



CUC expands among other campus construction

Mory appointed Vice President of University Advancement



The expansion of the Jared L. Cohon University Center broke ground last October; additions to the building include a new dance and theatre studio space and expanded fitness facilities.

BRIAN TRIMBOLI
Editor-in-Chief

Returning students will find a few things different about Carnegie Mellon when classes begin next week, in the midst of the busiest period of university expansion since its founding in 1900.

Last spring, the university began expanding the Jared L. Cohon University Center (CUC). The CUC, originally built in the mid-nineties and renamed after former university president Jared L. Cohon in March 2014, is receiving expanded athletic facilities, a new studio theater space, and other changes that are still in the works.

The improved CUC will include a new gateway to Forbes Avenue, a “front door” for the university that reinforces Carnegie Mellon’s 2012 master plan, according to Campus Design and Facility Development’s website. According to the website, “While complementary to the

existing facility, the addition is designed to be a contemporary architectural piece, incorporating materials from the existing building palette.”

Although construction for the expansion officially broke ground in October, changes to the CUC began in earnest during the spring semester. In March, after the end of the Tartan swim team’s 2014–15 season, the university closed the CUC’s locker rooms and half-sized Olympic swimming pool to begin renovations. The reopened facilities feature an improved locker room, two fitness classrooms, and a dedicated cycling studio. The pool’s air handling system will also be refurbished. Before the renovations, the CUC held only one fitness classroom, restricting the schedule of group exercise and other fitness classes.

The new studio theater, according to the website, includes “dance quality flooring” along with a lighting system, sound system, and

tension grid. Student organizations can use this space for dance and theater rehearsals and performances, as well as small concerts.

These changes come about as part of a larger effort to improve athletic facilities on campus. Although plans for the upcoming David A. Tepper Quadrangle are not yet finalized, Tepper stipulated with his \$67 million donation that the new space include athletic facilities. The university is working with architecture firm Moore Ruble Yudell Architects & Planners to design the new space, which will also include what will be the campus’s largest auditorium, a university welcome center, a technology-enhanced learning space for the Eberly Center, and the official home of the Tepper School of Business and the Simon Initiative. Over the course of the next year, university administrators will work with deans and

See **EXPANSION**, A2

LAURA SCHERB
Publisher

On Tuesday, July 28, the university announced that Scott Mory will start on as the vice president for university advancement on Oct. 1 of this year. Mory will replace Pam Eager, who has been serving as the head of the development team in the interim.

Cheri Hays, the director of the office of the president, and Michael Murphy, vice president for campus affairs, led a national search for a candidate to fill the position over the last year.

Mory, who currently serves as associate senior vice president and director of the University of Southern California’s (USC) campaign, will take the helm on initiatives such as alumni engagement and fundraising campaigns in order to provide a more stable financial future for the university.

During his time at USC, Mory helped build the campaign infrastructure that coordinated activity among USC’s 20 schools and 450 development staff. Working closely with top-level university administrators, Mory was at the helm of a campaign that recently passed the \$4.4 billion mark, making it one of the largest higher education campaigns in history.

Before he worked at USC, Mory served as assistant vice president for alumni relations and annual giving at George Washington University, where he earned his B.A. and J.D. Mory has experience both in the field of law and as an associate professor at George Washington University’s School of Law, where he taught a first-year course on legal research, writing, and oral advocacy.

Carnegie Mellon University President Subra Suresh sent out an email in July announcing the appointment,



Mory, who worked at the University of Southern California before coming to Carnegie Mellon, will begin his term as Vice President of University Advancement on Oct. 1.

saying that “Scott’s leadership, strong track record and passion will provide an important contribution to raising our advancement efforts to a new level.”

Suresh also wrote that Mory would play a key part in building the financial base that will allow the university to advance its strategic plan over the next few years as he provides the groundwork for support that faculty and students need in their work.

“This is a critical position for the university, as we seek to build our advancement team and build on recent successes. Scott’s leadership, strong track record and passion will help elevate our advancement efforts to a new level,” Suresh said in a university press release.

At a time during which the university has received several large philanthropic gifts

from notable alumni, Mory’s position will hopefully serve to continue the trend, increasing donations and engagement among both current students and alumni of all ages. “CMU is well-positioned to realize the philanthropy that will fuel its future aspirations, with its rich traditions, community of loyal alumni, parents and friends, extensive global reach and the leadership of President Suresh. I am excited to get started,” Mory said in the press release.

“As one of the world’s great research universities, Carnegie Mellon must continually challenge itself to pursue greater aspirations,” said Jim Rohr, chairman of Carnegie Mellon’s Board of Trustees, in the press release. “Scott brings experience that will play an important role in helping the university support those ambitious plans.”

CMU ECE student indicted as part of federal hacking bust

BRIAN WALSH
News Editor

In mid-July, the U.S. Department of Justice (DOJ) charged Carnegie Mellon junior electrical and computer engineering major and returning FireEye intern Morgan Culbertson for developing and distributing malware. Culbertson allegedly actively distributed malware on Darkode, a renowned online black market for malicious code. Specializing in Android security exploits, Culbertson’s malware sought mainly to steal user data from mobile phones.

An investigation of Darkode

by the Federal Bureau of Investigation led to the arrests of nearly 90 alleged cyber criminals, including Culbertson. Officials allege that Culbertson, one of the youngest among those indicted at only 20 years old, created a piece of Android malware called Dendroid. Dendroid allowed buyers of the software to remotely access Android phones.

Culbertson, who went to Shadyside’s Winchester Thurston Upper School, began developing Dendroid when he was 17. The malware could be purchased through Darkode from Culbertson — under the alias “Android” — for the Bit-

coin equivalent of about \$300, according to the *Pittsburgh City Paper*. Culbertson’s father, Robert Culbertson, is a retired Carnegie Mellon professor of entrepreneurship and founder of several successful start-up companies.

Culbertson is not the first notable hacker to come out of Carnegie Mellon. George Hotz, for example — more commonly known as GeoHotz — was well known for creating the first iPhone jailbreak, allowing users to use the phone with providers other than AT&T and install their own software. Hotz also gained recognition for his exploits with the firm-

ware of Sony’s Playstation 3, which culminated in a lawsuit from Sony.

Computer science students at Carnegie Mellon know the word hack — or hacker — very well. A hacker is not necessarily malicious, and in some situations even does good. Hackathons, for example, have co-opted the work “hack” as a term for putting together a good solution quickly, with minimal resources. Hackathons are beneficial competitions that help students learn. For Build18, an annual hackathon held at Carnegie Mellon in the spring, hackers meet in the Jared L. Cohon University

Center’s Wiegand Gymnasium. Tartan hacks, another annual hackathon at Carnegie Mellon, is put together by the student organization ScottyLabs.

Carnegie Mellon’s faculty generally trains students against hacking maliciously. In 15-213: Introduction to Computer Systems, for example, a core computer science class that provides “a programmer’s view of how computer systems execute programs, store information, and communicate,” professors stress that the curriculum is meant to teach students how to produce safer code, not exploit poorly written code.

Working for the cybersecurity company FireEye for the second summer in a row, Culbertson was supposed to be practicing that philosophy, but it became clear that he was using techniques learned from the company to develop his malware.

“Mr. Culbertson’s internship has been suspended pending an internal review of his activities. As there are ongoing investigations by external parties and FireEye, we cannot provide any further comment on Mr. Culbertson and his activities,” FireEye spokesperson Kyrk Storer said in a press release.



University continues CUC expansion



Top: Traffic on Forbes Avenue is limited to one lane in either direction because of construction. **Bottom:** The Forbes Avenue side of the Jared L. Cohon University Center is still under construction, pending completion in 2016.

EXPANSION, from A1

department heads to real-locate classroom space with these expansions in mind.

The Tepper Quadrangle, although it will not be completed until fall 2018, also has more immediate implications for campus life. The Quad, planned to be 295,000 square feet spread across four-and-a-half acres of university property, will displace Spring Carnival, which until this year took place on the Morewood Gardens parking lot.

This year's Spring Carnival will be the first to be spread across the College of Fine Arts lawn and parking lot. Booths will be on the parking lot, while Carnival rides and attractions will be on the lawn. Members of the university's administration proposed the CFA lawn and parking lot after looking at several other options and narrowing down the list through extensive research, meetings with student organizations such as AB Concerts and Student Senate, and town hall meetings to garner the opinion of the student body.

The university also announced in June that it would

be "moving toward a unified campus" by "undertak[ing] a project to connect the portions of campus north and south of Forbes Avenue, while completing a unified vision for the Cut." According to a campus-wide email from Vice President for Campus Affairs Michael Murphy and Vice President for Finance and Chief Financial Officer Amir Rahnamay-Azar, this project will expand the Purnell Center for the Arts to the north, toward Forbes Avenue.

"The largest element will be a structure extending from the Purnell Center to the north," the email says. "A part of the university's master plan for more than a decade, this addition will visually match the Cohon University Center side of the Cut, providing a natural campus entry point and seamless connection to the new Tepper Quadrangle to the north. The structure will house a faculty gathering space and offices that will free space elsewhere."

The expansion will also include a "town square," a space meant to provide a "safe and pleasant" crossing for Forbes Avenue and an "outdoor gathering space linking the Cut to

campus facilities to the north." The university sought proposals from architecture firms over the summer to plan this addition.

The university is also planning to expand along the Forbes Avenue corridor toward Craig Street. In a campus-wide email in April, Vice Provost for Research Farnam Jahanian outlined a plan for a plot of land on the south side of Forbes Avenue, near South Craig Street. This development, located next to the Carnegie Museum of National History and the Carnegie Museum of Art, "could include research space for faculty and students, space for external partners, labs and studios for collaborative industry-academia use, office space, a quality hotel, parking, and some retail space. It would build on the momentum of the adjacent Mehrabian Collaborative Innovation Center and serve as a new gateway to our campus from the west," Jahanian wrote in the email.

This development is part of the university's plan to create a new "innovation corridor" along Forbes Avenue, one that could "rival the major hubs of innovation around the world,

and make Pittsburgh and Carnegie Mellon University a magnet for talent and an axis for ideas that have global impact."

Hamburg Hall is also in the midst of a renovation, and the university is continuing construction on the Sherman and Joyce Bowie Scott Hall. Scott Hall, nestled between Hamerschlag and Wean Halls and scheduled to be completed in 2016, will be the home to Carnegie Mellon's growing Biomedical Engineering Department, nano fabrication, and the Wilton E. Scott Institute for Energy Innovation. Scott Hall will "house wet and dry laboratories, collaborative and office spaces, a cafe, and a 10K SF cleanroom facility," according to Carnegie Mellon's department of Campus Design and Facilities Management.

Currently the North side of Forbes Avenue, in front of the Morewood Gardens parking lot, is under heavy construction after a water main break in early June. The construction has reduced Forbes Avenue between Morewood Avenue and South Craig Street to one lane in either direction, hindering the flow of traffic through Oakland.

NEWS IN BRIEF

CMU's UDream receives national recognition

Carnegie Mellon's Urban Design Regional Employment Action for Minorities (UDream) has recently received national recognition. UDream is an 18-week intensive program offered over the summer and in the fall at Carnegie Mellon. The program gives minority students a hands-on taste of urban design, with the goal of keeping them in Pittsburgh.

UDream was recognized twice this year by the American Institute of Architects (AIA).

At the organization's 2015 Grassroots Leadership and Legislative conference in Washington, D.C., the AIA recognized UDream for its innovative method of diversifying Pittsburgh's urban design industry. The AIA also recognized UDream as a Diversity Recognition Program at the AIA National Conference in Atlanta.

Many UDream alumni have stayed in Pittsburgh to implement new concepts for neighborhoods, work with local architecture firms, and

participate in the local chapter of the National Organization of Minority Architects (NOMA). The local chapter of NOMA is an example of UDream's impact on the city — before the program began, Pittsburgh had lost its NOMA chapter because the city had so few minority architects.

Ashley Cox participated in UDream after graduating from Howard University with an undergraduate degree in architecture. When Cox arrived at UDream, she and a team of other students were charged with planning a residential corridor in the Hill District.

"It's thinking about what makes a community a community," Cox said in a university press release "How do you develop a new thing that resonates with what was there?"

The program also includes a 12-week internship, which allows students to gain valuable real-world experience as architects and urban planners.

CIT conducts national survey on device trust

Carnegie Mellon's College of Engineering recently conducted a survey of over 2,000 U.S. consumers. The survey asked participants to rank the 10 electronic devices that they trust the most with their personal information.

Consumers are generally more likely to trust items in the home. At the top of the list were items like home phone and home security system, while items like cell phones, laptops, desktop computers, and tablets were at the bottom.

Results also differed by factors such as gender and age. Men are more likely to trust electronics in their car than women are, and young adults (18–24 years old) are more likely to trust their smartphones, compared to

older users.

Ken Mai, a systems scientist in Carnegie Mellon's Electrical and Computer Engineering Department, is working to create low-cost, hardware-level methods of securing electronics against malicious attacks.

"When users think about the security of their electronics, most are concerned with their software and the Internet," Mai said in a university press release. "But it's critical that users consider the security of their hardware, too. Security vulnerabilities in hardware can be just as dangerous (if not more so) as software breaches, and are usually much harder to fix."

Compiled by
BRIAN TRIMBOLI

WEATHER

| | | |
|----------------|------------------|-----------------|
| TUESDAY | WEDNESDAY | THURSDAY |
| | | |
| 77° / 54° | 76° / 54° | 78° / 54° |
| FRIDAY | SATURDAY | SUNDAY |
| | | |
| 83° / 56° | 87° / 60° | 88° / 61° |

Source: www.weather.com

Corrections & Clarifications

If you would like to submit a correction or clarification, please email The Tartan at news@thetartan.org or editor@thetartan.org with your inquiry, as well as the date of the issue and the name of the article. We will print the correction or clarification in the next print issue and publish it online.

Compiled by
LAURA SCHERB

Campus Crime & Incident Reports

Suspicious Person

August 7, 2015

University Police were dispatched to the university bookstore after receiving a report of a suspicious person. The person was described as a black male around 40 years old and 5 feet 10 inches tall, with a beard, wearing a grey T-shirt and white shorts. University bookstore staff said that the man was carrying textbooks under each arm, and told the staff that he was trying to replace his sister's damaged textbook, but did not remember the name. After being told that the textbooks were not yet for sale, the man put them back and left the store.

