“WILL I EVER SLEEP AGAIN?”

“WHY ARE PEOPLE WEARING CAPES?”

“WHAT’S A THISTLE?”

“DO I REALLY NEED 3 MAJORS?”

Got questions Orientation didn’t answer?

Find all your answers in this special edition.

THE TARTAN

Carnegie Mellon’s student newspaper since 1906

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thetartan.org

A GUIDE TO YO

Carnegie Mellon's campus and its surrounding areas have a lot to offer students. Here we break down essentials, like where you're most likely to score free food, and we hint at some secret attractions, like how to transport yourself to Middle Earth.

1) Score some Razzy Fresh frozen yogurt basically in your own backyard.

2) Mourn the loss of a bar many students called their own.

3) Don't go anywhere but Tazza D'Oro for coffee on campus.

4) Stop an elevator in this building to find a secret floor.

5) During Spring Carnival, come here to watch robots race.

6) Find your inner Middle Earth outside of Baker Hall in this secret study spot.

7) On a budget? Come to the Cut for free food at almost any time of the day.

OUR NEW HOME

8) Stop by your favorite student student-run newspaper!

9) Another great study space, but this one will dazzle you with numbers.

10) Did you know the campus has a solar house?

11) Medidate in West Wing's Mindfulness Room for a bit.

12) These food trucks beat all other food on campus.

BUCKET LIST

Before Orientation's over, check out these campus secrets you may not hear about.

Robots. Try beating the sassiest robot around in a game of Scrabble in the Gates Hillman Complex, or travel to Newell Simon Hall to see robotic butler Herb crack open an Oreo cookie.

The steam tunnels. Find an entrance to these underground tunnels in Margaret Morrison Carnegie Hall to catch an unusual view of the swimming pool.

Number Garden. Don't try to decipher the numbers in this garden, but do decipher the message written on the wall behind it.

The Hobbit Hole. Travel there and back again to Baker Hall to find a secret hole hidden in the ground outside.

Rare Book Room in Hunt. This room, not hard to find, is located on the fourth floor of Hunt Library and holds a variety of rare books, including a page from Gutenberg's Bible.

Roofs. See how many rooftops you can scale. Rumor has it the tops of Wean Hall, Baker Hall, the College of Fine Arts, and Scaife Hall are easy to reach.

Wean Hall's Pi Floor. Open an elevator in Wean Hall between the third and fourth floors. You never know what you'll find.

Wraparound design special to The Tartan by Emily Dobler. Map special to The Tartan by Micah Benson.

Professor studies resistance to antibiotics · A4
SCITECH

Don't choose grades over personal happiness · A6
FORUM

A beginner's guide to Pittsburgh · B6
PILLBOX

THE TARTAN

Carnegie Mellon's student newspaper since 1906

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Hunt opens IDeATe spaces

BRADEN KELNER
Editor-in-Chief

Members of the Carnegie Mellon community have teamed up this summer to rethink the way students use Hunt Library.

The university is currently completing renovations to the basement, first floor, and second floor of the library to provide studio spaces and labs for the university's new Integrative Design, Arts, and Technology (IDeATe) program, a set of interdisciplinary concentrations and minors that explore how students can collaborate to present what they learn at the university across a variety of medias spanning technology and the arts.

The IDeATe program includes eight concentrations and minors: animation and special effects, entrepreneurship for creative industries, game design, intelligent environment, learning media, media design, physical computing, and sound design, according to the program's website.

Students can enroll in an IDeATe concentration or minor during their sophomore or junior years.

The program is set to launch this fall with classes housed in the library. Two studios will be available on the first floor for classes, as well as for students to use when classes are not being taught.

Thanassis Rikakis, vice provost for design, arts and technology, described the studios as spaces that will be open 24/7 and available to all students.

Almost all items placed in the studios, such as tables, chairs, and screens, will be on wheels so that students can rearrange them to fit their needs. Rikakis said the studios are meant to encourage team collaboration.

"You come to Carnegie Mellon from many areas, but one key reason is learning through making by collaborating with diverse cohorts, and the library should signal that," Rikakis

See **HUNT**, *A3*

Courtesy of Philippe Nyirimihigo

New master's graduates toss their caps in the air at the inaugural graduation ceremony for Carnegie Mellon's Rwanda campus. 22 students received degrees in information technology on July 24.

CMU Rwanda graduates first class

BRENT HEARD
Contributing Editor

Carnegie Mellon University celebrated another milestone in international education last month.

The university's Rwanda campus (CMU-R) graduated its first class on July 24, when 22 students received master's degrees in information technology during a ceremony at the Serena Hotel in Kigali, Rwanda.

Carnegie Mellon opened its Rwandan campus in 2012, becoming the first American university to offer master's degrees in Africa taught by full-time, resident faculty. CMU-R currently offers a master's degree in information technology, which, according to the university's website, covers topics in information and communications technology including "mobile applications, information security and networking, and software management, as well as critical business areas such as finance, operations and entrepreneurship." Beginning this August, the university will offer a joint master's degree in electrical and computer engineering with the Pittsburgh campus.

Four of the graduating CMU-R students visited Pittsburgh last semester and took part in a classic campus tradition: painting the fence.

"We wanted to paint Carnegie Mellon in Rwanda and the link to our website on the Fence so that more people can learn about CMU's presence in Rwanda," Merab Twahirwa, the student speaker at the graduation ceremony, said in a Carnegie Mellon press release.

Courtesy of Philippe Nyirimihigo

Student speaker Merab Twahirwa addresses the audience during the commencement ceremony at the Serena Hotel in Kigali, Rwanda.

Twahirwa also spoke of the current development in Eastern Africa, saying, "Rwanda is an exciting place to know, and Africa is growing fast. IBM, Phillips, and GE are already setting up offices there."

Bruce Krogh, professor of electrical and computer engineering and director of CMU-R, said of the recently graduated class, "They're pioneers. ... It's terrific. I really feel great for the students."

"The first semester is quite an adjustment for them," Krogh continued. "American accents are difficult for them to understand among English accents." Krogh also said that Rwandan education is typically more rote, and that the critical thinking and problem solving inherent in the Carnegie Mellon curriculum was new to many students.

"It was really more challenging for them," said Michel Bézy, associate director of CMU-R and distinguished service professor of engineering and public policy. He highlighted students' 80- to 90-hour work weeks, saying, "The work is not even anywhere close to what they've had before."

"The requirements on the students are very different," Bézy continued, mentioning that "plagiarism is very common in Africa; even some professors do it." CMU-R graduates had to make major adjustments in both dealing with the workload and creating quality work, according to Bézy.

Graduate Andrew Kinai (E '14) said in the release, "I always tell people, if you can come to CMU in Rwanda, it's a big opportunity. The way the courses are structured, it's relevant in terms of where we are in Africa today."

"They are all now going directly into work," Krogh said, noting that a few students are pursuing Ph.Ds. "More than half have jobs, and half had been working, left their job to do a master's for two years, and went back to these jobs."

However, Krogh also spoke of potential challenges in the East African job market, saying that "putting 22 CMU master's students in the job market in Kigali is quite a bump."

"It's going to take a few years for them to realize the quality of our students," Bézy said, explaining that professors regularly meet with human resource directors at many of the major companies operating in Africa, and CMU-R holds job fairs to place students.

In terms of future goals for the program, Krogh said, "our big challenge is tuition." Carnegie Mellon tuition is the

See **GRADUATE**, *A3*

SCS betters gender ratio

BRIAN TRIMBOLI
News Editor

When Tracy Chou, a software engineer at Pinterest, published the company's employee diversity statistics last October on *medium.com*, she revealed that 11 of Pinterest's 89 engineers — roughly 12 percent — were women. Chou's post foreshadowed a wave of similar reveals at other tech companies the following spring. Along with showing heavy racial imbalances in favor of white and Asian workers, all of the companies that revealed their employee statistics showed a disparate number of female employees.

Apple said in a diversity report on Tuesday that its workforce is 70 percent male and 30 percent female while Google, in May, said in a blog post that 30 percent of its employees are female. Facebook, similarly, is 69 percent male and 31 percent female, according to its press blog. A host of other companies — including Twitter and Yahoo — have similar proportions of male to female employees.

Google wrote on its blog, "Put simply, Google is not where we want it to be when it comes to diversity," while Facebook wrote, "As these numbers show, we have more work to do — a lot more."

At Carnegie Mellon, according to the Student Information System, 47 out of 136 incoming undergraduate full-time first-year students in 2013 in the School of Computer Science, or about 35 percent, were female. Across the six undergraduate colleges, 642 out of 1,442 students, or around 45 percent of students, were female.

Like many of Silicon Valley's best-known companies, Carnegie Mellon still has a long way to go in terms of gender equality. The university, however, is making strides toward having a more balanced School of Computer Science. According a July article in *The New York Times*, 40 percent

See **GENDER**, *A3*

Fuel & Fuddle reopens, with menu changes, after fire

Braden Kelner/Editor-in-Chief

The popular Oakland Avenue restaurant closed for renovations after a fire April 28 and reopened Aug. 5.

RACHEL COHEN
Publisher

For students who lived in Pittsburgh for the summer, it was a long-awaited event; for students returning to campus in the fall, the reopening of Fuel & Fuddle is just in time for the beginning of the new semester.

