefébvre, and Latry; at Église de la Madeleine tenured organists included Lefébure-Wýlę, Saint-Saëns, Debussy, and Faure. At Basílica-Catedral de América, there were Franch, Pierné, Tournemire, and Langlais. More familiar artists from this period include Chopin and Liszt, who also wrote for the pipe organ. As I had recently attended the recital of Camerl Carpenter, I was already familiar with the rather formidable capabilities of the instrument we have here in Los Angeles, and anticipated the program with an excitement bordering on the pathological. Fassang opted to play a series of pieces based on the B-A-C-H theme (B-flat, A, C, B in modern notation), which was used as a musical signature in hundreds of J.S. Bach's own compositions, providing a narrative for a journal through a few hundred years of subsequent musical thought and invention. Serendipitously, Fassang began his recital with the same piece as Carpenter, the Bach Toccata and Fugue in F Major, BWV 540. “Thus Spake Zarathustra” (‘Therefore spoke Zoroaster’). Ultimately, he died by explaining that he was playing the pieces out of their numerical order for the sake of musical cohesion, a choice that also helped place them in the context of the entire recital. Rounding out the first half was Roger’s Fantasy and Fugue on B-A-C-H, Op. 46. Although he died opera “La prophète”. Composed as a private meditation by Liszt during his pilgrimage in Weimar in 1850, it was eventually published despite almost no demand for such a challenging work, and received its premiere performance five years later. Composed of three sections and lasting almost half an hour, it

intermission, audience members had written suggestions for themes on which to base the final item of the program, and even an improvisation. Several members of the audience drew the raffle while Fassang read the results and placed as Carpenter, the Bach Toccata and Fugue on B-A-C-H, Op. 46. Although he died...
In defense of Houses: In response to Sarma, Kondos

MACKENZIE DAY
Contributing Writer

In light of the impending hazing policy and recent discussion about Caltech student life, I would like to speak about something abundantly clear: the House system. It is an overwhelmingly positive influence on students and student life at Caltech.

As many recent articles have pointed out, a substantial number of students come in to Caltech with varying social skills. Anyone trying to deny that needs a serious reality check. Imagine Caltech without the House system. For the sake of argument, let's assume the students have average or better social skills would do just fine. These students make friends easily and are able to quickly develop their own support network within the first few weeks of their freshman year of college. I am not interested in these people. I am interested in the students with underdeveloped social skills. Those students who perpetually make a bad first impression, or struggle with making conversation. We have all heard the stories. We have all received dozens of limp handshakes and endured conversations with inappropriate comments or awkward silences. Imagine these people, without the House system, trying to make friends in their first week of college. Add to that a workload possibly greater than any they have faced before, possible homesickness, and newfound independence. What about roommates? Assuming we don't assign them randomly (and I think we can all agree how terrible an idea that is) how are these people finding a good roommate if you can't have a decent conversation? Perhaps at this point you are thinking that I am being too harsh. You're thinking that, honestly, no one is so socially incompetent that they would flounder this much in their first weeks at Caltech. Maybe you're right. Then again, maybe you're wrong.

There are many reasons why I love my House. The people are amazing, the traditions are fun and bring us all together, the doors are always open. I could go on. But for the sake of argument, let's assume that, though not identical, the Houses all work roughly the same way.

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Caltech men’s basketball team posts thrilling win in home opener

from gocaltech.com

PASADENA, Calif. – In a contest that featured 11 lead changes and seven ties, two clutch plays in the closing seconds proved to be the difference in a tightly played contest as Caltech pulled out a 63-62 win over Pacifica on Tuesday evening.

With 1:09 left in the game Bryan Joel gave Caltech (1-1) a one point edge at 61-60 by making the back end of two free throw attempts. Pacifica (0-4) grabbed the lead right back on their next possession with an Alex Brandon lay-up with 44 seconds left on the clock.

During the final Beaver possession a loose ball scramble with 14 seconds remaining heightened the game’s tension. A double technical foul on a foul by Joel gave the home squad the ball while Caltech was calling a timeout.

Caltech used their long distance threats to start the game. Michael Edwards converted three shots from beyond the arc while Joel knocked home two from three-point land during the contest’s first five-plus minutes. Pacifica’s first half offense was effective down low as they posted a 26-18 edge in points in the paint. The teams went into the locker room knotted at 36-36.

Edwards led the evening’s scoring attack as the junior went for 28 points on the strength of six assists. Runkel provided a valuable spark in the post with 10 rebounds. His first career double-double (10 points, 10 rebounds).

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Caltech’s Michael Edwards, junior, takes a shot against Pacifica University. The point of basketball is to put the ball in your basket as many times as you can and stop the opposing team from doing the same. Now you know that.

Caltech’s Sarah Wright prepares for the opening tip-off on Friday night vs MIT. The Beavers pretty much fizzled out after this point in the game.

In front of a huge crowd at Braun Gymnasium the MIT women’s basketball team posted a mammoth win on Friday, defeating Caltech 100-26. The enormity of the loss was the latest setback to a team that has struggled with injuries and the loss of several key players.

The Beavers jumped out to a 6-3 lead in the first few minutes of the game, but soon found that both their offense and defense could not keep pace with the strong MIT lineup. The Engineers scored 31 unanswered points before Caltech’s Rachel Hess scored on a layup with 6:08 remaining in the half.

Although the Caltech offense returned to some semblance of form, its defense remained elusive, and the half ended with MIT leading 62-12, much to the delight of the largely MIT supporting crowd.

The Beavers failed to gain any momentum in the second half, scoring just 14 points while allowing the Engineers to score 38 en route to triple digits.

The rather abysmal affair did afford a few highlights. The game saw the return of sophomore Marilyn Moore, who has been plagued by a toe injury but still managed to score 5 points. She and freshman Bridgette Connor also led the team in rebounds with four each. Junior Sarah Wright added seven points of her own before fouling out in the second half. Rachel Hess, once again, led the Beavers in points scored with 12.

The reasons for the loss are numerous. For one, the Engineers simply outplayed the Beavers, displaying great shooting skills and more defensive energy. The Beavers seemed sluggish at times, although I’m willing to blame Thanksgiving dinner for that. I’d like to blame the referees, who did a poor job, often calling nonexistent fouls and tips, but they probably only accounted for a few lost points. Perhaps most confounding is the fact that the Massachusetts Institute of Technology is more stressful than Caltech, but we could not capitalize on their far greater strain of everyday life (I use fact very loosely here). Whatever the reason, the loss came as quite a shock to the Beavers.

Said one Caltech fan: “Oh, wow.”

Said another: “[expletive].”

Said one MIT fan: “What is this for? I don’t want my name all over the internet because of this. I don’t even like basketball.”

Hopefully the Beavers will be able to rebound from this tough loss when they play Chapman on December 3rd.
Humor

By Po Ku

Blackout!

1st week of 1st term:

There is no HW this week...

Prof.

Fresh / Prefrosh

Sigh... oh well, better luck next week...

Sophomores

Juniors

Too drunk to care

What is up with cauliflower?

It is just broccoli trying to be white.

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

tech.caltech.edu

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