Bicycle Theft

August 7, 2015

A Carnegie Mellon student reported to University Police that his black and gray Trek hybrid bicycle was stolen from Morewood Avenue on Aug. 6 at 1 p.m. When the victim returned to his bike the next day, he found that it had been unlawfully removed.

Bicycle Theft

August 7, 2015

University Police were dispatched to the bicycle racks by the Mall after receiving a theft report. A student told officers that he had secured his black

and blue Trek hybrid bicycle to the rack in the morning, and when he returned that evening it was gone.

Domestic Incident

August 8, 2015

University Police were dispatched to Fairfax Apartments after receiving reports of a domestic situation. Upon arrival, officers determined that an ex-boyfriend and ex-girlfriend were arguing. The situation was resolved by the ex-boyfriend agreeing to stay elsewhere for the night. No charges were filed as a result of this incident.

Public Drunkenness

August 9, 2015

A security officer contacted University Police after observing an intoxicated male outside of the Quiznos on South Craig Street. When University Police officers arrived on the scene, they identified the man as a non-affiliate. After doing a welfare check, the officers released the male into the care of a sober friend. No citations were filed as a result of this incident.

Compiled by
BRIAN TRIMBOLI

NATIONAL NEWS IN BRIEF

Republicans hold first debate in 2016 primary race

The Republican Party held its first major debate of the 2016 primary races on August 6 in Cleveland, Ohio. Co-sponsored by Fox News and Facebook, the debates featured the top-ten highest polling candidates of the race: Donald Trump, reality-TV star and billionaire; Ben Carson, neurosurgeon; Jeb Bush, ex-Florida governor; Scott Walker, governor of Wisconsin; Mike Huckabee, governor

of Arkansas; Ted Cruz, Texas junior state senator; Marco Rubio, Florida junior state senator; Rand Paul, Kentucky senator; Chris Christie, governor of New Jersey; and John Kasich, governor of Ohio. The debates were moderated by Bret Baier, Megyn Kelly, and Chris Wallace, and watched by nearly 24 million American voters. The debates featured questions asked by the moderators and, additionally,

questioned asked by viewers on Facebook, both through video submissions and text comments.

The candidates wrestled with each other and the moderators over issues of abortion, border control, political experience, international relations, and welfare. The next debate will take place on Sept. 16, and will be sponsored by CNN.

Source: Fox News

California drought rages on; wildfires begin

The drought in California has continued over the summer and is now well into its fourth year with no sign of letting up. While the state operates under water restrictions, wildlife is withering away, crops that supply the entire country with food are drying up, and wildfires are burning in the Sierra Nevada. Recently released research has shown that scientists believe that the drought has been furthered and intensified by the

rising temperatures that are a consequence of climate change. They say that the next two years could be the most brutal in California's recent history, and that up to 2,000 rural wells have dried up in the meantime.

Source: KCRA Sacramento

Congress to vote on nuclear deal

By September 17, Congress must vote to either approve or reject a deal that the Obama Administration has fashioned with Iran. The deal would curb Iran's nuclear programs, but with some concessions.

House Republicans have already formally introduced a resolution of disapproval.

Source: NPR

Compiled by
LAURA SCHERB



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Forum

FROM THE EDITORIAL BOARD

Lean on friends for transition back to school

For most students, the end of the summer and the start of the school year come with a heavy supply of mixed feelings.

On one hand, you're probably sad to be leaving behind the relative freedom and low stress of vacation—not to mention the warm weather. However, you're also likely excited to reunite with school friends, take some intriguing new classes, and dive back into extracurriculars that keep you the best kind of busy.

While there are pros and cons to the back-to-school shift, every student deserves to return to Carnegie Mellon life with minimal melancholy and maximum enthusiasm. There are several things you should keep in mind to ease the transition.

First, friends are your most valuable resource. During the summer, at-home friendships tend to have a more relaxed tone, since no one has deadlines hanging over their heads and you can concentrate on catching up and having fun. Now, you and all of your college friends are in the same, more stressful boat; sadly, you can no longer stay up all night just

chilling without academic consequence.

Instead of mourning that fact, reshape the dynamics of your friendships around it to make school both easier and more enjoyable. Studying and working with your friends, or even in the same room as them, is usually a good way to encourage productivity. Share with them what's exciting you about your classes in order to amp up your own excitement. Coax out the inner intellectual you've likely spent a few months neglecting by bouncing new ideas off of them. When you're all helping each other adjust to an academic mindset at the offset, you can avoid the trap of starting out with the bare minimum and getting bogged down by responsibilities later.

That said, also spare some time for living a little. Even though fun and relaxation won't reach peak summer levels, don't go cold turkey on everything good in life either. You would be doing yourself a major disservice not to leave some wiggle room in your schedule for improvisation, especially during the early

adjustment weeks of the semester. Spontaneous activities can include everything from 10-minute study snack breaks, to Friday movie nights with the floormates, to embarking on a grand Pittsburgh adventure.

In your late teens and early twenties, your potential has never been greater. Why not make good on some of that potential? Cultivate new experiences, collect some stories, and remember that "student" doesn't have to be the end-all, be-all of your identity.

At the same time, remind yourself why you are a Carnegie Mellon student. It's more likely than not because you have a passion for your academic field or fields. It's easy to moan about the stresses of student life, especially when you've just had a long respite from them. But there's also something incredibly joyful about being in an environment filled with smart, dedicated, passionate people on the hunt for discovery. Each and every one of you is lucky to be here. Internalizing that is the best way to hit the ground running this new semester.

Make connections with your professors



Eunice Oh/Art Editor

GORDON ESSTES
Staffwriter

"They won't let you do that in college."

Do what, exactly? Use a calculator? Bring notes? Ask for an extension? According to your teachers in high school, there are a whole lot of things that "they" won't let you do. But the truth of the matter is simple: Now that you're in the big leagues, there are few things that your professors won't let you do.

That doesn't mean that you can come to class drunk, start swinging from the lights, and throw things at the TAs. What it does mean, though, is that you are now the only person in the world responsible for your own education. Your math professors probably won't have a problem with calculators, but if you don't actually know the material, that's your own fault — your problem, not theirs.

But professors do care. They want you to succeed. And, probably, so do you. The question is how.

Professors might not demand a lot, but they expect more than they let on. Let's get the obvious out of the way: Come to class and do the work. Nobody's taking attendance anymore, but if you miss lecture, you won't be very happy when finals roll around.

Professors also want you to at least try to pay attention. Class can be boring sometimes — any high school graduate has learned this a dozen times over — but let's face it: You're no longer here by law. You're here to learn, so at least try to interface with the material. If you find yourself drifting, ask yourself why. Are you feeling lost? Do some extra preparation.

Snacking in class is generally fine. Most professors won't care if you get up and go to the bathroom in the middle of a seminar. Want to use your laptop in a lecture? Probably okay. But if you find yourself bringing a small army of electronics wherever you go, it might be good to ask yourself if your "boredom" isn't just a method of self-distraction.

It also doesn't hurt to realize that your teachers are giving up their time to teach you; browsing Facebook or Reddit might be more entertaining than Hooke's Law, but

you're wasting both your time and your professor's.

That's not to say that everything lies on your shoulders alone. Your professors have a right to expect certain behaviors from you, but it's a mutual relationship. You have the right to expect certain things from them in return, such as consistency. Most professors make a game plan, paste it at the front of their syllabus, and stick to it from the first lecture to the last. Familiarize yourself with it. Know what to expect, and get to work preparing for it.

Professors also try to make themselves available to you, so make use of it. Go to office hours. Most of your TAs, at least, will be actively invested in helping you succeed — why not help them help you? It won't do you a drop of good if you're cramming in the library at 5:30 p.m. instead of hanging out at Homework Center with your TAs. If you're struggling, ask how you can improve or what you should expect on upcoming assignments.

A relationship with your professors and TAs can prove rewarding in other ways as well. If they're in a department that you're interested in, ask about opportunities to get involved in extracurriculars, research, or internships. Get to know people — but as Dale Carnegie (author of *How to Win Friends and Influence People*) noted, do so willingly. These people have a wealth of experience that they can share with you. Try your best to be genuinely interested in other people, and they'll be happy to return the favor.

So that's what you want from your professors. What *should* you want? At college, you gain more than just knowledge — you also gain the ability to use and care about that knowledge. Taking 15-150 might teach you SML syntax, but the professor will instill in you a passion for functional ideas and programming. Learn to care about what you're learning, and take every opportunity to better your chances of success.

And if that's not enough, then consider this: Carnegie Mellon is a competitive, hard-working, and, ultimately, expensive school. So the next time you want to skip out on a biweekly morning lecture, just remember: You're paying to be here. So suck it up, go to class, and learn.



Courtesy of Gage Skidmore via Wikimedia Commons

Governor of New Jersey and one of many Republican presidential candidates, Chris Christie.

As the calendar flips to September, major news outlets descend upon each poll that is released, dissecting the results and evaluating the effectiveness of the campaigns of the 22 candidates for the commander-in-chief of the United States. The candidates dig their toes into the party line, attempting to sway primary voters to back their campaigns.

September is an important time in presidential elections. Labor Day is often cited as the point that polls begin to carry significant weight and the public's focus turns to the election. Of course, that is referring to Labor Day of 2016 and the general election. For the presidential campaign to take up this much of the news media's airtime more than one year out is not just absurd and annoying — it has real consequences.

The first problem is that "election season" halts the political process. A good example is Obama's Iran Deal. While diplomatic outreach to enemies is often controversial, it also usually gains at least some bipartisan support. No one wants Iran to have nuclear weapons, and many people see a deal — especially one jointly negotiated with several allies — as a meaningful alternative to war, which is unpopular with both parties. Instead, the deal has become one of the most politically polarizing points of Obama's presidency as the

Republicans look to foster ill will towards the president and undermine the Democrats on foreign policy, an issue where the Democrats are often more popular.

A second problem is that the election season being this long is a result of the blatantly undemocratic primary system. The system itself is incredibly opaque and easily changed, which gives the party conventions far too much say over who becomes president. The concept of "early voting" states like Iowa and New Hampshire gives undue attention to issues only important in those states, as opposed to other issues, such as corn subsidies.

A more compact primary would force presidential candidates to appeal to all party voters, not just ones in states that happen to be early enough to matter. While some people say this gives some citizens a chance to meet the candidates, there's no reason that looking for grassroots support through meet and greets in a more condensed series of primaries and caucuses would be impossible; they would just meet with more geographically diverse voters.

Further, it also prevents candidates like Senator Lindsey Graham (R-SC) from running on single issues (in this case excessive hawkishness) in hopes of pulling more likely candidates to their preferred positions.

This is a waste of media airtime and votes that occur before the candidate inevitably drops out.

Some people say the long election season gives people more time to know the candidates, because it gives those running a chance to get their names out there. This argument relies on the idea that primaries tend to be more substantive, while general elections tend to be about getting entrenched voters into the booths. This argument is flawed, however. Very few candidates have rolled out meaningful and specific policy proposals at this stage, and will not do so until they have a safety net of some delegates after early voting states. They get their ideologies out, but those "ideologies" change so quickly as the issues meaningful to the public and the most popular positions shift that it becomes harder to reconcile the beginning of a political campaign with the end of it the longer election season goes.

A condensed primary would cut down on the amount of time candidates have to "evolve" and provide a more democratic system through more equally impactful and more informed votes. It would also cut down the years of our lives we lost while contemplating Donald Trump as the president. That sounds like a win-win.

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* Denotes executive committee member



LETTER TO THE STUDENT BODY

Student Government, cabinet ready to tackle the new year

JR MARSHALL
Student Body President

Dear Campus Community, it is so good to be back on campus and breathe in that good ole muggy Pittsburgh air again! The energy here is already insatiable; the excitement for the year is downright palpable.

When I look at the year ahead in terms of leading the student government, I consider it important for me to summarize the numerous efforts already set forth by our Cabinet team. We're very lucky to have a devoted and motivated group of students from every corner of campus excited to help my vice president Jibby and I make Carnegie Mellon a better place for every student. The following is just a glimpse of several efforts already underway from within our President's cabinet.

Rachel Freer has been coordinat-

ing programing with Jess Klein, our coordinator of gender programs and sexual violence prevention, to ensure our incoming first years begin their Carnegie Mellon careers as active participants in our campus movement to completely eradicate sexual assault and relationship violence.

Siriana Abboud and the alumni association are working together to help our newest students get to know Carnegie Mellon through webinars and get-togethers. Siriana is also organizing student-faculty mixers to take place on campus to establish more personal relationships with our incredible faculty.

Thomas Preite is currently organizing several town halls to take place over the course of the semester. Jibby and I want to be the utmost advocates for every student point of view. We therefore aspire to better engage our community through student government and these student-

centered town halls.

Jamie Earnest and Carnegie Mellon INSPIRE are getting several student projects off the ground through cross-collaboration and student government assistance

We will also be sure to utilize our marketing team, led by Jennifer Han and Gwen Luvara, to keep the student body up-to-date on our progress.

Our cabinet is already doing and will continue to do tremendous service to our school, but we also need the participation of the student body now more than ever.

In order to make Carnegie Mellon University a happier, healthier, and safer community for every student, Jibby, myself and the Student Government need your input and for your voice to be heard. Attend our town halls, reach out to us at any time, and most of all, have an amazing start to the year.

Trump makes poor showing in Republican primary debate on Fox

IAN TANAYA
Assistant Sports Editor

On Aug. 6, during the first (technically second) Republican presidential debate, Fox News anchors Megyn Kelly, Bret Baier, and Chris Wallace worked as moderators to challenge each of the top ten Republican candidates with individually tailored questions.

For instance, Governor Scott Walker (R-WI) was asked a question about the recent bill he signed into law banning abortions past 20 weeks, even in cases of rape, incest, or severe fetal anomalies. Governor Chris Christie (R-NJ) was asked why the nation should trust him with the economy when New Jersey under his terms in office ranked 44th in the nation in terms of job creation. Ben Carson was pointedly asked why, without any political experience, he could be trusted with the nation's highest office. Yet, none of these tough, targeted questions drew more ire and controversy than those asked to Donald Trump.