The Oakland restaurant and bar reopened Aug. 5 after a chimney fire caused it to close for a three-month restoration process.

The fire occurred April 28 and prompted kitchen repairs, as well as a transfer in ownership to returning manager Brandon Smith, who worked at Fuel for 13 years before leaving to start his own establishment nearly a year ago.

Aside from physical alterations, Smith also introduced menu and pricing changes to the popular student destination. While Smith kept two-thirds of the menu items from before the restaurant's closing, he also added many new options.

Among the menu additions are expanded wing options, hanger steak, fried pork chops, and a new cocktail menu.

Existing menu items also come with a few ingredient enhancements, including a custom ground burger blend and a homemade marinara sauce for the restaurant's pizzas.

Importantly, Fuel's long-standing tradition of half-price food on weeknights after 11 p.m. has changed. Instead, Fuel will offer a $5 menu after 11 p.m. on weeknights different from the regular full-price menu. With this change, Smith intends to eliminate confusion over which items are covered under the weeknight deal and which are not.

In addition to menu changes, the physical space has also seen minor touch-ups, including new lighting and a fresh paint job.

"We took advantage of the time we were closed to make the place look better," Smith said.

Regarding his reasons for taking over Fuel, Smith explained that former owners Mike Hanley and Jerry Dilembo arranged a private sale, choosing to focus efforts on their three Burgatory restaurant locations.

"Fuel just needed someone to be here to take care of it," Smith said. "It takes a lot to run it."

Aside from the business opportunity, the decision to come back to Fuel was also a personal one for Smith. His most recent venture is The Korner Pub, a Mt. Lebanon craft beer and hard cider den — but Smith was drawn back to Fuel because of its distinctive character.

"Our food is better, and we kind of have more of a restaurant atmosphere more than we have a bar atmosphere," Smith said. "It never hits really loud in here."

"We try to make sure everyone feels welcome, young or old," Smith said. "It's all about the environment."

Smith assured future visitors that Fuel is the same place as it was before the fire, with a few adjustments.

"We're ready to go," he said.

FEATURE PHOTO

Pittsburgh students host refugee camp

Courtesy of Minnar Xie

The Pittsburgh Refugee Youth Summer Enrichment (PRYSE) Academy is a three-week summer camp led by student volunteers from CMU FORGE, Pitt FORGE, and Pitt Keep it Real. Carnegie Mellon hosted the campus from Aug. 4–8. **Top:** Campers enjoy a morning of African dance, a workshop planned with the Refugee Health Advocacy Project to promote healthy living and exercise. **Bottom:** At an afternoon printmaking workshop led by recent graduate Nathan Trevino (CFA '14), an Iraqi camper learns to coat a plate with ink so she can then draw back into it.

NEWS IN BRIEF

12th class at CMU's Silicon Valley campus graduates; PARC chief executive speaks

Carnegie Mellon's Silicon Valley Campus graduated its twelfth class on Sunday, Aug. 10. At the ceremony, 70 students received their graduate degrees, 39 in software engineering and 13 in software management.

Stephen Hoover, chief executive officer of PARC, a research and development company owned by Xerox, was the keynote speaker for the ceremony. Hoover earned his master's degree in 1989 and his Ph.D. in 1994 from Carnegie Mellon, both in mechanical engineering.

Hoover holds seven patents and leads PARC's business and research across disciplines. PARC works to develop innovations with a wide array of companies, including Fortune 500 companies, startups, and government agencies, according to a university press release.

Before the ceremony, students showed their research and projects during the fifth annual Tech Showcase.

Past keynote speakers have included Ed Frank, a then-vice president at Apple, and Scott Dietzen, chief executive officer of Pure Storage.

Carnegie Mellon established its Silicon Valley campus in 2002 in Mountain View, California.

The Silicon Valley campus offers full- and part-time master's degrees in software engineering and software management.

Carnegie Mellon purchases duplex for graduate students, visiting faculty

Carnegie Mellon purchased a duplex on Forbes Avenue in July to house graduate students and visiting faculty members, according to Larry Lee, associate dean of student affairs for operations.

One portion of the duplex, 5222 Forbes Ave., will provide visiting faculty with short-term housing. Lee said the university provided short-term housing in an apartment at 5216 Forbes Ave. and saw a high demand for its use.

The Office of Property Assessments recorded the sale of 5216 Forbes Ave. to Carnegie Mellon on June 1, 1998. The university bought the house for $75,000. Carnegie Mellon is still listed as the owner of the location.

"The 5222 Forbes Ave. space will help to meet the need our departments have expressed for cost-effective, short-term housing close to campus," Lee said via email. He said that renovations of the location should be completed during the fall semester.

Lee said the second location, 5224 Forbes Ave., will house graduate students, with renovations already completed.

The Allegheny County Office of Property Assessments recorded the sales for both 5222 and 5224 Forbes Ave. on June 4 with prices of $250,000 each.

Compiled by
BRIAN TRIMBOLI
BRADEN KELNER

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.

Campus Crime & Incident Reports

Cash and iPad Theft
Aug. 6, 2014

University Police were summoned to the Greek Quadrangle after a female victim reported that nearly $100 was taken from her wallet in her room, which was unattended for a short period of time. The wallet was later found in a trash can. The next day, it was reported that an iPad was taken from the same area on the same day.

After investigating, University Police identified two suspects who took two iPads and cash, from two separate buildings in the Greek Quadrangle. Police recovered the stolen property and returned it to the victims. The two suspects, who were employees of a custodial company, were terminated and issued defiant trespass notices. The suspects are not being charged at this time, at the request of the theft victims.

Cash Theft
Aug. 8, 2014

A Carnegie Mellon pre-college student reported to University Police that someone had taken $200 from a draw string bag in her room in Morewood Gardens E Tower. The student left her door open the previous day between 1–3 p.m.; she may have been sleeping in the room when the perpetrator took the money.

Underage Drinking
Aug. 8, 2014

University Police were called to Morewood Avenue after a noise complaint. Upon arrival, they confirmed there was loud music coming from the address, and cited the residents for underage drinking and disorderly conduct after finding alcohol in their possession. Conduct citations were issued to those who provided the alcohol. No medical attention was needed.

Property Theft
Aug. 8, 2014

University Police investigated after reports of a custodial employee unlawfully taking property from Doherty Apartments. The employee was terminated. The victims requested he not be charged.

Driving Under the Influence
Aug. 9, 2014

In the early morning, a University Police officer saw a car hit the curb near the intersection of Forbes Avenue and South Craig Street. After the vehicle continued driving carelessly, the officer made a traffic stop.

The woman driving was arrested for driving under the influence of alcohol, and is being charged with a DUI and traffic violations.

WEATHER

MONDAY	TUESDAY	WEDNESDAY
High / Low	High / Low	High / Low
80 / 65	77 / 66	83 / 65

THURSDAY	FRIDAY	SATURDAY
High / Low	High / Low	High / Low
84 / 66	85 / 68	87 / 66

Source: *www.weather.com*

Statistically Speaking

First-year students are preparing for the novel experiences that will define their first year at Carnegie Mellon — and they fall right into step with a long line of Pittsburgh firsts. Although Carnegie Mellon can boast of its own fair share of firsts — including the first emoticon in 1982 and the first campus-wide wireless network in 1994 — Pittsburgh has always been home to innovators. Following is a list of firsts that originated in, or around, the Steel City and took off to leave a nationwide footprint.

1904

David Strickler, a pharmacist's apprentice, invented the banana split. The pharmacy he worked at — Tassel Pharmacy in Latrobe, Pa., just outside of Pittsburgh — sold the first banana split for 10 cents, twice the price of the store's other sundaes. Strickler, who was 23 years old when he invented the dessert, later bought Tassel and renamed it Strickler's Pharmacy.

1913

The world's first drive-in gas station opened on Nov. 30 at the intersection of Baum Boulevard and St. Clair Street in East Liberty. Drivers hand-pumped their gas and checked fuel levels with a dipstick; the station opened decades before the invention of the fuel gauge and the fuel pump.

1920

KDKA began broadcasting from Pittsburgh to became the world's first commercially licensed radio station. Originally operated by the Westinghouse Electric Corporation, KDKA is currently owned by CBS Radio.

1967

Jim Delligatti, owner of several McDonald's franchises in the Pittsburgh area, debuted the Big Mac at his Uniontown restaurant for less than 50 cents.

Sources: *post-gazette.com, clpgh.org, cmu.edu/brag*

Compiled by
BRIAN TRIMBOLI

Courtesy of Philippe Nyirimihigo

Jim Garrett, dean of the College of Engineering, speaks to graduates at the commencement ceremony for Carnegie Mellon's Rwanda campus.

Rwanda campus awards first degrees

GRADUATE, *from A1*

same worldwide, and despite the Rwandan government providing a 50 percent scholarship to East Africans, the cost of a CMU-R degree is still high, according to Krogh.

"Another goal is to get the student diversity we'd like to see," Krogh said.

He explained that, out of the most recent graduating class, 21 of 22 were Rwandan. "We'd like it to really become a regional, if not international location."

Steps toward this goal are being taken, however.

Two Carnegie Mellon Pittsburgh students are traveling to the Rwandan campus to finish their master's degrees in electrical and computer engineering this semester, and one Rwandan student studying information technology is coming for his fall semester at the Pittsburgh campus this year.

Carnegie Mellon's Qatar campus also recently celebrated 10 years in Education City on the outskirts of Doha, Qatar's capital.

The campus opened in 2004 with 41 students in two programs and now offers biological sciences, business administration, computational biology, computer science, and information systems programs.

In 2012, Carnegie Mellon partnered with Sun Yat-sen University in Guangzhou, China to launch a joint graduate engineering program, called the Joint Institute of Engineering.

Sun Yat-sen and Carnegie Mellon at the same time launched a complementary program, the Shunde International Joint Research Institute, with the Shunde People's Government of Foshan in Foshan, China.

Alumni startups get seed funding

BRIAN TRIMBOLI
News Editor

Carnegie Mellon's Open Field Entrepreneurs Fund (OFEF) recently gave $800,000 to 16 startup companies. The OFEF, awarded by the Center for Innovation and Entrepreneurship (CIE), was established by Jonathan Kaplan (TPR '90) and his wife, Marci Glazer. Kaplan, a Carnegie Mellon alumnus who created the Flip Video Camera, meant to give early-stage financial support to startups founded by other Carnegie Mellon alumni.

"Research and learning at Carnegie Mellon generates great ideas and talented innovators," said Robert M. Dammon, CIE board member and dean of the Tepper School of Business in a university press release. "The Kaplans' contribution to create and sustain the Open Field Entrepreneurs Fund is a valuable asset to our students and recent graduates that are seeking to successfully introduce new products and services to the marketplace."

The fall 2013 OFEF recipients are Bistrobot, Digital Dream Labs, LegalSifter, Midnight Madness Distilling, SolePower, and Trance. The spring 2014 recipients are BandPass, Collected, Greennovation, Impaqd, Innovesca, LifeShel, Naturi, PieceMaker, popAD, and Solvvy Inc.

These companies are part of the fourth and fifth rounds of the OFEF, which has funded 37 companies with over $1.8 million since its inception in June 2012.

The companies funded by the OFEF represent a diverse array of industries and products, from food to shipping to technology. The alumni who founded them, although concentrated in computer science and engineering, come from many of Carnegie Mellon's different colleges and graduate programs.

Midnight Madness Distilling, for example, was started by Doug Heckmann (DC '13), Casey Parzych (CIT '14), and Anthony LoRubbio (DC '13) as an entrepreneurship class project and, starting in the fall, plans to produce a "Swiss-imported herbal liqueur," according to the OFEF website. The company also produces craft spirits under the brand Fortis.

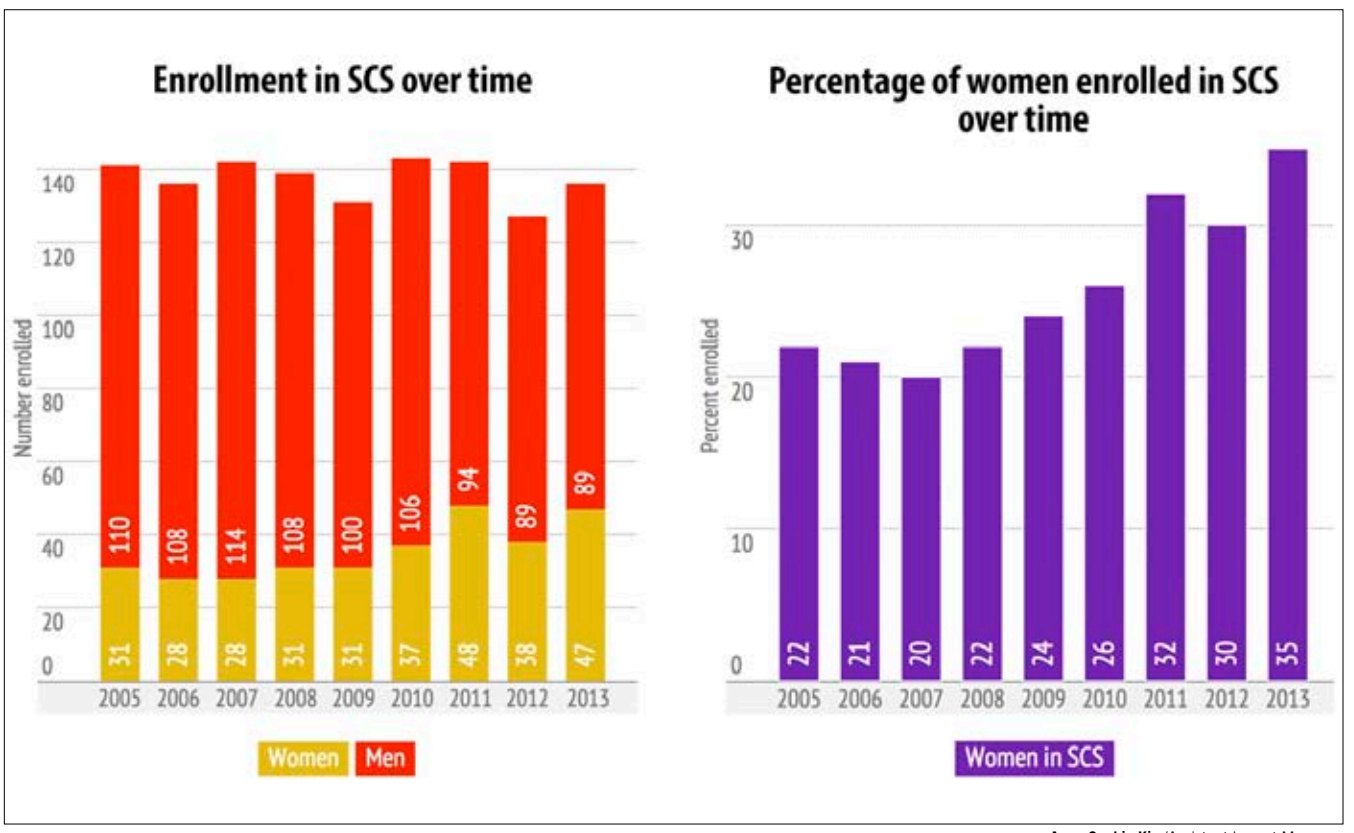
SolePower, founded by Matt Stanton (CIT '12) and Hahna Alexander (CIT '13), earned a spot on *Popular Science*'s 2014 Invention Awards list with an insole that produces power every time the wearer takes a step.

Naturi, founded by Aditya Dhere (TSB '14), Anes Dracic (TSB '14), and Jennifer Mrzlack (TSB '14) takes on the growing health food industry with "artisanal, organic Greek-yogurt that gives you peace of mind and body." Naturi is in the midst of a Kickstarter campaign with a $15,000 goal, based on a platform of healthy and delicious food.

LegalSifter, founded by Elliott Williams (SCS '08) and Lars Mahler (SCS '14) is a machine-learning program that summarizes, sorts, and searches legal documents, while Trance, founded by Harper LaFave (SCS '12), Marwa Nur Mahammad (SCS '12), and Julien Altieri (SCS '12), is a social network for dancers and dance enthusiasts to share and watch dance videos.

The Center for Innovation and Entrepreneurship was born from the marriage of startup incubator Project Olympus and the Tepper School of Business's Donald H. Jones Center for Entrepreneurship. The center administers several programs for budding entrepreneurs at Carnegie Mellon, including the OFEF and the Innovation Scholar Program, a program for entrepreneurship-minded undergraduates.

SCS gender ratio becoming even



Anne-Sophie Kim/Assistant Layout Manager

Library redesigned for new program

HUNT, *from A1*

said about the reason for including the IDeATe program's facilities in the library.

Despite an overhaul of the first floor, the Global Communications Center, which was installed in the library in 2012, will remain in its usual location, as well as the Maggie Murph Café and the study locations surrounding the café.

Below the studios, in the basement, will be the IDeATe program's labs, including a room painted black to allow for easy motion capture and rooms housing laser cutters and 3-D printers, among other equipment.

The university intends for the labs, like the studios, to be open 24/7, according to Rikakis.

In order to use much of the equipment in the labs, students will have to pass a portal course, or introductory course open to all students.

The portal courses serve as prerequisites for the concentrations and minors offered by the program.

There will also be a location in the basement for students to borrow various portable machines, like laptops, so that they can create their own virtual classrooms in the library.

Basement areas that students previously frequented, such as the three brightly colored study rooms and computer cluster, will remain.

The library's video collection, previously housed in the basement, will be relocated to the second floor of the library to bring the collection out in the open, according to Keith Webster, dean of libraries.

Other collections affected by the introduction of the IDeATe program will also be moved to upper levels of the library.

Additionally, on the second floor will be a new faculty lounge for industry partners who will teach courses within the IDeATe program.

Rikakis said that a lounge, as opposed to an office, was constructed for these partners — who could include someone like an employee of Intel or Disney — so that people can simply walk in and meet them.

Webster said about the decision to integrate the IDeATe program into Hunt Library that those who visit libraries do not use printed materials as they once did, but people still use libraries because they represent a place of learning.