The businessman and current leader in the Republican field immediately found a target on his back when Baier opened the debate by asking if every candidate could promise to support the eventual nominee. Although directed to all the candidates, the question clearly targeted Trump, who has been considered most likely to make a third party run. Baier made it clear that his doing so would presumably hand the presidency to the Democratic nominee.

A question on immigration, the topic that has been the largest source of Trump's political strength, was answered fairly well and received applause from the undoubtedly conservative audience. However, a question that Kelly asked regarding Trump's views on women has become the center of conservative backlash following the debate.

Kelly quoted Trump on his previous characterizations of women as "fat pigs," "dogs," and "slobs." Though Trump attempted to defuse the situation by joking that those insults were only against Rosie O'Donnell, Kelly would not be swayed. She pressed on with her question and asked how he would answer these charges to Hillary Clinton, who would presumably charge him as a prosecutor of the "War on Women" and declare him unfit to be president on those grounds alone.

Trump initially answered fairly enough for his political message: that he has no time to be politically correct and that the nation needs leaders who act rather than worry about every word they say. He then went on to personally attack Kelly, drawing the ire of the audience watching the debate.

The post-debate backlash was immediate. Many Republicans were quick to criticize the entire debate, claiming that it had been far too tough on the candidates and that the Democratic debates would not have such hard questions from debates

hosted by the mainstream media. Rush Limbaugh and Glenn Beck in particular scathingly criticized Fox News, claiming that the questions asked would hurt the Republicans in the general election. Undoubtedly, most of these criticisms were fueled by the apparent bias against Trump, beginning from Baier's question at the start to Kelly's question about his stance on women.

Most of the criticism comes down to Republicans' fear that they have been abandoned by the one major television network they trust. Fox News has long been considered the Right Wing's primary source for news, and will likely always be. However, longtime critics of the network praised the debate coverage, as they should. In presenting tough, targeted questions to the candidates, critics could not dismiss them as propaganda from the mainstream media.

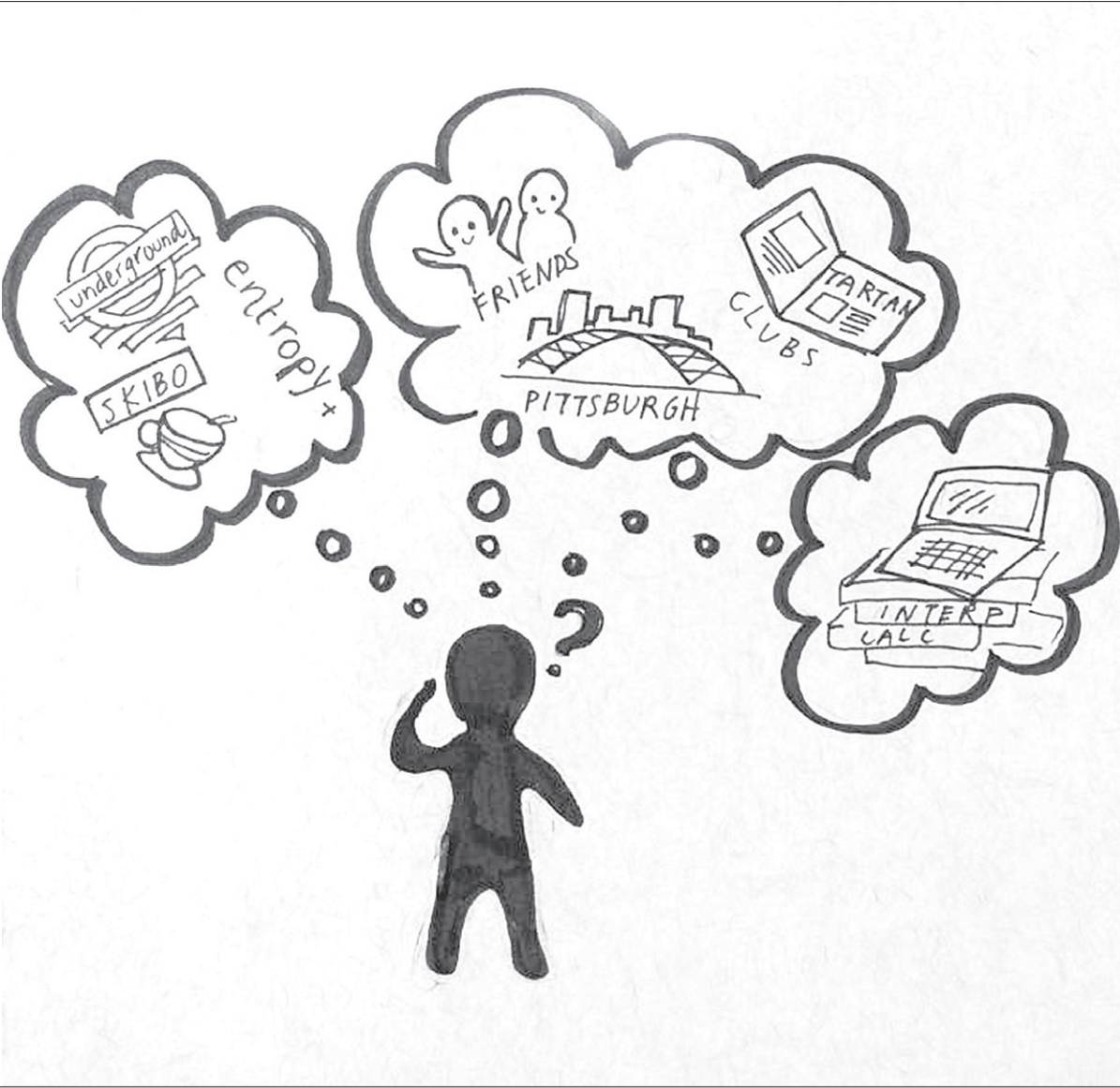
The presidential debates have long been considered the most important component of the electoral process, and the moderators that mediate them should not pull their punches. If the Republican candidates are unable to answer controversial questions on a network favorable to the Right in front of a conservative audience, they will be very unlikely to maintain their poise when the time comes for a true challenge.

After the debate, Donald Trump continued his tirade on Twitter, preaching his victimhood in the Fox News hit job to whomever would listen. His most ardent supporters have filed a petition to remove Megyn Kelly from future debates out of pure spite. He has continued to utilize his singular brand of political incorrectness to describe the issues facing the nation.

While political correctness may be overrated, the continued popularity of a candidate with almost no substance is appalling. The backlash against Fox News from conservatives and particularly from supporters of Trump makes it clear that Fox News did its job right. It provided a forum for debate that presented all the candidates to voters and uncovered details about the candidates that have caused voters to re-evaluate their support.

Moreover, it exposed Donald Trump for who he is: an opportunist who will lend his support to whatever side benefits him most, not a leader who could fulfill his campaign slogan ripped directly from Ronald Reagan. He has been shown to be petulant and angry at anyone who dares challenge his talking points. He has demonstrated that he has no way of backing up his bold rhetoric with action, the same trait he decries in other politicians. At the same time, his lack of substance has served to contrast him with other, more suitable candidates.

Trump will still have plenty of support, but his road to the Republican nomination has been greatly damaged by his own words and actions.



Louise Zhou/Staff Artist

SATVIKA NETI
Staffwriter

"You have to choose" is a myth that well-meaning people tell us throughout our lives. Choose a major, choose a career, choose a goal. "Because you can't do it all," they say. I'm here to tell you that you can. But I'm also here to tell you that you don't have to.

Carnegie Mellon can be a hard place sometimes, especially at first. You're not the smartest kid in the room anymore, and that can be shocking — it was for me. I spent a lot of my first semester lying in bed watching *How I Met Your Mother* because I didn't think I was good enough to do anything here.

What I learned, though, is that everyone at Carnegie Mellon is here because they're passionate — about learning, about the world, about their chosen field of study and often many fields outside it — and that if you can stand out at this school, you can stand out anywhere. Here's how.

First of all, get up. Get out of bed. You are made up of the universe, so you can do this. I know that it's warm in your bed, but do you know what's warmer? That classroom that never turns down the heat, that's what — and hey, you might get bonus points for being in class!

As much as you'd like to believe otherwise, it's impossible to do 10 hours of work in three hours. Pace yourself with five-minute breaks every hour or so. Even if you just spend them groaning loudly at your books or looking longingly at your bed, those five minutes are integral to getting back on track and finishing the work you have to do.

Take time away from drowning in work to be around people you like. It's worth it to spend an hour or two

just talking with someone, whether they're an old friend or a new friend or a stranger at the coffee shop that randomly makes conversation with you. Even if you have work due later that night, you'll like yourself more when you get around to it.

Feel free to whine about how much you have to do. Whine to everyone. Whine to your mother, your roommate, your friend, that random person serving you coffee, yourself, I don't care — just do it and do it often. Not only is whining stress-relieving, but it can also help you to formulate a good mental checklist of what and how much you have to do; it's a great way to get yourself in gear.

Blocking yourself off Tumblr or Facebook or your chosen Internet poison is not actually as effective as it sounds, because you'll inevitably end up back on there. You'll end up back there a lot. You will always find distractions. The key is to put the phone down, click out of the tab, or at the very least give yourself a deadline of how long you can take a break, and then stick to it. You don't want to be that person stuck in the library at three in the morning finishing a paper you could have had done by midnight if you hadn't been scrolling through Reddit instead.

If you drink coffee or tea, make friends with the baristas at the coffeshops on campus. They'll always make your coffee just right and sometimes write cute messages on your cup, which is a great pick-me-up if you're having a bad day.

Work in groups. I can't stress this one enough. Not only will you actually work because people will hold you accountable, but you'll also improve your understanding of the coursework when you have to explain things to others and you can get things explained to you.

Make friends with your professors and talk to them about your life. They actually care, I promise. During the last week of classes, ask them all the questions you ever wanted to ask, even ones as personal as "Why are you a Republican?" You'll get interesting answers.

Take time to help other people with their homework, even if you're done with it and you have 10 million other things you need to be doing. Trust me, eventually you will need help on the homework and they will have 10 million things they need to be doing — they'll stay to help you.

If you need a day to lay in bed and do nothing, and you will absolutely need those days, take some time off. But just a day — okay, maybe two days.

Keep your surroundings clean. You'll be more motivated to do things when you don't have to look piles of papers, laundry, or dirty dishes.

Go out and see the city. Pittsburgh is a wonderful place to live, and there are amazing things happening right off campus. Even if it's just to go to half-price in Oakland, get out of the Carnegie Mellon bubble.

You'll hear a lot about "stress culture" here: the idea that if you're not doing more than everyone else around you, you're not doing enough. It's a real thing, and it's perpetuated a lot — don't fall victim to it.

Find something that you love doing here; if you want, find multiple things! Even though you can do it all and you don't have to choose one thing over another, don't feel that you need to do more if it's negatively affecting your physical or mental health.

Most of all, remember that you are doing enough. Remember that you are enough.



Maegha Singh/Staff Artist

Science & Technology

Researchers find rate at which developing brain prunes connections

JOSH BROWN
Staffwriter

The human brain, a network of billions of neurons that makes a myriad of computations every second, is analogous to an immense computer. By studying this naturally occurring computer, researchers can draw conclusions and apply them to artificially engineered computers, using the study of biology to enhance our understanding of computer science and vice versa.

Recently, faculty members at Carnegie Mellon have conducted studies with researchers from the Salk Institute for Biological sciences, demonstrating the link between computer science and biology by comparing the process of network creation in the brain to that of artificial computers.

In the simplest sense, a network is a series of connections that allow communication and data transfer. For example, the brain is a network of neurons, and the internet is a network of computers. Engineered

networks can also be infrastructural — railroads and pipelines are also networks. These artificial networks have traditionally been built from the ground up, starting with very few connections and gradually making more. The brain, however, builds its network in the opposite direction. During early development, the brain starts out with too many connections, called synapses, and undergoes a process called pruning, which trims down the number of synapses and increases the brain's efficiency.

“When you build a network by pruning, you over-connect and then pull back,” explained

Alison Barth, a professor in Carnegie Mellon's biological sciences department and a member of the BrainHubSM initiative. “It seems wasteful to make all of these connections and then

prune, but even though it is costly, there are huge advantages to how the pruned network performs.”

To come to this conclusion, Barth worked with Saket Navlakha, an assistant professor at

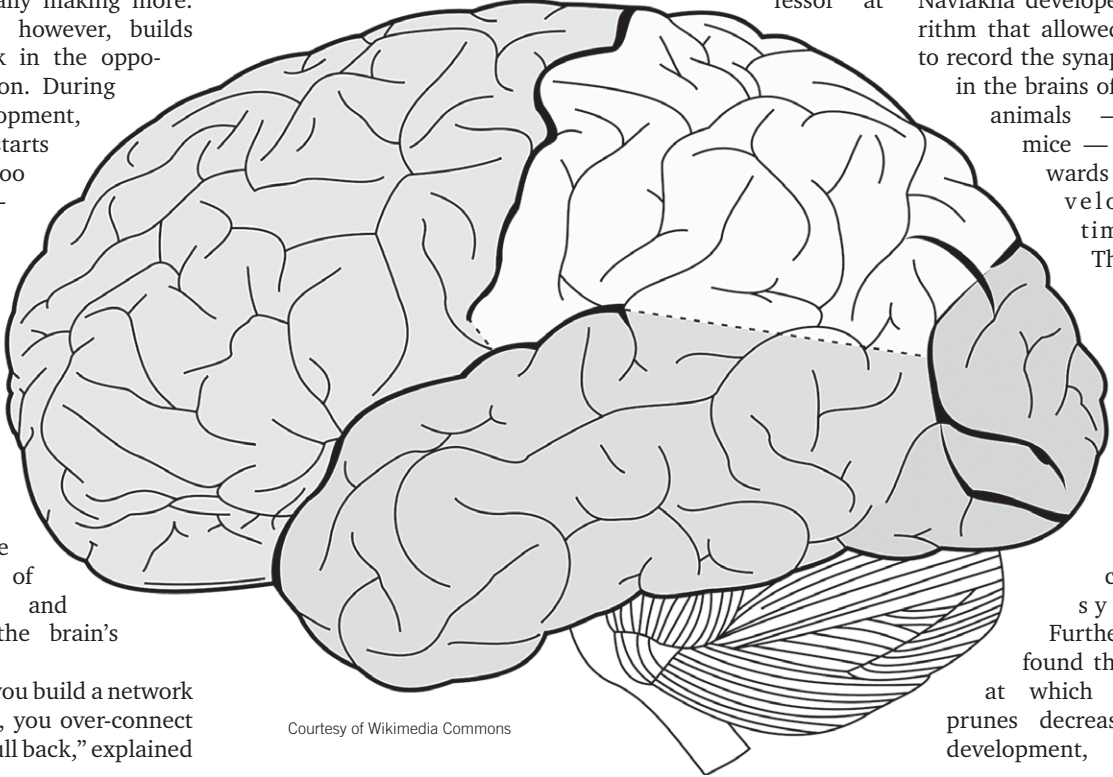
the Salk Institute's Center for Integrative Biology, and Ziv Bar-Joseph, an associate professor in Carnegie Mellon's Machine Learning Department and Lane Center for Computational Biology. Navlakha developed an algorithm that allowed the team to record the synaptic density in the brains of 41 sample animals — namely mice — across upwards of 16 developmental time-points. The data determined that, during development, the brains lost nearly 50 percent of their synapses. Further research found that the rate at which the brain prunes decreases during development, meaning

the brain aggressively trims connections early in development, and decreases the rate of pruning over time.

Through further experimentation, the team also determined that pruned networks were more efficient and robust than the traditional ground-up model. While it may not be cost-effective to put this knowledge to use in infrastructural networks, there may be further applications in the realm of computer optimization. In the wake of this project, Barth said that there is still a long way to go before the brain and its processes can be truly understood.

“One thing that still remains unknown,” she explained, “is exactly what computations neural circuits are carrying. We don't know what the little calculations are at each small step.”

The one thing that is certain, however, is that the fields of biology and engineering are innately linked, and provide tremendous potential for future interdisciplinary discovery.



Researchers find a more effective way to administer chemotherapy



JULIA NAPOLITANO
Assistant Scitech Editor

Researchers from Carnegie Mellon University, the Industrial Technology Research Institute in Taiwan, and the University of Pittsburgh have

discovered a way to more effectively administer platinum-based nanodrugs that treat cancer by reducing their toxicity and improving their bio-availabilities. Platinum-based drugs are commonly used in various chemotherapies which

treat many types of cancer, but they, like other chemotherapy drugs, have adverse side effects. Most notably, they are redirected to the liver and spleen by a part of the immune system called the reticuloendothelial system (RES).

“The body's immune system, especially the liver and spleen, has been one of the biggest stumbling blocks in developing nanoscale chemotherapy drug delivery

SHARON WU
Staffwriter

Today, more than 3 billion people are connected to the World Wide Web, making the digital realm an ideal place for marketers and advertisers to promote their products, services, and opinions. Ever since the first clickable web ad was sold in 1993 by Global Network Navigator to a San Francisco law firm, online advertising has been advancing, to the point where online ads can be customized to fit a user's interests and needs. But as online ads have become more specifically tailored to each user, researchers suggest that advertisers unfairly target users of a particular demographic.

A recent study conducted by a team of researchers including Anupam Datta, an associate professor of computer science and electrical and computer engineering at Carnegie Mellon University,

focused on Google ads shown to users with different ad settings. Datta's study of Google online ads is part of an overarching goal to learn more about the scientific foundations of security and privacy. Datta started the project with Amit Datta, a doctoral student in Carnegie Mellon's electrical and computer engineering department, and Michael Tschantz, a former doctoral student at Carnegie Mellon University who is currently a researcher at the International Computer Science Institute at the University of California, Berkeley.

In their study, the research group used AdFisher, a tool they designed to run automated experiments on customized ad settings. The tool runs 1000 browsers, simulating 500 female users and 500 male users. The gender of each simulated user was marked on Google's Ad

SCITECH BRIEFS

New technology improves detection of blood clots

Currently, there is no one method used to locate a blood clot in the body. Instead, ultrasound, magnetic resonance imaging, and computed tomography are used to view the legs, heart, and lungs, respectively. A team of researchers at the Martinos Center for Biomedical Imaging at Massachusetts General Hospital, including faculty member Peter Caravan, has developed a new method that could identify blood clots in the body with a single full-body scan.

Caravan's team created a blood clot probe by attaching a radionuclide, which can be detected anywhere in the body by positron emission tomography (PET), to a peptide that binds specifically to fibrin, which is found in blood clots. The team tested several probes with various radionuclides in rats, and is now focusing on the fibrin binding probe #8 (FBP8) that uses copper-64 as the radionuclide and has been determined to be most efficient. The team hopes to begin human testing in the fall.

Source: Science Daily

Curbed carbon emissions could save farmers billions of dollars

Economist Brent Boehlert, a research affiliate of MIT, along with a team of researchers, has estimated that curbed carbon emissions could save farmers billions of dollars by 2100 by reducing the frequency and severity of droughts.

Boehlert and colleagues analyzed the effect of temperature and rainfall changes on droughts, and estimated that farmers will save approximately 980 million dollars annually by 2050 if large-scale carbon emission cuts are made that keep atmospheric carbon dioxide concentrations below 500 parts per million (ppm), as opposed to 1750 ppm, which is the expected atmospheric carbon dioxide concentration if no measures are taken. Less drastic cuts that keep carbon dioxide concentrations below 600 ppm would save 390 million dollars annually.

Source: Science News

Flexible electronics offer wide variety of applications

Researchers at the Air Force Research Laboratory at Wright-Patterson Air Force Base are now able to replace rigid circuit boards with flexible electronics by placing a thin silicon integrated circuit, only a few hundred nanometers thick, on a bendable plastic-like substrate.

This bendable format allows circuitry to be placed in tight spaces or curved surfaces, such as airplane wings or a person's skin. The research team at the Wright-Patterson Air Force Base are looking into a variety of applications for this new technology, including aircraft applications measuring stresses and strains. The same technology is also being investigated as a way to monitor pilots' health. A wearable biosensor patch that monitors the body's heartbeat, hydration, and temperature could indicate fatigue or cognitive problems. In both cases, information could be relayed to a ground crew through the use of a small embedded antenna. The system could also monitor conditions of bridges and other infrastructure.

Source: Science Daily

Chinese writing on cave helps predict drought

Sebastian Breitenbach, a climate scientist at the University of Cambridge, along with a group of researchers, has found writing on the wall of Dayu Cave in the Qinling Mountains of central China that records information about droughts in the region between 1520 and 1920. The research team also analyzed stalagmites in Dayu Cave.

By analyzing stable isotopes of oxygen, carbon, uranium, and other elements, the researchers determined that the years which the cave writing cited as years with little rainfall, correlated with higher oxygen and carbon isotope ratios. Using this discovery, the team created a precipitation model for the region. The model aligned with a drought in the 1990s, and predicted a drought in the late 2030s.

Source: New York Times

Drones are poor choice for monitoring wildlife

Drones, or unmanned aerial vehicles (UAVs), are becoming a popular method for studying wildlife, yet it has been suggested that they might cause stress or harm to the animals being studied. Mark Ditmer of the University of Minnesota, St. Paul, along with other researchers, studied the effect of a small UAV on four black bears, which were fitted with GPS collars and heart monitors.

The researchers found that the bears' heart rates rose drastically when the UAV was flown overhead. They also discovered that the animals' response to the UAV was stronger when the sound of the UAV approaching was masked by the wind. All four heart rates had returned to normal approximately 30 minutes after the UAV flew overhead. The researchers concluded that the animals were slightly, but not extremely, stressed by the UAV. They did note, however, that the bears being studied live in an area heavily impacted by humans, and that wild animals might have a much stronger reaction.

Source: Science News

New galaxy collision provides insight on collision rings

A team of astronomers at the University of Hong Kong and the University of Manchester have discovered a new galaxy collision, which occurs when two galaxies of similar mass collide and the resulting shockwaves form new stars. The galaxy collision, named Kathryn's Wheel, is 30 million light years away, which is about seven times closer to the Milky Way than any other galaxy collision found to date. The collision was observed with the UK Schmidt Telescope in Australia during a wide field survey of the Southern Milky Way. The low mass of the galaxy collision suggests that collision rings can form around smaller galaxies than originally thought. Because smaller galaxies are more common, this implies that collision rings could be up to ten times more common than previously thought. The researchers intend to study the collision further with larger telescopes.

Source: Science Daily

Carnegie Mellon researchers investigate fairness of online ads

ADVERTISING, from A6

setting page, which is meant to provide users some control over the ads they receive online. Before the experiment, the researchers ensured that gender was the only difference between the two groups. The browsers were then directed to top 100 websites for employment that were listed on Alexa, an Amazon-owned company that provides web traffic data services. A built-in feature of AdFisher enables the browsers to collect ads on any of the visited websites. *www.TimesofIndia.com*, the website of a popular newspaper, was chosen for most of the experiments as it provided the most Google ads per page reload. “AdFisher then used machine learning and statistical analysis to identify the differences among the ads served to the males and females,” Anupam Datta explained in an email interview with The Tartan. The results showed that an ad from a career coaching service, with the promise of high-paying executive level jobs, was targeted significantly more towards men than women. The study determined that male users were shown the ad 1816 times, while women were only shown the ad 311 times. “We were surprised and concerned by this finding,” Anupam Datta said. While the results from AdFisher detect discrimination in Google’s ad targeting, it does not provide a full picture as to why this is happening. Datta and his colleagues have several theories as to what caused the phenomenon. Google’s targeting algorithm may have learned that males are more likely to click on a particular ad than females, and therefore used that information to

promote more relevant ad targeting. It is also possible that the advertisers themselves chose to target males over females, a request that could easily be carried out by Google’s massive, automated advertising system. The researchers believe that it is unlikely that Google programmed their advertising ecosystem to show a bias toward male users over female users. The researchers also noted the possibility that the results were influenced by Google’s security measures to detect robots. “Indeed, it is possible that Google suspected that the browser activities were conducted by bots rather than humans in our experiments and therefore treated them differently,” Datta said. “However, we consider it unlikely that they decided to serve ads in a discriminatory manner after making such a determination.” The root of the issue lies within what are called “black boxes,” algorithms or other programs whose

inner workings are unknown. “In today’s society, important decisions in many sectors are being made by a combination of algorithms and humans who act from within black boxes,” Datta stated. “Their operation is not trans-

parency in Google’s ad system, the researchers had a group of simulated users visit top websites for substance abuse, while another group of simulated users was idle. The substance abuse visitors were exposed to more ads for alco-

Furthermore, the search for substance abuse had no effect on the Google Ad Settings page, perhaps for the same reasons that targeted ads seemed to produce gender discrimination. However, the researchers suspect that the results may be due to remarketing, in which an advertisement from a visited website continues to follow the user on the Internet. While Google did not officially address these findings, the company has recently reworded its ad settings page to indicate the limits of users’ control over what is targeted to them. Even as Google utilizes personal data to produce more relevant advertising, its lack of transparency may set up systems for unintentional abuse, such as helping to maintain the gender gap in salaries. “Online advertisements and recommendations are a gateway to opportunities, and this form of differential treatment

based on gender can unfairly limit opportunities,” Datta explained. Currently, the researchers are working with Microsoft to develop tools that can offer more internal oversight of information processing ecosystems, particularly the ad ecosystem. Datta expects that there will be more work done in making companies more accountable when concerning behaviors, including discrimination, arise from their information systems. His group believes that using AdFisher will help identify violations in black box information systems during future studies. “Our research findings provide the first proof of existence of discrimination in online behavioral advertising,” stated Datta. “Thus demonstrating that the problem exists in practice, not just in theory.”

“Our research findings provide the first proof of existence of discrimination in online behavioral advertising.... Thus demonstrating that the problem exists in practice, not just in theory.”

— Associate Professor of Computer Science
Anupam Datta

parent to the people who are subjected to these decisions, making it difficult to hold them accountable for undesirable outcomes.” To study the lack of

hol and drug rehabilitation centers, but Datta and his colleagues noticed that the control group did not receive any of those ads.



Anne-Sophie Kim/Layout Manager

Intravenous nutrition found to improve chemotherapy effects

CHEMOTHERAPY, from A6

systems,” said Chien Ho, an alumni professor of biological sciences at Carnegie Mellon University, in a university press release. “When the drugs collect in those organs, they become less available to treat the cancer, and can also cause toxicity.” On average, a total of one to ten percent of the drug ends up reaching the tumor, while between 40 and 80 percent of the drug is redirected to the liver and spleen. In a study published on June 3 in *Scientific Reports*, “A New Approach to Reduce Toxicities and Improve Bioavailabilities of Platinum-Containing Anti-Cancer Nanodrugs,” the researchers discuss their strategy of using Intralipid 20 percent, an FDA-approved fat emulsion, as a pre-treatment to the platinum-based anti-cancer drug DACHPt/HANP. The use of Intralipid decreased toxicity and increased bioavailability — the absorption rate — of the drug by inhibiting RES function. According to the report, the researchers’ studies “show that Intralipid pre-treatment can be used to reduce RES uptake and side effects, and improve

the bioavailability and clinical applications of Pt-containing nanodrugs. Moreover, [the researchers] have observed that Intralipid treatment can decrease Pt accumulation in kidney, thus reducing nephrotoxicity of the Pt drug.” The body’s immune system has been one of the biggest stumbling blocks in developing nanoscale chemotherapy drug delivery systems” —Professor of Biological Sciences Chien Ho The study reports that a single dosage of Intralipid reduced platinum accumulation in the liver by 20.4 percent, in

the spleen by 42.5 percent, and in the kidneys by 39.3 percent after 24 hours. The bioavailability of DACHPt/HANP also increased by 18.7 percent after five hours and 9.4 percent after 24 hours, respectively. The researchers also reported that using Intralipid as a pre-treatment reduced spleen enlargement and decreased apoptotic kidney cells, both common side effects of DACHPt/HANP. Based on their results, the researchers believe that “clinicians might be able to give the patients more anti-cancer nanodrugs to kill the tumors with less toxic side effects.” “The outcome of this study has the potential to decrease the toxic side effects of anti-cancer nanodrugs and other nanodrugs, and, therefore, to reduce human suffering,” the report states. “Our findings for the use of Intralipid with nanodrugs can also lead to the reduction of healthcare costs as well as to the improvement of the quality of life for patients who undergo the therapeutic treatment.” The research was funded by the National Institute of Health and Carnegie Mellon University’s Disruptive Health Technology Institute.