He explained that people once interacted with printed words in libraries to create knowledge, but now interact with various forms of media to create the knowledge they seek.

He said people today use libraries to connect with new technologies.

The inclusion of the program in the library "signals that what we want is to represent the evolution of the library and to recognize that we are positioned physically at the heart of the campus and we want to be at the heart of the student experience," Webster said.

He continued, "That intersection that Carnegie Mellon is uniquely placed to offer between arts, design, and technology is absolutely core to the student experience."

Construction of the new collaborative studios and labs began in mid-June and is expected to be completed by mid-September, Rikakis said.

During construction, the building needed to be refitted with ventilation systems and other components to address concerns related to the new activities that students will be able to perform in the basement labs, such as laser cutting.

Rikakis said equipment, such as screens and other technology, will be moved into the studios as the semester begins.

GENDER, *from A1*

of Carnegie Mellon's incoming School of Computer Science students this year are women, the "largest group ever."

Carnegie Mellon, the article continues, has worked to remove obstacles for women interested in computer science without changing the content of the computer science curriculum.

Lenore Blum and Carol Frieze, both professors in the School of Computer Science, published a study in 2005 that concluded that, in balanced learning environments, women and men showed little to no differences as students of computer science. Blum and Frieze's work refutes several studies done by Carnegie Mellon in the 1990s, *The New York Times* said, that found that women care more about real-world applications of computer science, while men are more interested in the actual programming.

Many of Carnegie Mellon's measures to include women in computer science stem from a 1997 paper co-authored by Allan Fisher, Jane Margolis, and Faye Miller, which showed that women in the School of Computer Science felt unprepared for their coursework, typically having less prior programming experience than their male classmates, and perceived themselves as less successful students than they actually were.

The study, which comprised interviews of 29 male and 20 female Carnegie Mellon students majoring in computer science, along with samples of female non-computer science majors who took computer science classes, "counter[s] the suggestion that prior computing experience is necessary to do well in undergraduate computer science," the researchers stated in a paper titled "The Anatomy of Interest: Women in Undergraduate Computer Science."

"There are definitely CS classes where you look around the room and there are not many females, but overall CMU is an accepting community."

—Rebecca Greenberg
Senior business administration major with a minor in computer science

This study led to several policy changes, including the removal of prior programming experience as an admissions criterion for the School of Computer Science.

Gail Wilson, a junior computer science major, said via email that being a woman in the School of Computer Science has its ups and downs. "I'm worried about answering the wrong questions in class where all the guys seem to know it all and have done CS for so much [longer] than myself," Wilson said. "And sometimes people are just surprised and skeptical to learn I'm in CS myself."

Wilson added, however, that "I sometimes like surprising them, because it seems like such a good thing. Responses like 'Wow, you must be crazy smart!' are always fun."

Additionally, Carnegie Mellon is home to organizations such as Women@SCS, which is directed by Frieze. Women@SCS, its website says, is meant to "create, encourage, and support women's academic, social, and professional opportunities in the computer sciences and to promote the breadth of the field and its diverse community."

Wilson also appreciates the experiences she's had with Women@SCS, calling it an organization that "brings together women in our CS department to connect, talk, support each other, and host events that help encourage women to feel like a community in computer science, and also outreaches to young women in the nearby community to encourage them to discover the innovation and fun of the technology industry as well as let them know there are so many women who are a part of it too."

Women@SCS organizes outreach programs such as TechNights, a series of weekly workshops for middle school girls interested in computer science.

Many of Carnegie Mellon's measures to include women in computer science, it seems, are paying off. In July, *Business Insider* published a list of "22 Of The Most Powerful Women Engineers in the World." Merline Saintil (SCS '05), head of global engineering operations at Yahoo, was number six on the list.

Saintil received her master's degree in computer science from Carnegie Mellon, and went on to work at companies like Sun Microsystems, Adobe, and PayPal before she landed at Yahoo. Earlier this year Saintil also joined Carnegie Mellon's Alumni Board of Directors.

Obstacles for female computer scientists are not confined to higher education, however.

Another article from *The New York Times* cites "Technology's Man Problem" as another major obstacle facing women interested in computer science. The article tells the story of Elissa Shevinsky, who left her business partner at a start-up called Glimpse Labs after one too many misogynistic tweets. Among women who become computer scientists, the article says, 56 percent leave by mid-career, revealing a problem not only in recruiting women as computer science majors but retaining them in the midst of the industry's culture.

"A culprit, many people in the field say, is a sexist, alpha-male culture that can make women and other people who don't fit the mold feel unwelcome, demeaned, or even endangered," the article continues.

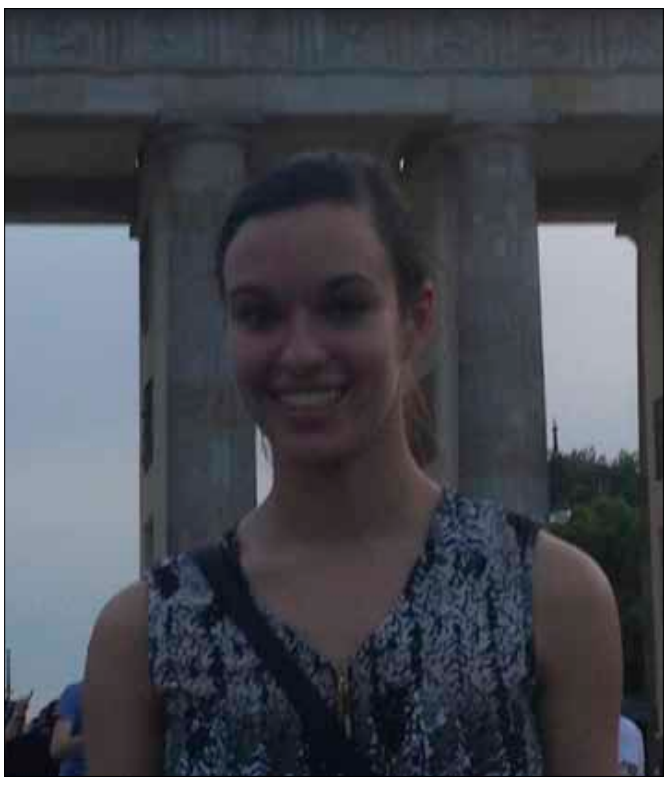
The industry, however, is also changing.

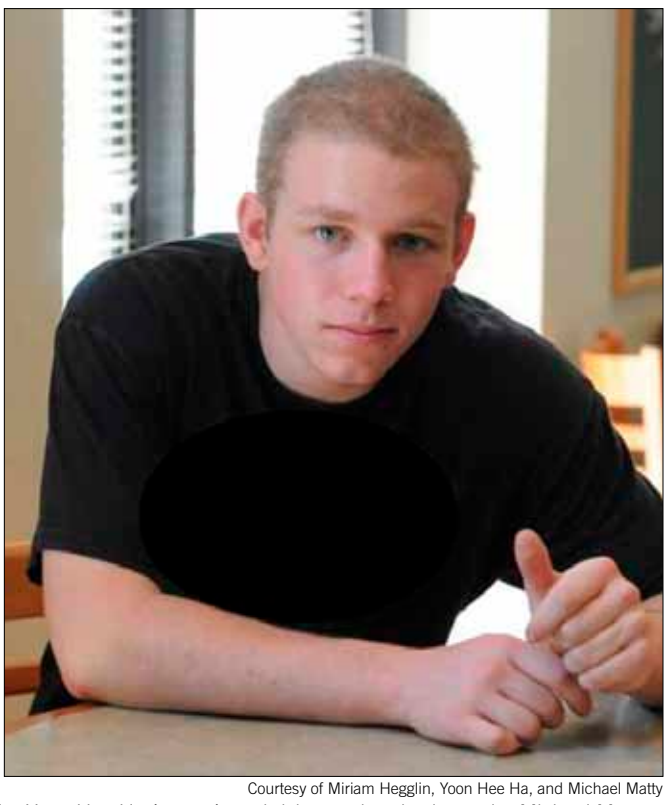
Wilson mentioned that "in more ways, I feel being a woman has been a benefit. Again, it gets me noticed. I make friends with other women in computer science." Wilson, who spent her summer interning at Zillow, said that being a woman often helped in the industry. "The women recruiters for companies seem to love to see women in the technology business. I've even been tweeted about by the CEO of Zillow during my internship twice partially because I'm a woman in CS."

Rebecca Greenberg, although she is a senior business administration major with a minor in computer science, has spent her last two summers as a software development intern at Intuit and Salesforce.com, respectively. Greenberg said that she spent her summer at Salesforce on a "team that was dominated by female engineers." She said of her experience in computer science classes at Carnegie Mellon, "There are definitely CS classes where you look around the room and there are not many females, but overall CMU is an accepting community."

Science & Technology

Undergraduates participate in German research program





Courtesy of Miriam Hegglin, Yoon Hee Ha, and Michael Matty

Rising senior civil and environmental engineering and engineering and public policy major Miriam Hegglin (left), rising junior mechanical engineering major Yoon Hee Ha (center), and rising senior physics major Michael Matty (right) participated in the Deutscher Arkademischer Austausch Dienst (DAAD) Research Internships in Science and Engineering program this summer.