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How Things Work: Crowdfunding

DANIELLE HU
Staffwriter

Aspiring artists, ambitious entrepreneurs, and passionate believers, listen in. Whether you're a group of college students who want to create a start-up, or a broke art student in need of supplies for an upcoming assignment, the power of technology is here to deliver a fast means of communicating your monetary needs to the world.

Crowdfunding, an increasingly popular practice, is a way for people to advertise products and solicit funding through the Internet. The concept is easy to understand: Use the internet to promote your idea, and ask people from all around the world to financially support it. Although this idea is simple, it remains a powerful tool for anyone with access to the web. According to www.howstuffworks.com, crowdfunding generated over 6.1 billion dollars in 2013, 16.2 billion dollars in 2014, and is projected to raise over 34.4 billion dollars in this upcoming year.

As opposed to venture capitalism, or any other type of investment method, crowdfunding focuses on drawing small support from large crowds. Instead of

a direct financial return for these supporters, campaign founders typically give back in these campaigns with small, non-monetary, and inexpensive returns. So instead of borrowing money from large corporations and having to return that amount of money with added interest, crowdfunders borrow money from numerous individuals and show their appreciation by offering discounts or providing special insights to their project.

Crowdfunding websites, such as Kickstarter and Indiegogo, handle and maintain their policies differently. All crowdfunding websites charge campaigns that have reached their goals a fee, typically three to ten percent. Some of these websites allow campaigns to keep the money that they made, even if their goal wasn't reached, whereas other websites make it a requirement for a project to reach its goal before giving the campaign founder funds.

Kickstarter supports the "all or nothing" approach, where project creators only receive the money that backers have donated if their goals are met. The idea centers around the concept that without the initial goal of the project being met, the project would not continue on after the crowd-

funding campaign. A lack of supporters indicates that the product isn't successful enough to back, and so the supporters who did contribute funds to the campaign are not charged for what they pledged. On the other side, Indiegogo allows campaign heads to choose between the "all or nothing" approach, called fixed funding, or an approach that lets them keep the funds, regardless of the goal being met, called flexible funding.

The strictness of these policies span over a variety of conditions. Kickstarter stands on the more strict side of the spectrum, monitoring and approving all projects that are submitted to the site. But it's counterpart, Indiegogo, makes it possible to submit just about any project, with the exception of some standards for legal and ethical purposes. Most of these crowdfunding companies have also shifted toward prohibiting product renderings and simulations in campaign videos. This rule prevents campaigns from misleading the public about the progress of their products.

Unfortunately, turning to crowdfunding will not always garner success. In fact, according to Kickstarter's

mid-2015 report, projects have a 37.3 percent success rate. A more frightening statistic is that 14 percent of projects never raise a single cent. Although those numbers may seem discouraging, know that a man named Zach "Danger" Brown raised 55,492 dollars from 6,911 backers over the course of a month to make potato salad. Although Brown set out for a goal of ten dollars, he instead received over 5500 times that goal.

Popular projects range from creative art projects, such as indie films or television movie reboots, to desired technological advances, such as the Pebble Smartwatch. There is no secret formula to guarantee a successful campaign, however, based on statistics, crowdfunding companies continue to offer tips on how to run a campaign.

For example, crowdfunding campaigns that include a quality video clip under three minutes explaining their project have a success rate two to three times higher than those that rely solely on printed word. A key to successful crowdfunding projects is advertising and publicizing the project. An initial anchor of support from family and friends is often needed to help build

momentum for a campaign. After the initial support, often times a meaningful story behind the product or the creators helps push the funding to its set goal.

So if you're ever looking for a way to raise money in today's modern world, crowdfunding is an excellent and easily accessible way to achieve this goal. If you ever find yourself starting a Kickstarter, look up previously successful projects and take hints from their campaigns. Simple ideas, such as timing your campaign to finish near the end of the month when people receive their paychecks, or hiring a professional videographer, may have serious benefits. At the end of the campaign, make sure to understand the responsibilities behind the promises made towards your backers, especially details that are easy to overlook, such as shipping costs. Be mindful, be unique, be calm, and who knows, maybe one day you'll fund your potato salad.



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Steelers face questions on their defensive line this season



Clockwise from Left: Courtesy of Keith Allison via Wikimedia Commons, courtesy of SteelCityHobbies via Wikimedia Commons, courtesy of SteelCityHobbies via Wikimedia Commons

Left: Steelers quarterback Ben Roethlisberger prepares for a game. **Top Right:** The Steelers defense tackles a member of the Tampa Bay Buccaneers. **Bottom Right:** The Steelers face off against the Kansas City Chiefs.

FOOTBALL, *from A10*

been known for until last year. Offensive coordinator Todd Haley managed to turn the Steelers offense into a dynamic unit last year that saw quarterback Ben Roethlisberger have his best statistical season in the league.

Running back Le'Veon Bell proved to be made for more than just the Steelers' traditional run-heavy offense with

his ability to make big plays from dump-off passes, and he offered a much needed rushing threat to allow Roethlisberger some room from defenses that had to honor Bell's talent.

The receiving corps are certainly some of the most talented Pittsburgh has ever had. Wide receiver Antonio Brown challenged Detroit Lions wide receiver Calvin Johnson for the title of best wide receiver in the league; though Johnson

was rated higher on NFL Network's annual Top 100 Players list, Brown certainly came close for his dynamic contributions last season.

Receivers Markus Wheaton and Martavis Bryant both capitalized on the attention defenses had to give to Brown, combining for almost 1,200 yards and scoring plenty of touchdowns. Tight end Heath Miller remains a steady commodity for the offense,

catching passes and blocking for others with almost equal ease.

Most importantly, the offensive line, long considered a weakness for the Steelers given how often opposing defenses had managed to get to Roethlisberger even if the line did not take him down, has undergone a remarkable boost over the past few years. With the support of offensive line coach Mike Munchak, the of-

fensive linemen have formed an elite unit, particularly with young talent like center Maurkice Pouncey and right guard David DeCastro.

Overall, the Steelers seem poised to make a serious play-off run, though exactly how long it will last will likely depend on their success in the regular season. Pittsburgh certainly has the talent to win the AFC North, but Cincinnati and Baltimore will undoubt-

edly make strong challenges for that title. Among the elite teams in the AFC, the Steelers defense will surely be tested when they face the likes of the Denver Broncos, New England Patriots, and Indianapolis Colts; however, armed with an offense that can match every point their foes score, the Pittsburgh Steelers have every reason to believe that they can bring home yet another Super Bowl victory .

Some teams win, others lose in NBA Free Agency

BASKETBALL, *from A10*

mascot bruiser and terrific post defender, to bloated contracts from the Mavericks and the Knicks respectively for no compensation again.

This was all after they had already traded away forward Nic Batum. Credit to him, Oshley didn't just give up and go on full on Sixers level tank mode. The Blazers have made solid low-risk, high reward moves by offering talented but unpolished players such as Al-Farouq Aminu and Ed Davis above market deals to give them sufficient playing time in a proven system suited to a lot of their strengths.

Hopefully some of his moves work out, otherwise Oshley and his coach Terry Stotts will be very worried about the drop in talent level at the franchise.

Dallas Mavericks

At one point the Mavs seemed like locks to land on the former list. They had secured a verbal commitment from Wes Matthews and within the next couple of days had a commitment from center DeAndre Jordan as well. With just a point guard to look for, it seemed like the Mavs had the potential to become a ma-

jor contender in the bloodbath that is the Western conference. Then the Jordan NBA reality show of July 8 happened, leaving the entire world laughing, and the Mavs fuming.

At the end of the day, the Mavs let center Tyson Chandler and guard Monta Ellis walk, and only have a recovering-from-Achilles-surgery Wes Matthews to show for it.

Their only real salvation could come in the signing of guard Deron Williams, who has looked worse with every game for three years straight now.

It's been a very poor summer indeed for Mark Cuban and Rick Carlisle.



Courtesy of SD Dirk via Wikimedia Commons

Forward Kawhi Leonard was locked into a 5-year, \$90 million max contract with the San Antonion spurs.

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Sports

BikeFest promotes safe biking in Pittsburgh



File photo courtesy of Jonathan Leung

ZEKE ROSENBERG
Sports Editor

In 1994 the Community Design Center of Pittsburgh began the foremost bicycling event in the Pittsburgh region, PedalPGH. The event, a mass bicycle ride, was designed to bring many cyclists together to raise money and make Pittsburgh a more bike friendly city.

In 2012 BikePGH, a bicycle advocacy group, took over the event and merged it with their signature event, BikeFest, which began in 2005. BikeFest is a city wide celebration of biking featuring not just the PedalPGH ride, but a huge number of biking themed events and a kickoff

party described on their site as “an all-night rager.” The ten day celebration of bicycle culture brings the city’s cyclists together and helps BikePGH grow and advocate for making Pittsburgh a more bicycle-safe city.

Advocacy director of BikePGH Eric Boerer began BikeFest itself as a large event in 2005, but the festival reached a new level of popularity after adding PedalPGH in 2012, when it became a signature event and serves as the finale of the ten days. PedalPGH features three routes that take bike riders through the city, including a car free environment that provides the safe ride for bikers that BikePGH advocates for.

The events themselves

began August 21 and will stretch over ten days. Each has its own contribution to BikePGH’s promotion of bicycle culture. Some events provide lessons, such as the Confident City Cycling class, which will teach riders how to safely navigate city streets. Others, such as Monster Trike Night and the bluntly named Unicycles Are a Thing, provide an opportunity for festival attendees to be silly and have fun in the name of bikes.

Try-A-Bike Jamboree allows riders to bring in all sorts of bikes and showcases the innovation and variety that bikes feature. The event is a mainstay of BikeFest and takes the heart of bike culture, the bicycles themselves, to the

forefront to show riders what kinds of options are out there.

In recent years Pittsburgh has vastly improved its bicycling infrastructure, but the benefits of biking have created far-reaching demand. Bikes offer cheap and environmentally friendly commuting in addition to being a form of exercise or even a fun pastime for many people. With bike ridership up, BikePGH continues to try and improve the number of bike lanes and even bike-only sections of road to improve Pittsburgh for bikers.

The event brings all of Pittsburgh’s cyclists together in order to create awareness and raise money to help Pittsburgh’s biking community thrive.



Eunice Oh/Art Editor

Steelers looking forward to a strong offensive season

IAN TANAYA
Assistant Sports Editor

“Defense wins championships.”

Despite the effects of player safety rules that have allowed offenses to gain more yardage and score more points than ever before, defense remains the top priority for any team that wants a shot at Super Bowl glory. This was proven more than convincingly when the Seattle Seahawks decimated the Denver Broncos in Super Bowl XLVIII.

Defense has always been the key to success in the AFC North, and the Pittsburgh Steelers have known it since the days of the Steel Curtain in the 1970s. Competition on the defensive front, however, has been very tough. The Baltimore Ravens, Cincinnati Bengals, and Cleveland Browns, Pittsburgh’s rivals in the AFC North, all sported top-10 defenses at some point in the 2014 season.

Although Cleveland is hardly a threat with an offense that doesn’t know what

to expect from new quarterback Johnny Manziel after letting go of quarterback Brian Hoyer, the Bengals and the Ravens will certainly stand as enormous obstacles to Pittsburgh’s return to the playoffs, and the Ravens almost certainly pose a substantial threat if both teams face each other in January.

What stands out for the 2015 Steelers is the number of question marks on the defense following a very weak performance last year by the Steelers’ lofty standards. While the Steelers’ run defense was sixth in the league last year, their pass rush was markedly weaker, ranking only 26th in sacks. The linebacker corps, however, are undeniably ready to pressure opposing quarterbacks.

Veterans like linebackers James Harrison and Lawrence Timmons provide the team with tremendous leadership and production, and the young talents like linebackers Ryan Shazier and Bud Dupree are ready to become a part of the long legacy of Steeler

greats. Their secondary though, will have to quickly establish a new identity with the loss of longtime strong safety Troy Polamalu and cornerbacks Ike Taylor and Brice McCain.

After the Steelers finished 27th in the league in passing yards allowed and making only 11 interceptions all season, someone will have to step up in order to revitalize the team’s defense. Rookie cornerbacks Senquez Golson and Doran Grant are both promising talents to shore up the Steelers secondary, but veteran players like cornerbacks William Gay and Cortez Allen will have to lead the secondary to traditional Steelers expectations. Taking on the offensive juggernauts in the league will prove to be a challenge for this unit, and only time will tell whether or not they are ready for this task.

The offense, on the other hand, stands ready to take on any defense in the league, something Pittsburgh hasn’t

See **FOOTBALL**, A9

NBA Free Agency comes with surprises for many

NISHANT RENIWAL
Staffwriter

The beginning of Free Agency 2015 was as frantic as anyone in the NBA has ever seen. \$1.4 billion was committed to players on July 1 as teams gave huge contracts to retain players who would command a much higher salary a year later, with the massive cap boom of 2016 looming. It would be hard to call anyone a real loser of free agency with the draft always a way to load up on talent, but there were some clear winners and losers this time around.

Winners
San Antonio Spurs

The Spurs were favored heavily as the eventual landing spot of top free agent forward LaMarcus Aldridge, and they delivered on that front as Aldridge signed a 4 year, \$80 million deal to leave Portland after nine years. While that deal on its own would comfortably make them winners of the offseason, the other moves they managed to pull off while luring Aldridge away from his other suitors set them apart.

Forward Kawhi Leonard was locked down to 5 year, \$90 million max contract as soon as free agency began. The deal represents a mild bargain already, given how important he is to their offense and defense, but accounting for his development and potential as an MVP candidate this season or next the contract is an absolute steal. An even bigger bargain is the 4 year, \$45 million deal they got guard/forward Danny Green to accept. 3-and-D “specialists” are usually players proficient in one of those skills, but Green is truly a player who’s absolutely elite at both. His fit in the Spurs system is impeccable and when compared to the 4 year, \$70 million contract Dallas Mavericks guard Wes Matthews and 4 year, \$65 million contract Toronto Raptors forward DeMarre Carroll got, the Spurs saved a ton of money for equal production.