BROOKE KUEI
SciTech Editor

Students often come to Carnegie Mellon because they believe they have something to offer to the world. They have talent, passion, and a strong work ethic. They have an innate drive for knowledge, but even more than that, they crave discovery. And they want to contribute new ideas to the world around them. But where do they begin?

One of the programs through which undergraduates can gain hands-on research experience under the guidance of a faculty mentor and graduate student mentor is the German Academic Exchange Service (Deutscher Akademischer Austausch Dienst, or DAAD). This past summer, Carnegie Mellon undergraduates Miriam Hegglin, Yoon Hee Ha, and Michael Matty were accepted to participate in the DAAD Research Internships in Science and Engineering (RISE) program. Below are descriptions of their intellectual escapades.

Miriam Hegglin

Hegglin is a rising senior double majoring in civil and environmental engineering and engineering and public policy. After spending last summer doing research at Carnegie Mellon, Hegglin said she "decided to take a giant leap and not only look for opportunities outside of CMU, but outside of the country." She was particularly drawn to Germany because she was fluent in German during her youth and also has relatives in Switzerland and Spain.

This summer, Hegglin worked at the Philipps-Universität Marburg in Marburg, Germany. "I really love the history of the city and the sense of community here," Hegglin said. "It is almost like being in a fairytale sometimes."

For her project, Hegglin focused on sustainable innovation processes in the travel and tourism sector. "We are analyzing the economic, ecological, and social impacts of responsible tourism standards, particularly the Fair Trade Tourism standard, which was pioneered in South Africa," Hegglin said.

She explained that while travel and tourism is an area of great potential for economic development in South Africa, harmful effects to the local environment and communities can occur if it is not conducted with sustainability in mind.

Hegglin plans to stay at Carnegie Mellon to complete a master's degree in environmental engineering and is considering going into industry after graduation.

Yoon Hee Ha

Yoon Hee Ha is a rising junior majoring in mechanical engineering. Ha applied to the DAAD RISE program because she believes it will take her one step closer to her dream job: being the chief executive officer of BMW.

Ha interned this summer at Hochschule Hannover in Hannover, Germany. She spent the summer studying pedelecs — electric bikes — through computational modeling.

"Specifically, I developed a MATLAB model that calculates the estimated range of operation with one battery charge," Ha said. "I developed the model so that it can reflect changes in variables such as the weight of the driver or road conditions."

She also explored how different conditions would affect the range extenders — additional power units that extend the distance a bike can last — of pedelecs.

"Working on a subject I find interesting was such a blessing this summer," Ha said. "Because I was genuinely interested in the topic of using electricity as a main source of energy, my research was more meaningful and I had the desire to produce better results."

After her experience through DAAD, Ha is seriously considering pursuing a master's degree in Germany.

Michael Matty

Michael Matty is a rising senior majoring in physics and was interested in going to Germany because he has some experience with the language.

"The DAAD program seemed like the perfect option since it allowed me to go to Germany, and several of the available projects were very closely aligned with the type of work I want to pursue in graduate school."

This summer, Matty worked at the Eberhard-Karls Universität Tübingen in Tübingen, Germany. His project involved studying thermal vacancies — defects in crystals where a site in which one would expect to find a particle is instead empty — in close-packing solids. "I looked at studying the thermodynamic properties, such as free energy and pressure, of such materials using a particular expansion for the canonical partition function to a higher order than had previously been done before," Matty explained.

When asked about his favorite part of the summer, Matty replied, "It's hard for me to pick a single thing."

Matty said his lab group was friendly, his faculty and graduate student mentors were "committed to making sure that my work turned into something useful," and he loved the culture in Germany — especially the soft pretzels.

Matty plans on pursuing a Ph.D. in the future and hopes that he will one day become a professor.

Chemistry professor studies antibiotic-resistant bacteria

CLAIRE GIANAKAS
Staffwriter

As the understanding of medical care has evolved, the use of antibiotics — specifically, the issue of antibiotic resistance — has become a major topic of discussion.

Yisong Guo, an assistant professor of chemistry at Carnegie Mellon, has become part of this conversation through his research regarding the biosynthesis of carbapenems, a class of antibiotics currently used to treat various types of drug-resistant bacterial infections.

A bacteria generally becomes resistant to antibiotics when it produces enzymes, such as beta-lactamase, which destroy antibiotic molecules and render the bacteria resistant. Fortunately, carbapenem antibiotics are insusceptible to these enzymes due to two unique structural components.

"The stereochemistry of the two protons on C5 and C6 carbons and the carbon-carbon double bonds at C2 and C3 carbons … give carbapenem molecules protection against the attack of beta-lactamase," Guo said. In other words, the unique spatial arrangement of atoms in carbapenems act as a defense against antibiotic resistance-inducing enzymes.

Researchers hypothesize that the formation of these two structural components is catalyzed by carbapenem synthase (CarC), a key enzyme in the synthesis of carbapenem that belongs to a class of enzymes called alpha-ketoglutarate (aKG) dependent mononuclear non-heme (MNH) iron enzymes. CarC is thought to initiate both the stereoinversion — a flip in structural orientation — that results in the two protons on C5 and C6 carbons, and the desaturation reaction that causes the carbon double bonds at C2 and C3.

The stereochemistry behind the C5 and C6 protons formed the basis for Guo's research. It was previously discovered that precursors in the synthesis of carbapenem have the opposite stereochemistry from the final carbapenem on the two protons of C5 and C6 carbons, suggesting that carbapenem must go through a stereoinversion reaction in order to end up with its final structure.

Guo conducted the research while a postdoctoral researcher at Pennsylvania State University along with Wei-chen Chang, Chen Wang, Susan Butch, Amie Boal, Carsten Krebs, Amy Rosenzweig, and J. Martin Bollinger Jr.

The team's research, which was supported by grants from the National Institutes of Health, aimed to determine the chemical mechanism behind the stereoinversion.

Guo explained that understanding the chemical mechanism behind the carbapenem stereoinversion is essential for understanding many key biological processes. Uncovering this mechanism, however, produced many challenges. "Enzyme reactions are generally very fast, spanning the time scale from milliseconds to seconds, which renders traditional crystallographic technique not applicable," Guo said. "One way to tackle this challenge is to use [a] rapid freeze-quench technique to stop the reaction at any given time point by quickly freezing the reaction solution, then to analyze the chemical species present in this frozen solution using spectroscopic techniques."

Courtesy of Yisong Guo

Yisong Guo, an assistant professor of chemistry, studies carbapenems, antibiotics used to treat drug-resistant bacterial infections.

Guo, a trained spectroscopist, used electron paramagnetic resonance (EPR) and Mössbauer spectroscopy to detect the structural components present during various levels of synthesis. Ultimately, the team was able to determine the mechanism behind the stereoinversion. They determined that the molecule is situated between an iron center and an amino acid residue called tyrosine. An intermediate of carbapenem called Fe(IV)-oxo removes a hydrogen atom from one side of the molecule, after which the tyrosine donates a hydrogen atom to the opposite side of the molecule, completing the stereoinversion.

The discovery of this mechanism has the potential to impact many aspects of the chemical world. Guo explained that the research helps elucidate how enzymes such as carbapenem synthase work.

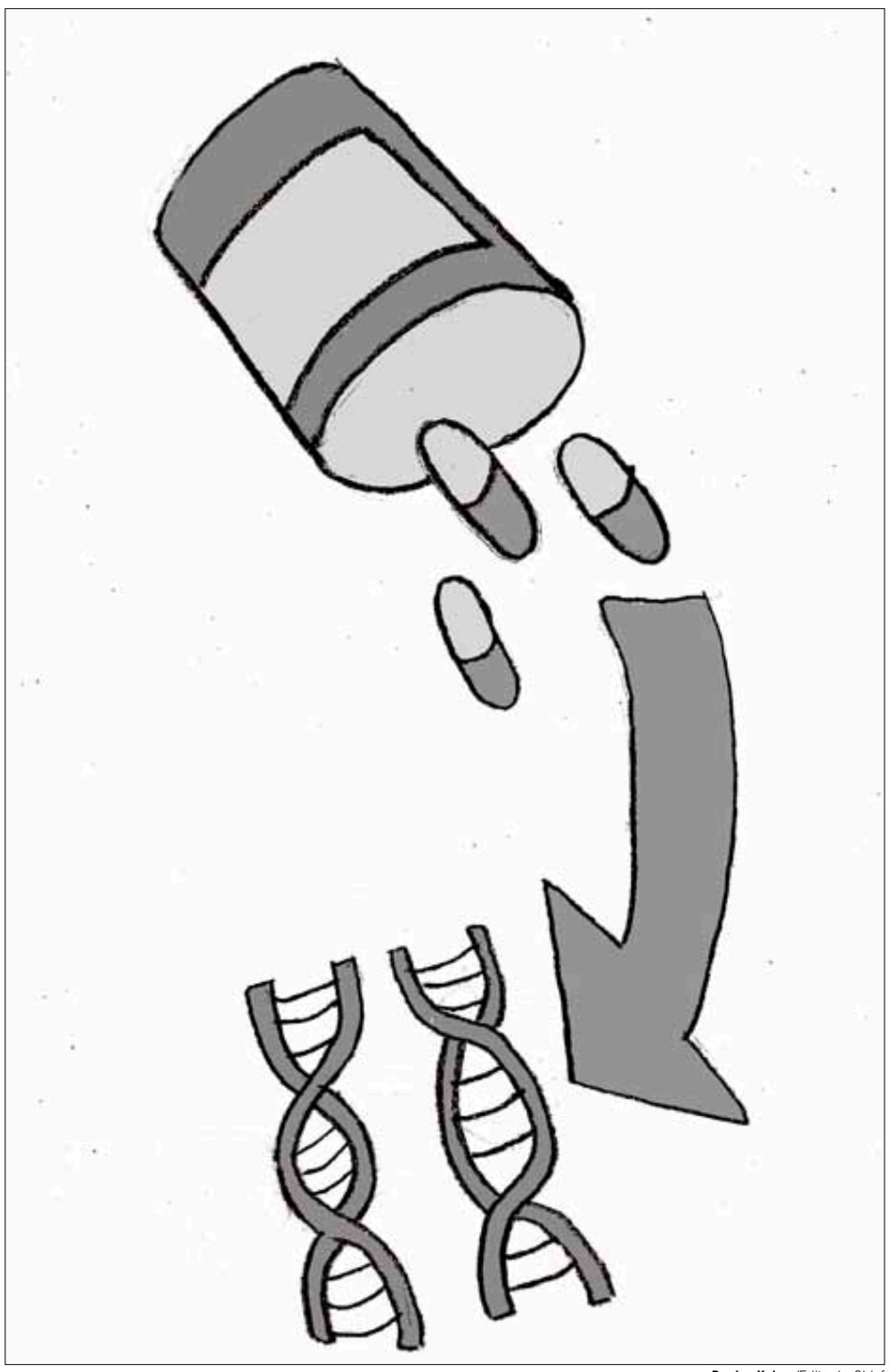
"It sheds light on how aKG-dependent MNH-Fe enzymes control their chemical reactivities through the protein scaffold surrounding their iron centers," Guo said. "More importantly, it provides more knowledge to help us understand carbapenem antibiotics and create new drugs targeted at treating antibiotic resistant bacteria."

Despite these results, Guo admits that there is still room for further study. "It is still unclear about the reaction mechanism on the desaturation reaction to form the C-C double bond," Guo said. "It is likely that the enzyme starts new reaction cycles to build up the Fe(IV)-oxo intermediate … but new experiment designs are needed to test this hypothesis."

The discovery of new chemical mechanisms, such as the mechanism behind carbapenem stereoinversion, has the potential to greatly enhance our current knowledge of various biological and chemical processes.

This research paves the way for new, more effective antibiotics and could help determine the next steps in the prevention of antibiotic resistance.

New method analyzes how drugs affect gene networks



Braden Kelner/Editor-in-Chief

RAGHUNANDAN AVULA
Staffwriter

Modern drug development is a lengthy, lavish, and laborious process largely because biological systems are complex and dynamic.

According to the California Biomedical Research Association, it takes about 12 years and $359 million for a drug to complete its journey from inception in a research lab to patients. Only 10 percent of pre-clinical drugs successfully reach human trials. Of these, only one in five reaches the market.

Wei Wu, a computational biologist at the Ray and Stephanie Lane Center for Computational Biology at Carnegie Mellon, believes that "if we understand the changes introduced by a drug at the molecular level, we can design smarter drugs that have a higher success rate." To do so, Wu and her team have developed a computational method to analyze expression data from breast cancer cells collected by collaborators at Lawrence Berkeley National Laboratory.

Their method, detailed in the online scholarly journal *PLOS Computational Biology*, enables researchers to understand how a drug influences changes in gene networks. This knowledge can provide insight as to why some drugs appear to work at first, but might fail at curing a disease in the long run.

In a cell, proteins of specific shapes and sizes interact in a vast, tightly regulated network that determines their production, function, and eventual destruction. Many diseases, such as cancer, are caused by proteins that are made incorrectly, allowing them to escape regulation and negatively impact biological processes. Modern drug development aims to identify the misguided proteins and use chemicals to alter their functions and eventually cure diseases.

Unfortunately, this is easier said than done. Altering a biological pathway can have unexpected consequences. Cells will adapt by activating other pathways, or other proteins in the same pathway, to compensate for and overcome the effect of the drug. These changes can introduce new symptoms or diseases, or simply render the drug useless.

Using breast cancer cells, the group's method harnesses new techniques to identify the adaptations at the molecular level and explain the effects of a drug.

At Berkeley Lab, Wu worked under Mina Bissell, a breast cancer biologist. Bissell developed a unique 3-D cell culturing technique to grow cancer cells in a lab while maintaining their native 3-D structure in a patient. Older methods consisted of growing cancer cells on the flat 2-D surface of a petri dish. "This technique is vital because the interactions between cells in a 3-D environment can largely impact the protein networks within the cell," Wu said.

Exposing these cells to different cancer drugs mimics the treatment in a patient. Bissell and her team use microarrays to measure the expression of thousands of genes in five different states: normal cells, cancer cells, and three types of reverted-cured cells after the treatment.

Researchers can use this expression data to make inferences about active protein pathways. Unfortunately, with previous methods, a large amount of expression data was required to infer the correct pathway, and researchers are limited by the number of microarrays they can afford and have time to carry out. To overcome this problem, computational biologists have pooled the data from multiple cell states to determine significant pathways.

Wu said that in the group's study, the goal is to differentiate the pathways in the different cell states, so simply pooling all data does not suffice. To solve this problem, she collaborated with Eric P. Xing, a professor of machine learning at Carnegie Mellon, and together they developed Treegl.

Wu explained, "Treegl is a powerful computational method that pools the data from the different cell states while also identifying similarities and differences. By identifying the similarities, the method discovers statistically significant pathways while only requiring three microarrays for each of the five cell states." More importantly, the method identifies the differences in the active pathways between the different cell states, highlighting the effects of the drug at the molecular level.

A potential approach for cancer drugs that has garnered interest involves inhibiting MMP proteases, which naturally break down other proteins in the cell.

Wu described that with their approach, "after treatment with MMP inhibitors, the newly active pathways showed how cells were able to compensate for the lack of MMP, thus resisting the effect of the drug. This provides a potential explanation as to why this treatment approach shows a low success rate within patients."

The earliest tangible records of cancer in humans date back to the Egyptians, who observed cancerous overgrowths but were unable to determine their causes. The past few decades have seen a burst of knowledge in molecular biology, enabling researchers to better understand cancer and make significant strides toward developing viable cures.

Sidney Farber, widely regarded as the father of modern chemotherapy, saw promise in using powerful chemical agents to defeat cancer. Countless times, he saw the children he treated improve from a combination of drugs to only fall ill once again to a cancer that adapted to the drugs and returned stronger than before.

Wu strongly believes that the work of her team and her collaborators has immense potential and real-world application, including the ability to understand the effects of the drugs they test and combine drugs to overcome a disease's ability to adapt.

After losing many patients, Farber admitted that fighting cancer would be an arduous task, requiring a multidisciplinary approach. His vision has now become a reality, as this new method combines the power of computation with modern biological techniques to devise strategic approaches to defeat the most challenging diseases.

SCITECH BRIEFS

Regular marijuana use shown to negatively affect teenage brains

According to a discussion at the 122nd annual convention of the American Psychological Association, frequent marijuana use can have negative effects on the adolescent brain and result in addiction. Brain imaging studies of teenagers 16–19 years old who increased their marijuana use in the past year showed abnormalities in the brain's gray matter, which is associated with intelligence. These conclusions were reached even after controlling for major medical conditions, prenatal drug exposure, developmental delays, and learning disabilities. Furthermore, a 2012 longitudinal study which followed 1,037 participants from birth to age 38 showed that adolescents who become addicted to marijuana may lose up to six IQ points by age 38. According to Krista Lisdahl, director of the brain imaging and neuropsychology lab at University of Wisconsin-Milwaukee, the recent legalization of marijuana has made the drug seem less risky to teenagers and young adults. Lisdahl believes policymakers should take steps to prevent easy access to young adults and fund intervention for current users.

Source: Science Daily

Researchers at University of Montreal design 3-D sketching system

On Aug. 10, researchers from the University of Montreal presented Hyve-3D, a 3-D sketching system, at the SIGGRAPH (Special Interest Group on Graphics and Interactive Techniques) 2014 conference in Vancouver. The system is run by a Macbook Pro laptop, two iPad Mini tablets, a tracking system with two 3-D sensors, and a specially designed high-resolution projector. Users create drawings on iPad mini tablets, and the projector displays the drawing as a 3-D image within the system's space. Users manipulate the 3-D image by changing their drawing on the iPads which are connected to the 3-D sensors. According to leading research professor Tomás Dorta of the University of Montreal's School of Design, the system is the first simple, non-intrusive 3-D sketching system and has applications in many fields, including engineering, industrial and architectural design, medical 3-D applications, game design animation, and movie production.