Returning the best wing rotation in the league along with one of the top-5 big men would be enough, but RC Buford and Gregg Popovich had a few more tricks up their sleeve. David West signed at the veteran’s minimum and both forward/center Tim Duncan and guard Manu

Giinobili return at bargain deals for one final run at the title. This has the potential to be Pop’s best roster ever, and all signs point towards him making it count.

Milwaukee Bucks

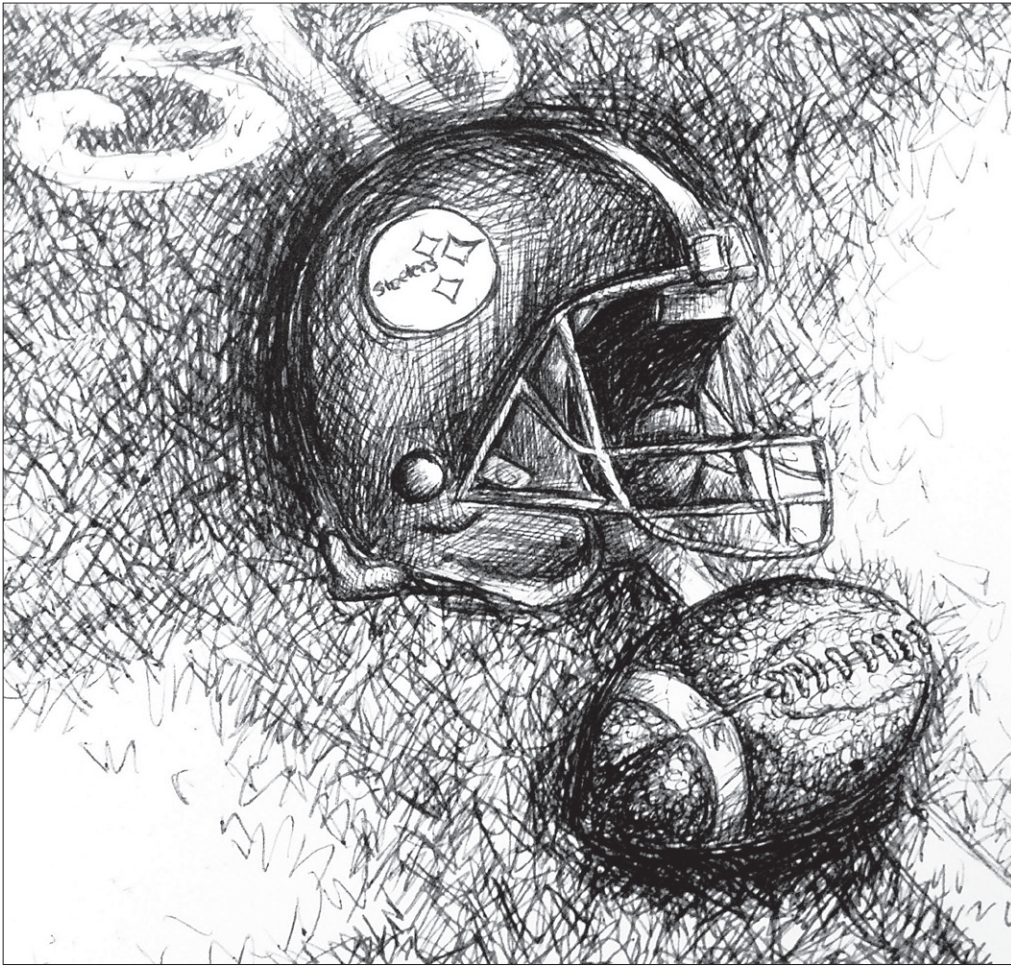
The suitor list for big time free-agent center Greg Monroe was not too long, but he had the two biggest markets in the league chasing him. The Los Angeles Lakers and the New York Knick made it clear that they would be willing to pay him top dollar to secure his commitment. Since no major contenders required this type of player, one of those teams was considered a near lock to lure him to their roster. In a near unthinkable move, one of the premier offensive centers in the league chose one of the smallest markets in the league, with considerably worse living conditions over the two behemoths.

While it goes a long way toward showing how dire the state of those teams is, lets not take credit away from the Bucks front office as they pulled off a major coup and instantly made the team one to watch in the putrid Eastern conference. Oh, they also took care of business by locking down guard Khris Middleton to a five-year deal as early as possible on a bargain contract, considering the cap boom of next summer, especially if he continues improving as projected. All things considered, it’s been a terrific summer for Jason Kidd.

Losers
Portland Trailblazers

Where can you begin? General manager Neil Oshley knew at the beginning of the summer that he had one very important target to achieve and everything came after that. It cannot be overstated how important Aldridge was to this franchise. He was their player since the draft, he was their franchise superstar despite the emergence of guard Damian Lillard, and more frequently than not he was the man bailing them out game after game every single season. Losing a player of his caliber for nothing in return would already make it an awful summer, but the Blazers managed to lose Matthews, one of the top 3-and-D players and the heart of the team, as well as center Robin Lopez,

See **BASKETBALL**, A9



Emily Giedzinski/Staff Artist



pillbox

The Tartan's art & culture magazine

Kinky Boots

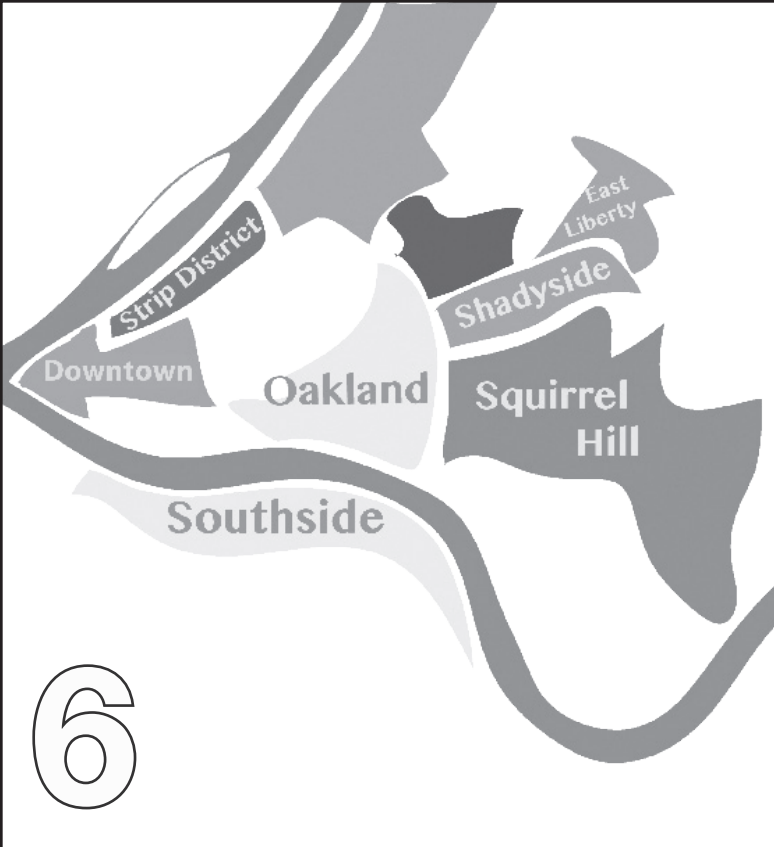
Tony winner reprises role • B3

A Guide to Pittsburgh

Explore everything the Steel City has to offer • B6

08.24.15 Volume 110, Issue 1

...this week only



3 *Kinky Boots*

Billy Porter comes back to Pittsburgh.

4 From the HOCS

Head Orientation Counselors welcome the incoming class.

6 Pittsburgh Guide

Learn your way around Pittsburgh with this neighborhood cheat sheet.



...diversions

8 Comics

Pick up your souvenir photo at the gate.

9 Puzzles

Solve a Sudoku puzzle and, if you still have time, find your way out of a maze.

10 Horoscopes

Find out what the stars have in store for you this semester.

regulars...

3 Advice

Josh Brown advises how technology and relationships can improve intimacy.

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The Sex is in the Heel

Kinky Boots comes to Pittsburgh in style with CMU Alumni

When thinking of theater and dramatic arts, a few different places might come to mind: New York, Los Angeles, Chicago, maybe even Michigan or Boston. Pittsburgh, however, most certainly wouldn't be at the top of that list unless you were somewhat involved in the entertainment world. Although Carnegie Mellon is well known in the computer science and engineering fields, its contributions to the arts have not been as widely promoted. Alumnae have gone on to earn Academy Awards, Grammys, Emmys, and Tonys. In recent years, the Tony Awards have been dominated by Tartan alumnae. Two years ago, the Best Actor and Best Actress in a Musical categories were both won by former Carnegie Mellon students. And on Aug. 8, I was lucky enough to have the opportunity to go to the Benedum Center and watch Billy Porter (CFA '91) reprise his role as Lola in *Kinky Boots*.

Kinky Boots is the 2013 winner of the Tony Award for Best Musical. It tells the story of a man who loses everything and risks the one thing he has left, his father's factory, on a wild (for the time) idea: boots for drag queens. In the process of saving his father's legacy, he meets Lola, played by Porter, a drag queen who shows him everything he needs to know about life, love, people, and boots. Boots are important, heels are important, and red is important. These are all things I have learned from the musical in a song about heels.

The show-stopping number "The Sex is in the Heel" is an iconic musical theater number that just lets you know how

much production musical theater actually involves. Lights, sets, props, dancers, song, music, costumes: *Kinky Boots* had everything you could ask for from a big Broadway musical, all in downtown Pittsburgh. The production was truly amazing, and Billy Porter gave such an impressive performance that after a number in the second act (that he nailed) the entire crowd gave him a full 2 minute standing ovation, mid-act.

Billy Porter also visited the campus while he was in Pittsburgh to see his old professors and mentors in the School of Drama. He is a proud alumnus who constantly gives thanks to his education at Carnegie Mellon and truly showcases how impressive the School of Drama is. Recently, it was recognized as one of the top schools in the nation, getting high marks in every category.

In my four years attending Carnegie Mellon, I have had the privilege of attending most plays and musicals that the School of Drama has put on and the operas of the School of Music. The productions over the years have ranged from *Sweeney Todd* to *The Mad Party* to *The Crucible*, and have all been impressive in their own ways. Carnegie Mellon constantly strives for greatness, and if you're looking to find some great theater, well, you've come to the right place.

José Lopez | Staffwriter



Courtesy of Powerhouse Theater via Creative Commons

Carnegie Mellon alumnus Billy Porter reprises Broadway role as Lola in *Kinky Boots*, a Tony-winning musical.

Advice for awkward people

About creating connections

"Dear Josh,

I am a sophomore with a double major in philosophy and computer science, and while I totally have tens of friends and a relatively decent social network, I find myself regrettably partnerless. Some nights, I get to thinking. In a romantic way. In a deep emotional way. In a good time lovin' kind of way. I want to get metaphysical. Metaphysical. I think it's time to get out there, maybe take some risks. I don't know any moves, and the thought of putting myself out there makes me sweaty. Do you in your ultimate wisdom have any advice on how to approach the realm of courting?

Cheers, Righteously Ornerly Bodacious Official Friend Reaching Euphorically Underneath Dresses."

Dear ROBOFREUND,

Personally, I don't see the reason to enter into the "realm of courting" if you're so apprehensive about it. Given your training in computer science and the rising acceptance of dating simulators, you can try to redirect this romantic frustration into a lucrative career choice. My advice? Tailor-design a dating SIM around your deepest, most personal fantasies. Intimacy in media is about more than just the physical: It's the metaphysical that counts. It's about that entrance into someone else's life and connecting on all circuits. If you really pour all of your heart and your fantasies into the story's creation, hopefully someone will see that passion and they'll purchase and play it. Then you'll achieve both financial success and a romantic connection you may not be able to achieve from traditional dating.

—Josh

Need advice? Send queries to advice@thetartan.org.

A Letter from Your Head Orientation Counselors

Words of welcome and wisdom to incoming first-year students

Congratulations and welcome to Carnegie Mellon!

You will be joining us on Carnegie Mellon's campus as our newest, brightest first-year class. We, the seven Head Orientation Counselors, have been working hard to make Orientation 2015 one of the most enjoyable and welcoming weeks of your life at Carnegie Mellon. Along with the Orientation Leaders and Orientation Counselors, we will be here to guide you across the bridge that connects your past experiences to new and exciting ones that you'll have during your college experience! These upcoming years are filled with untapped potential, and your transformative journey begins here. The best part about this adventure is that while you can take any path across the bridge you choose to build, you will always have the support of others to make the journey everything you want it to be. Don't be afraid to be yourself; the people here are what make this place as special as it is, so throw yourself into the diverse mix of backgrounds, personalities, and cultures that comprise our expansive, welcoming community. As you build the bridge that will shape your time in the Carnegie Mellon community, there may be unexpected bumps in the road that you would have never predicted. But learning how to make the most of these situations will equip you with the skills to adapt and deal with a variety of scenarios. You may be feeling many emotions right now as you leave the familiar and enter the unfamiliar, but just keep this in mind: You can build your bridge to any destination you want, and it all begins here at Orientation 2015.

We are so excited to meet you!

**With all our Tartan love,
Your 2015 Head Orientation Counselors**



Courtesy of Sawsan Boutemine
Left to right: Jenny Young, Residences on the Hill; Ben Siegel, Mudge House; Caitlin Lohman, Residence on Fifth; Theodore Warhoe, Stever House; Meg Boyle, Morewood E-Tower, Zuojun Gong, Donner House; and Sawsan Boutemine, Residences on the Hill.

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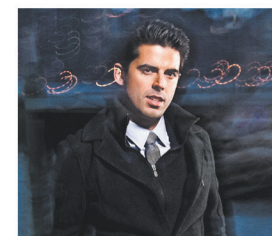
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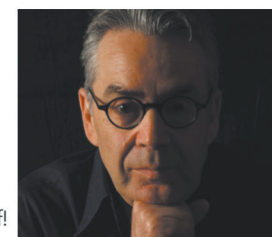
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When students arrive at Carnegie Mellon, they often find that the campus is a fascinating place with its outgoing student body, research initiatives, and unusual creations. The campus offers more than enough to keep students busy during their time at the university, but beyond the campus is an entire city to explore. Not only is Pittsburgh located in a unique geographic location nestled among rivers, but it is broken into various neighborhoods and districts that have their own distinct flavors. Use this guide to navigate these neighborhoods, which shouldn't be missed by any Carnegie Mellon student.