Source: Science Daily

Facebook purchases cybersecurity startup

Facebook announced last week that it purchased PrivateCore, a startup that produces software to protect data on servers. According to Joe Sullivan, Facebook's chief security officer, PrivateCore's software "protects servers from persistent malware, unauthorized physical access, and malicious hardware devices." The startup was formed in Palo Alto, Calif. by former VMware and Google employees in 2012. Sullivan announced on his Facebook page that "PrivateCore's technology and expertise will help support Facebook's mission to help make the world more open and connected, in a secure and trusted way."

Source: CNN Money

Ebola may not be widespread epidemic

The recent Ebola outbreak in West Africa has caused alarm worldwide, particularly since the virus's arrival in the U.S. However, the virus may not be the serious pandemic that hysteria has made it out to be. People acquire the disease when they come into close contact with animals that carry the virus, a rare event in a developed country. Ebola has caused less damage than the SARS outbreak of 2003, and has caused even fewer deaths than diseases that are considered mundane, such as influenza and measles. Experts believe that the root of panic over Ebola is the widespread expectation of a deadly pandemic. Additionally, Ebola may cause more panic than SARS or influenza because of its gruesome symptoms. While it has not caused as many deaths as other major epidemics, the virus kills 60 to 90 percent of the people it does infect. Priscilla Wald, author of a number of pandemic-related books and an English professor at Duke University, said, "A terrifying disease, easily transmitted, spreads from a developing country and threatens to become apocalyptic.... That story has been told so many times, even when people hear one piece of that story, that one element may invoke the entire narrative."

Source: CNN

IBM develops chip that emulates brain function

Researchers at IBM have designed a new low-power chip based on the brain's architecture. The chip, named TrueNorth, attempts to recognize patterns by relying on interconnected networks of transistors, structured similarly to the neural networks in the brain. It uses no more power than that of a hearing aid, which is 500–2,000 times less powerful than today's personal computers. The notion that neural networks could help in processing information has been prevalent since the 1940s, but is still in its infancy in terms of practicality. Recently, companies such as Apple and Google have used pattern recognition to speed up the networks used in computing. Despite claims that the chip has the potential to do calculations that today's supercomputers are incapable of, there is skepticism as to whether it will ever be able to outperform today's fastest supercomputers, and whether it has been adequately tested as to how well it can perform functions such as movement detection. In the immediate future, the primary goals of the chip are to automate the surveillance done by military drones and to quickly test neuro-scientific theories about how brains function.

Source: *The New York Times*

Immense vortex on Saturn

NASA's *Cassini* spacecraft, which has been orbiting Saturn for 10 years, recently sighted a six-sided vortex on the planet's north pole. The atmospheric phenomenon was first discovered by NASA's *Voyager* in 1980, and was identified as a hexagonal storm four times the size of Earth. However, after the *Voyager* left, Saturn's north pole descended into winter. Since the planet takes 30 Earth years to orbit the sun, the storm was engulfed in darkness until *Cassini* just recently spotted it again. The storm is bordered by a jet stream blowing 220 miles per hour. Ana Aguiar-Ricardo, professor of chemical and biochemical engineering at the New University of Lisbon, attributes the storm's strange shape to friction with slower-moving atmosphere on either side of the jet stream.

Source: *The New York Times*

Compiled By
SONIA KATHARANI-KHAN

Forum

Venture out, experience the city past South Craig Street

Brandon Schmuck

BRANDON SCHMUCK

Many students have passed through the gates of Carnegie Mellon without ever managing to adequately step off campus and explore the exciting world around them. If you are an incoming first-year, you will quickly become familiar with Craig Street, though hopefully your exploration of Pittsburgh will lead you past that boundary.

I remember walking the streets of Downtown with some friends last year when one of them had an outburst about how Pittsburgh was such a boring place. After talking to my friend, it became clear that she had left campus very little and had no idea what this city has to offer.

Forbes named Pittsburgh the most livable city in the U.S. in 2010 for a reason.

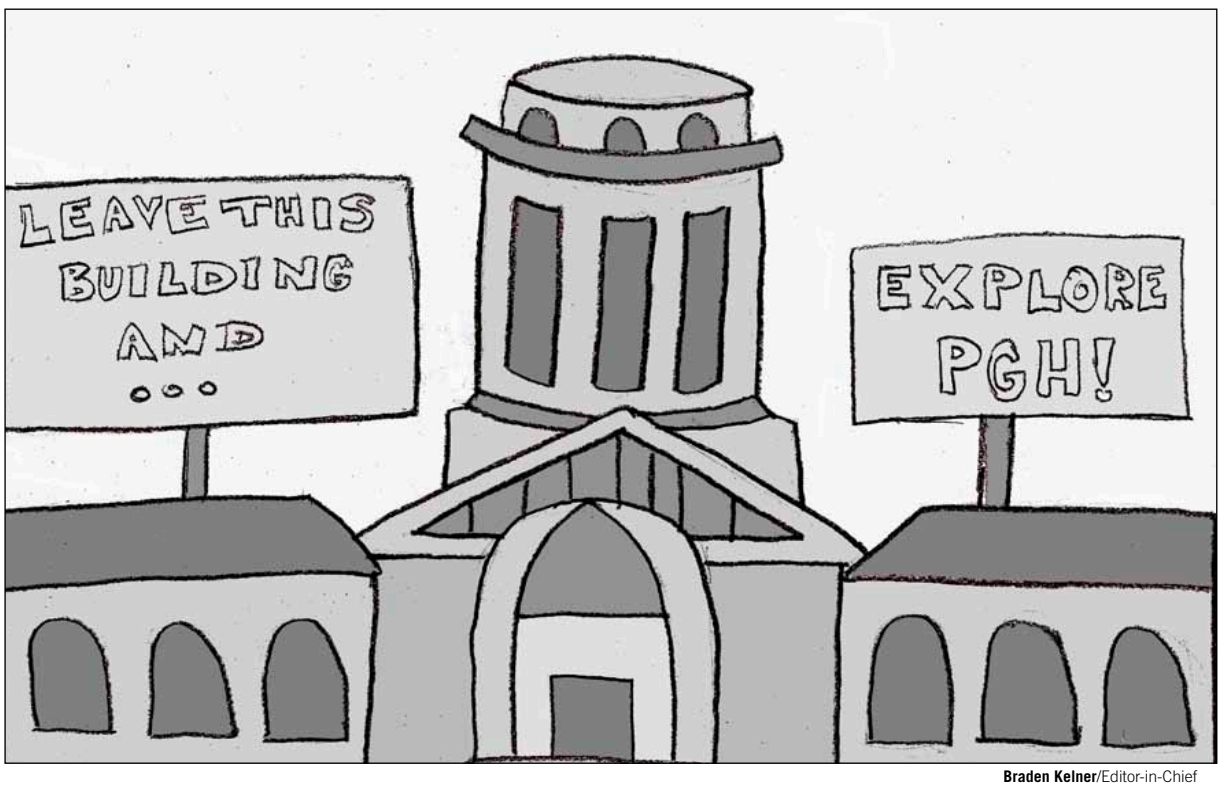
With its plethora of arts, music, sports, food, and culture, Pittsburgh offers the same caliber of experience as many cities quadruple its size. Its many entertainment options are also coupled with some of the lowest living costs in the nation — meaning you can enjoy the best in urban life for less.

Crazed about arts and music? Venture to the Carnegie Museum of Art, the Mattress Factory, or the Andy Warhol Museum; attend a music festival or a concert by your favorite artist (OneRepublic was just here this month); and see a show at the Benedum Center.

Love sports? The Steel City is the perfect place for you. The Steelers have more Super Bowl wins than any other NFL team, and the Pirates and Penguins give away teams a fight for their money. Pirates tickets are inexpensive and promise a great evening out with friends.

Hungry? Pittsburgh has many famous restaurants waiting for you to try. It is obligatory that you make a visit to Pittsburgh's famous Primanti Brothers, as well as Pamela's, and be sure to grab some homemade ice cream afterward at Dave and Andy's. Some of my other favorites include Spice Island Tea House, Sushi Fuku, Everyday Noodles, and the Union Grill. Almost all of these restaurants require venturing past South Craig Street.

If you are looking for thrills, visit Kennywood or Sandcastle Waterpark or, better yet, spend a day in the Laurel Highlands. For a hot day, Ohiopyle State Park offers whitewater rafting, kayaking, and more. During the merciless Pennsylvania winter, Seven Springs Mountain Resort offers skiing, snowboarding, and snow tubing. While you are in the area, be sure to stop by Frank Lloyd Wright's famous Fallingwater, a marvel of architecture that was literally built on top of a waterfall.



Braden Kelner/Editor-in-Chief

There is no excuse for not exploring when public transportation and visits to the Carnegie Museums, Carnegie Science Center, Andy Warhol Museum, Mattress Factory, Phipps Conservatory and Botanical Gardens, and National Aviary are free for all Carnegie Mellon students. Learn about the city and use your free bus pass to explore Downtown, Station Square, Shadyside, Squirrel Hill, East Liberty, the South Side, the Waterfront, and the numerous other neighborhoods that make up this great place besides the oft-visited Oakland.

As a returning student, I am not going to lie and tell you that you will have all the time in the world to have these experiences. There are many weeks you will find little time to spare for yourself.