Strip District

Vibe: An old riverside warehouse district transformed into a regional culinary destination.

Best eats: For everything from steamy espresso to fresh cooked pasta straight from the heart of Italy, Enrico Biscotti Company has you covered. And no, we don't mean the small bakery (although you could definitely fill up on delicious biscotti there). Nestled behind the bakery is the restaurant portion of the business, which is an authentic family favorite and crowd pleaser.

Best attraction: Sure, this area is great during a normal day, but by the time you graduate, you must go during its peak business hours: Saturday and Sunday mornings. The street market explodes with people, food, flowers, and fun little shops.

Travel tip: If you can borrow a car, do it. The buses that take you to the Strip are few and far between.

Downtown

Vibe: The only area of Pittsburgh that really feels like a traditional East Coast city; skyscrapers and congested streets galore.

Best eats: Meat and Potatoes was the hip and trendy Euro-style gastropub that was a gastropub before it was cool. Though definitely a more expensive restaurant, the food here is unbeatable: delectable and surprising at the same time. Take a date, make sure to get a drink from their fabulous selection, and then enjoy a night on the town.

Best attraction: Seviche, a Mexican/Cuban restaurant on Penn Avenue, hosts a learn-to-salsa dance class every

Monday night starting at 9 p.m., and then at 10 p.m., the floor opens for a night of sultry dancing and late night snacks. The music plays until nearly 1 a.m., so bring your dancing shoes and your date!

To get there: Hop on any 61 or 71 headed inbound and then walk when you get there. You never know what you'll stumble upon Downtown!

East Liberty

Vibe: An up-and-coming neighborhood, almost like a mineral: a little rough outside, but some real gems lie inside if you take the time to look.

Best eats: The pan-Asian fusion at Plum is the winner for East Liberty. Hands down the classiest

pan-Asian in Pittsburgh, Plum presents not only a beautiful, tasty plate, but a fun, modern space in which to enjoy it with family and friends. Be sure to try the pad thai and the sushi.

Favorite attraction: All the shopping. In recent years, the city has put a lot of money and effort into the gentrification of this area, leading to the development of plenty of stores and shops. From Giant Eagle to Trader Joe's to Anthropologie, check out Bakery Square and more in East Liberty.

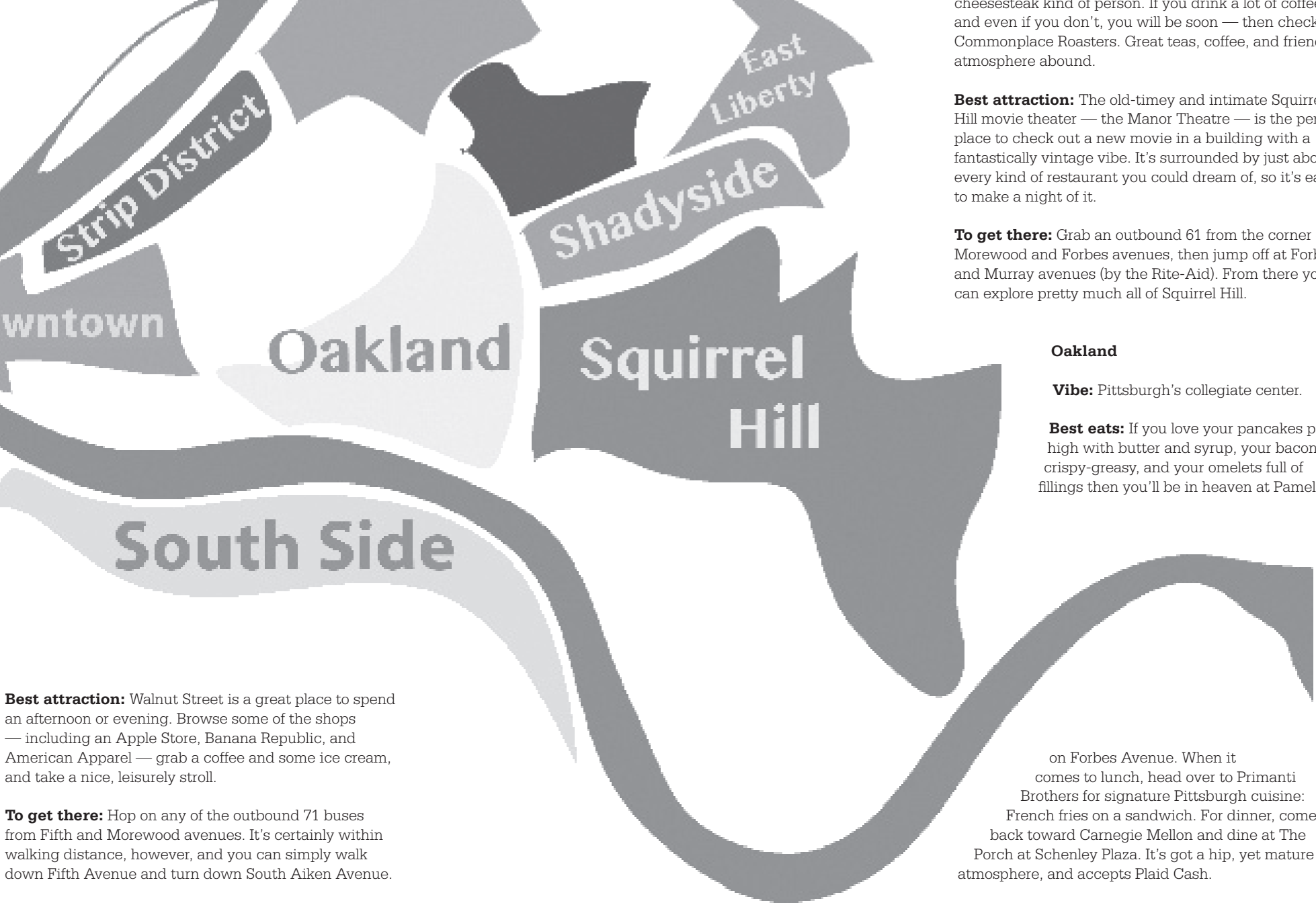
To get there: Take the 71B from Fifth and Morewood avenues to South Highland Avenue and Station Street.

Shadyside

Vibe: A slightly upscale, clean neighborhood with fashionable shops.

Best eats: For a nice evening out, head to Girasole, a fabulous Italian restaurant with a classy vibe. For a mouth-watering burger, check out Stack'd, a burger joint

where you build your own burger from the bun up. If you're a big sushi fan, then hit up Umi. Right on Ellsworth Avenue, this restaurant is known for its fresh, delicious sushi.



Best attraction: Walnut Street is a great place to spend an afternoon or evening. Browse some of the shops — including an Apple Store, Banana Republic, and American Apparel — grab a coffee and some ice cream, and take a nice, leisurely stroll.

To get there: Hop on any of the outbound 71 buses from Fifth and Morewood avenues. It's certainly within walking distance, however, and you can simply walk down Fifth Avenue and turn down South Aiken Avenue.

Squirrel Hill

Vibe: A lower-cost, quirkier sibling of Shadyside.

Best eats: For the best pizza in all of Pittsburgh, head to Mineo's Pizza House on Murray Avenue. Uncle Sam's Sandwich Bar is also a great spot if you're a cheesesteak kind of person. If you drink a lot of coffee—and even if you don't, you will be soon — then check out Commonplace Roasters. Great teas, coffee, and friendly atmosphere abound.

Best attraction: The old-timey and intimate Squirrel Hill movie theater — the Manor Theatre — is the perfect place to check out a new movie in a building with a fantastically vintage vibe. It's surrounded by just about every kind of restaurant you could dream of, so it's easy to make a night of it.

To get there: Grab an outbound 61 from the corner of Morewood and Forbes avenues, then jump off at Forbes and Murray avenues (by the Rite-Aid). From there you can explore pretty much all of Squirrel Hill.

Oakland

Vibe: Pittsburgh's collegiate center.

Best eats: If you love your pancakes piled high with butter and syrup, your bacon crispy-greasy, and your omelets full of fillings then you'll be in heaven at Pamela's

on Forbes Avenue. When it comes to lunch, head over to Primanti Brothers for signature Pittsburgh cuisine: French fries on a sandwich. For dinner, come back toward Carnegie Mellon and dine at The Porch at Schenley Plaza. It's got a hip, yet mature atmosphere, and accepts Plaid Cash.

Best attraction: Possibly one of the greatest — and often underutilized — resources is the museum complex on Forbes Avenue, at the end of South Craig Street. The Carnegie Museums of Art and Natural History are not to be missed. They're both free with your student ID and packed with interesting and thought-provoking material. Best of all, you don't even need a bus to get there.

To get there: Hop on either an inbound 61 from Forbes and Morewood avenues or an inbound 71 from Morewood and Fifth avenues. Or just walk — it's practically in your backyard.

South Side

Vibe: A shopping center, nightlife destination, and restaurant hotspot.

Best eats: If you have a big group, definitely hit up Buca di Beppo. This almost cheesy Italian restaurant serves great food family style, meaning large servings in big bowls to pass and share around the table. They'll have to roll you out after eating so much pasta. For a truly hilarious dining experience, ask to sit in the Pope room, where a bust of the Pope watches you eat. Another great find in the South Side is Nadine's, near the SouthSide Works cinema. Their fried bologna sandwich is as good as it sounds.

Best attraction: SouthSide Works is a must-see for anyone who is going to call Pittsburgh home for the next four years. Head there for the Cheesecake Factory, trendy shopping, beautiful fountains and gardens, and a short walk to the river's edge.

To get there: Head down to South Craig Street and catch the 54 from in front of Bagel Factory. Take that to East Carson and South 22nd streets in South Side. From there, just walk east on East Carson Street until you get to South 27th Street. From there, you should be able to see SouthSide Works!

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Earth Quake by Alex Culang and Raynato Castro



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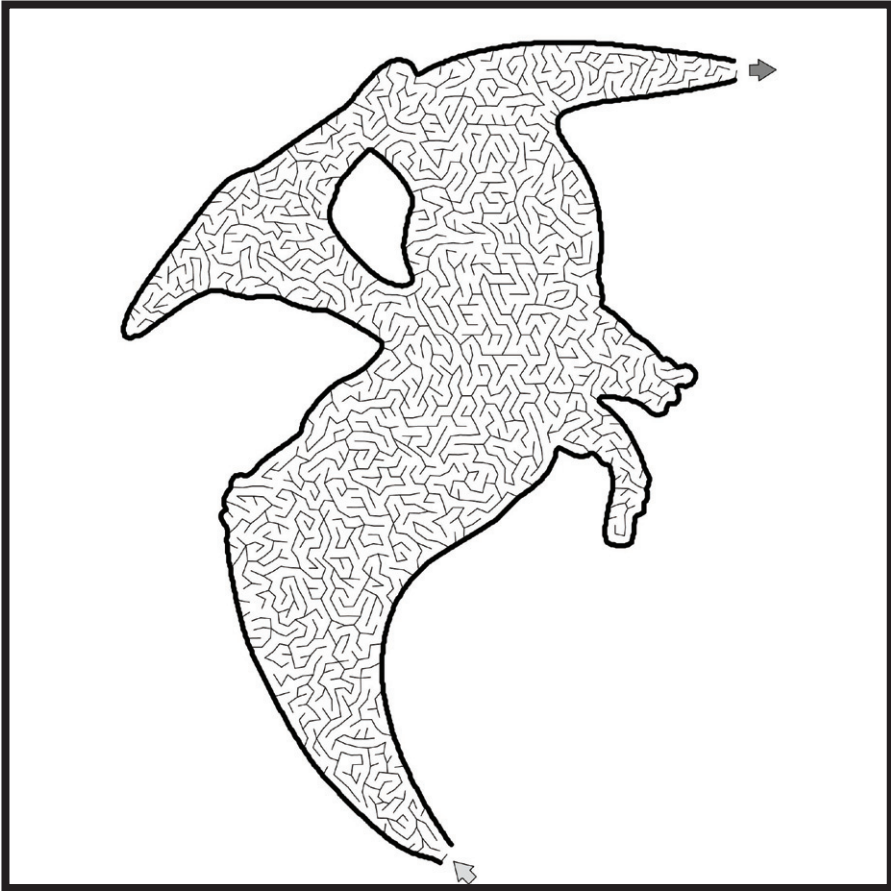
Sudoku Puzzle: Intermediate

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

Sudoku courtesy of www.krazydad.com

Fill all empty squares using numbers 1 to 9. No number may be used in the same row or column more than once.

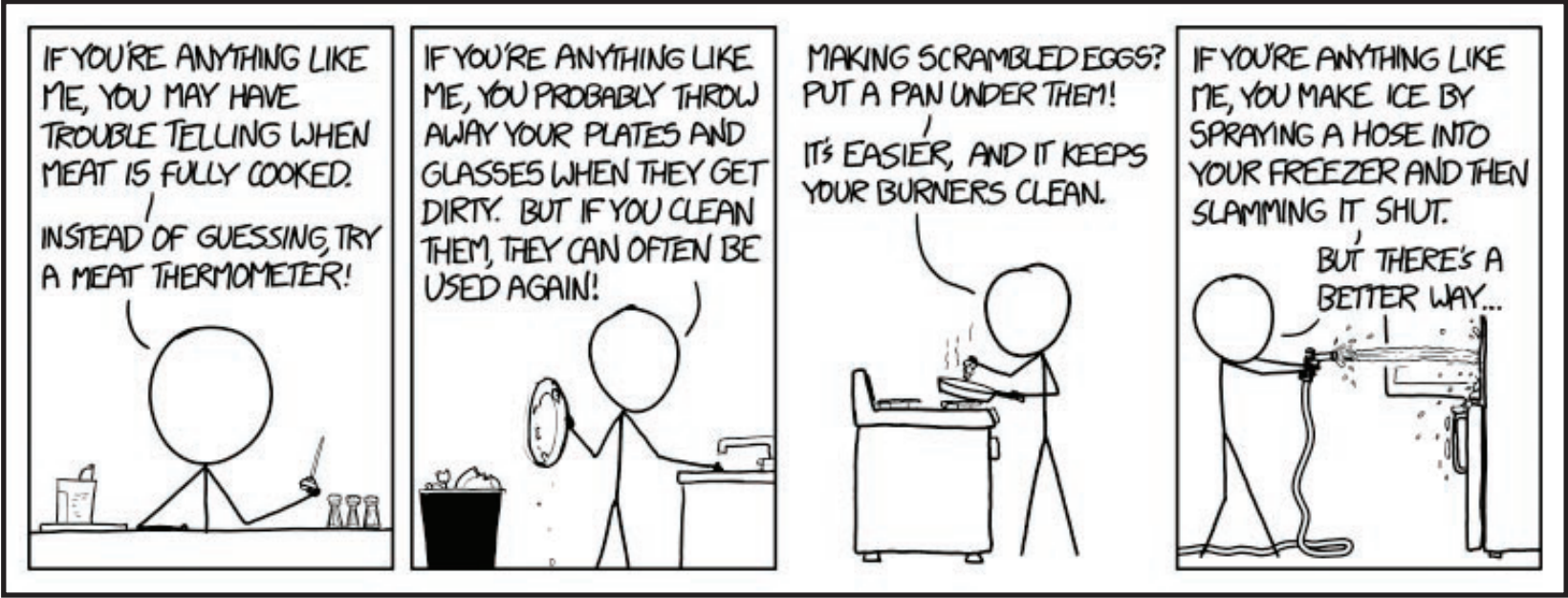
Maze Puzzle: Hard



Maze courtesy of www.krazydad.com

Solve the maze by entering through the bottom arrow and out the top arrow.

Kitchen Tips by xkcd



press@xkcd.com

xkcd.com

Horoscopes

Back to School aries

march 21–april 19

Get plenty of sleep. College is hard enough with classwork and extracurricular activities. Make sure to rest, so your body and mind can keep up.

taurus

april 20–may 20

Open yourself to suggestions. Once in a while let yourself be persuaded into something daring. You might just learn something new!

gemini

may 21–june 21

Don't be afraid to ask. With the new school year come new unanswered questions. Everyone is learning around you, too, so don't be afraid to speak up.

cancer

june 22–july 22

Talk to your secret crush. A new year means new relationships, whether it be new friends or finally hanging out with that amazing guy/ girl from class.

leo

july 23–aug. 22

Create a healthy routine. It is easier to start a healthy schedule from the beginning than to try to start one halfway through the school year.

virgo

aug. 23–sept. 22

Be mindful of deadlines. Don't forget any important dates for loans, expenses, health insurance, etc. They can come back and bite you if they slip your mind.

libra

sept. 23–oct. 22

Stock up on food. If you're living off campus, be sure to find time to get to the grocery store before schoolworks gets in the way.

scorpio

oct. 23–nov. 21

Check out some new groups on campus! Sign up for some new clubs at the activities fair this fall or perhaps start one of your own if one of your passions is unrepresented.

sagittarius

nov. 22–dec. 21

Meet and greet. A new school year brings new faces from near and far. Don't forget to welcome the incoming class.

capricorn

dec. 22–jan. 19

Explore your surroundings. Before classes pull you down, find a chance to see the sites in Pittsburgh.

aquarius

jan. 20–feb. 18

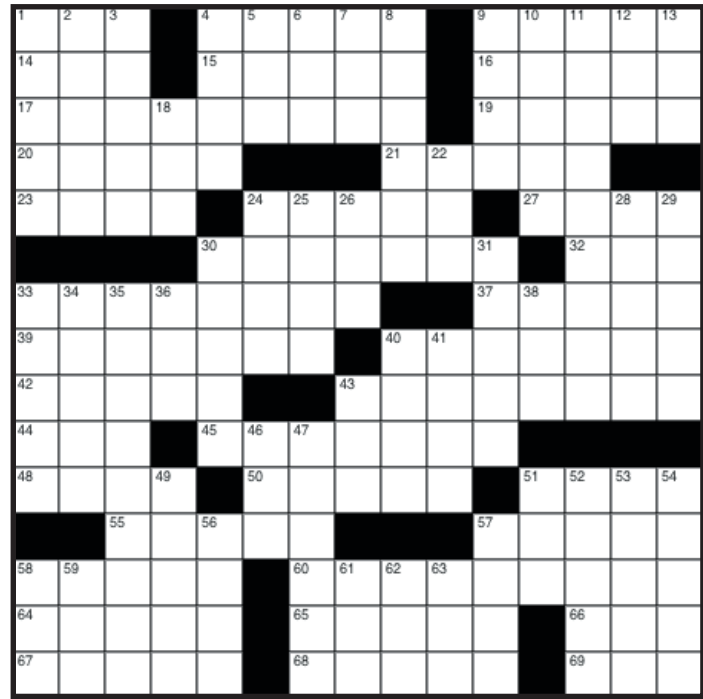
Don't lose your ID! Losing your ID is by far one the worst things here as a student. Keep that card handy and close!

pisces

feb. 19–march 20

Take on a job. The start of the school year means great opportunity for job openings around the campus, and it never hurts to have a little extra cash.

Maryyann Landlord | Comics Editor



Crossword courtesy of *BestCrosswords.com*

ACROSS

1. Primate with a short tail or no tail
4. Kett and James
9. Fanatical
14. Receive
15. Modern bank card
16. Military camp
17. Restore moisture
19. Peter and a Wolfe
20. Each partner
21. Examine account books
23. Congers
24. Inclined
27. Type of tide
30. Refuse floating on water
32. Cowboys' org.
33. On an upper floor
37. Gandhi's land
39. Abbreviate
40. Socks of any kind
42. Actress Anouk
43. Roman capital of Palestine
44. Leg, slangily
45. Waterflea
48. Robt. ____
50. Actor Ryan
51. Drop ____ (moon)
55. Potato pancake
57. Bit of wisdom
58. Noted duck
60. Pathless
64. Dutch painter Jan
65. Taj ____
66. Penlight battery
67. Curt
68. Bubbling
69. Map lines: Abbr.

DOWN

1. Be of one mind
2. Pet ____
3. Lucy's landlady
4. Whirlpool
5. Thrice, in prescriptions
6. TV listings abbr.
7. Small island
8. Takes by theft
9. Tear
10. Dined at home
11. One who mixes and serves drinks
12. Wall St. debut
13. Paris's Pont ____ Arts
18. Decade divs.
22. Actress Hagen
24. That's ____!
25. Ripped
26. T.G.I.F. part
28. Blazing
29. Beach, in Baja
30. Destined
31. Beethoven's "____ Solemnis"
33. Grammarian's concern
34. Glass bottle
35. Wine steward
36. Uno + due
38. Actress Peoples
40. Mandlikova of tennis
41. Trompe l'____
43. Friend of Fidel
46. Hunky-dory
47. Soul
49. Relaxes
51. A Kennedy
52. "M*A*S*H*" name
53. Mountain nymph
54. Arm bones
56. Actress Daly
57. Voting-pattern predictor
58. Summer hrs.
59. Munched on
61. Capture
62. Howe'er
63. Thor Heyerdahl craft



Tuesday 8/25/15

Idina Menzel.

Benedum Center. 8 p.m.

This year Idina Menzel is taking her first world tour, visiting 54 cities across Asia, Europe, and North America. She will perform some of her Broadway hits, popular covers and of course, "Let It Go" from Disney's *Frozen*. Tickets start at \$55.

Friday 9/18/15

TRANS-Q Live!

Andy Warhol Museum. 8 p.m.

With performances of dance, music, comedy, poetry and more, Trans-Q Live will be a night full of queer fun. Immediately following the performances there will be a reception and party hosted by DJ Sassy Suggestions. The event is co-presented by Trans-Q Television, a project of the Center for the Arts in Society at Carnegie Mellon. Tickets are \$10 for general admission and \$8 for students and members.

Saturday 9/19/15

Pittsburgh Pierogi Fest.

Stage AE. 12-5 p.m.

Back for its 3rd year, the Pittsburgh Pierogi fest is here to celebrate the city's most delicious dumpling. The event will feature over 30 pierogi vendors, with live music ranging from polka to rock, paint your own pierogi lessons, balloon animals and face painting. Tickets are \$12.50.

VIA Festival.

Throughout Pittsburgh.

VIA Festival happens each fall, featuring over a week's worth of local Pittsburgh artists in a unique meeting of music and visual arts. The self-described "Festival as Laboratory" tries every year to redefine what constitutes a music festival, offering an immense variety to suit many tastes. For information about the lineup and ticket prices, which vary per show, visit www.via-2015.com/pittsburgh.

Friday 10/16/15

21+ Night: Back to the Future

Carnegie Science Center. 6-10 p.m.

Celebrate the month that Marty McFly traveled into the future at Carnegie Science Center's monthly 21+ night. Highlights of the event include the Steel City Time Machine, a replica Back to the Future DeLorean, a High Voltage show featuring a Tesla Coil, and a screening of Back to the Future 2.

Tuesday 11/3/2015

Sufjan Stevens.

Heinz Hall. 8 p.m.

Sufjan Stevens is a multi-instrumentalist singer-songwriter with a wide range of talents. His discography ranges from indie pop and electronica to folk. He is on tour this year following the release of his most recent album *Carrie and Lowell*, which critics have deemed Stevens' best yet. Tickets start at \$48.

Aftersound: Frequency, Attack, Return.

Regina Gouger Miller Gallery. Through November 22, 2015.

This exhibition, which officially opened August 21, explores the place that sound has in art. It specifically focuses on sound visualization, physics of sound, political implementations of sound such as sonic warfare, and experiments attempting to use sound to access new sensory experiences. There will be a reception on Friday September 25 from 6-8 p.m. Entrance to the exhibition and the reception are free.

HACLab Pittsburgh: Imagining the Modern.

Carnegie Museum of Art. September 12, 2015 through May 2, 2016.

Featured in the museum's Heinz Architectural Center, the exhibition looks at Pittsburgh as a city from an urban revitalization and architectural perspective. The "experimental presentation" narrates the successes and failures the city has had, also featuring historical archives, an actual architectural studio, and a salon for discussion.

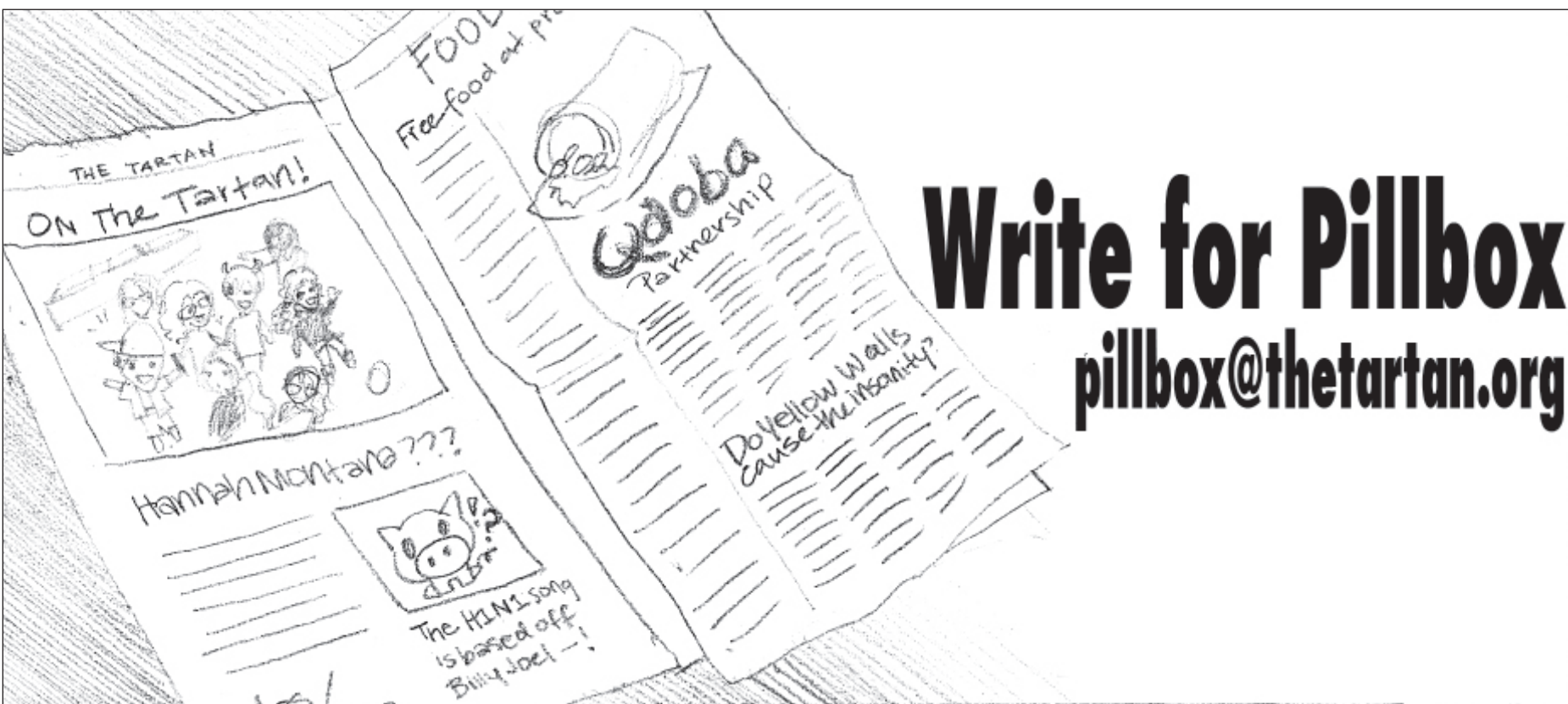
Warhol by the Book.

Andy Warhol Museum. October 10, 2015 through January 10, 2016.

This exhibition curated by Chief Archivist Mat Wrbcian puts on display the work Andy Warhol did with books. While much of the collection was never published, it gives insight into his creative processes. Admission to the exhibition is free with admission into the museum.

Compiled by **Sarah Gutekunst** | Operations Manager

Want your event here?

Email calendar@thetartan.org.

orientation counselor selfie



Courtesy of Zuojun Gong via Facebook

Orientation counsleors gather in Porter 100 for an ugly-sweater-themed training session leading up to the move-in of the Class of 2019+. Everyone on campus is waiting with bated breath to meet this year's best and brightest.