However, you must make time to see the world around you as a Carnegie Mellon student. Experience Pittsburgh. Venture past Craig Street. Only then can you challenge me with claims that Pittsburgh is boring.

*Brandon Schmuck (*bschmuck@*) is a staffwriter for The Tartan.*

LEADERSHIP PERSPECTIVES

Student newspaper serves as platform for engagement, change

To the class of 2018+,

As you adjust to the campus community at Carnegie Mellon, you will no doubt find a wealth of resources that can help you thrive during your college experience. These resources will come in many forms, from fellow classmates to professors, from textbooks to teaching assistants, from posters pinned up in your dormitories to the resident assistants who hang them.

As you weigh the various resources that will be essential for your time at Carnegie Mellon, we hope you will consider The Tartan among them.

The Tartan serves to inform the diverse community of Tartans who walk the Cut and Mall every day. Each week in this newspaper, you will find information about the campus's latest research advancements, extracurricular events, and campus improvements, among other topics.

Our newspaper is foremost an outlet for change. There is always room to improve the standard of campus life in a community that represents an academically and personally distinct student body, especially at this pivotal time in students' lives. We hope that The Tartan can act as a catalyst for needed improvements as students and faculty identify them.

To promote change, we hope to represent the student body's interests as accurately as possible. To help us in our goal, we encourage you to submit Letters to the Editor for Forum, our opinion section. Letters to the Editor, like the opinions of our staffwriters, provide individuals with a public outlet for expression and offer readers perspectives on issues or points of discussion.

Eunice Oh/Staff Artist

We also hope that you will consider submitting Leadership Perspectives, like this letter, as you become involved with campus organizations. A student leader can be anyone who has been elected or volunteered to head an established organization or event. These submissions are meant to inform the campus community of important milestones or to introduce points of discussion from the students and faculty who, through their positions on campus, guide other campus members. By engaging with us through your submissions and comments, we can better engage and serve you.

All Letters to the Editor and Leadership Perspectives may be accepted or rejected for printing by the discretion of The Tartan's editorial staff. To submit a Letter to the Editor or Leadership Perspective, email *forum@thetartan.org* or visit The Tartan's office on the third floor of the Jared L. Cohon University Center at UC314.

We also encourage you to connect with us online through your comments on our website, *www.thetartan.org*, and your posts interacting with our social media channels, including Facebook and Twitter.

To join The Tartan, request us on The Bridge, the university's online hub for student activities, or stop by our table at the upcoming Activities Fair on Wednesday, Sept. 3, 4:30–6:30 p.m.

For general inquiries, email *contact@thetartan.org*.

Sincerely,

Braden Kelner, Editor-in-Chief
Rachel Cohen, Publisher

During time in college, happiness counts

Justin McGown

JUSTIN MCGOWN

As a new student at Carnegie Mellon, the statistics indicate that you have good numbers. Your SATs, your ACTs, your GPA, your IB or AP scores — all of them are almost certainly topflight.

And while your time here has just begun, I wager that a lot of you are also anticipating good numbers once you've graduated, in the form of a high salary or, at the very least, a number of job opportunities knocking at your door.

And now I'm here to tell you not to sweat the numbers. Of course, you can't ignore your GPA entirely, and I understand that for those going into a STEM field, the majority of your coursework will, in fact, involve numbers.

Numbers, of course, matter, and you should take steps to ensure that you have the best ones you can manage, especially if you intend to enter a graduate program. Despite that, numbers don't measure the most important indicators of the value of your time spent here.

If at any point you're not happy, or at least content, you should reconsider how you're spending your time. Measure your life qualitatively, not quantitatively.

If nothing makes you happier than good grades, then by all means pursue them, but be thorough and explore other avenues. Take some courses that don't count toward your intended course of study. Take them not just because they fill general education requirements, but because they interest you. Go to museums, parties, and places you've never been before.

Remember, even if you find yourself pulling six figures at the end of this decade, beginning with these next four years, it won't matter if that money does not allow you to be happy.

It's better to be a happy truck driver than a miserable millionaire (although there's nothing wrong with aspiring to be a happy millionaire).

You should learn about things that exist beyond the classroom just as much as you need to study for your next test. Interacting with people in social settings, navigating interpersonal drama, and discovering yourself and the world around you are at least as important as developing the skills you will need in your intended field.

Beyond leading a more fulfilling existence, these life skills are what will give you upward mobility in many organizations. Simply being a skilled programmer, engineer, musician, architect, statistician, writer, or any other kind of professional will only get you so far. High technical skill will get you a job, but interpersonal skill and an ability to understand and empathize with others, as well as an understanding of how messy life can get, is what will make you a leader.

If you are content to do one thing well and to not look far beyond that, then by all means do so.

But take advantage of the opportunity for personal growth presented to you at Carnegie Mellon. The university itself will give you a very useful set of skills with quantifiable applications, and while that might make professional life easier to live, it is what happens outside of the classroom and outside of the work itself that will ultimately make life worth living.

*Justin McGown (*jmcgown@*) is a staffwriter for The Tartan.*

THE TARTAN

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Letters to the Editor are the opinions of their authors. Letters from within the University community take precedence. Letters intended for publication must be signed and include the author's address and telephone number for verification; letters must not exceed 350 words. Authors' names may be withheld from publication upon request. **The Tartan** reserves the right to condense or reject any letter. Letters must be submitted by 5 p.m. on the Wednesday before publication by mail or to *forum@thetartan.org*.

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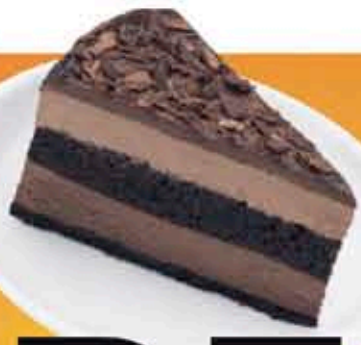

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Sports

Varsity fall sports: A look back and a look ahead

Football

File photo by Kelsey Scott

Troy Witt

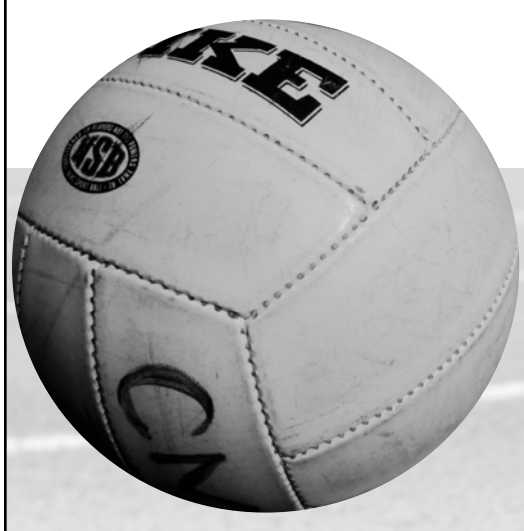
The Carnegie Mellon football team is coming off a tough year, going 3–7 in 2013 overall and 0–3 in the University Athletic Association (UAA). The Tartans' primary quarterback, Rob Kalkstein, graduated in May, but a number of the team's strong rushers and receivers are returning for the 2014 season. Current junior running back Troy Witt was the team's leading rusher last year, running for 431 yards in 100 carries. In the receiving department, senior wide receiver Tim Swanson grabbed 26 passes for 548 yards and three touchdowns last year. Defensively, the team's top returning tackler is Vince Demarchi, a junior cornerback, who recorded 32 tackles in 2013.

In addition to the returning players, the team is expecting to welcome 43 new recruits for the upcoming season.

This year, Carnegie Mellon football will become an affiliate member of the Presidents' Athletic Conference (PAC), along with fellow UAA member Case Western Reserve University. The PAC's pre-season poll pegged the Tartans to finish seventh in the 11-team conference.

"We are a very young team that has a lot of talent returning that saw a lot of playing time," senior linebacker Alexander D'Angelo said in a Carnegie Mellon press release earlier this month. "This team has a tremendous amount of chemistry and is looking forward to the start of the season."

The first game will be Saturday, Sept. 6, at Case Western Reserve.



Volleyball

Finishing third place in the UAA, the Carnegie Mellon volleyball team went 25–10 last fall behind the leadership of graduated senior Ali Nichols, current senior Ali Celentano, current junior Emily Lawlis, and current sophomore Jackie Gibbons. Nichols led the team in digs and blocks, Celentano in kills, points, and total attacks, Lawlis in assists, and Gibbons in aces. The team made it to the NCAA Division III quarterfinals before losing to the University of Mount Union.

During the season, Celentano was named to the All-UAA team, then All-Mid-Atlantic team, and the Eastern College Athletic Conference Division III South all-star second team.

The volleyball season for 2014 gets underway on Friday, Aug. 29, with four weekend matches scheduled at the Gettysburg Battlefield Classic.

File photo by Jason Chen

Ali Celentano

Golf

Carnegie Mellon's top golfer last year was Ian Bangor, who carded the team's lowest round (70) and lowest overall average (75.2) during the 2013–14 season. With his graduation last May, the top two prospects on this year's team are sophomore George Qian and junior Ben DuCarme. Qian recorded a low round of 71 last year and finished among the top 10 players at four competitions. DuCarme scored a low of 72 and placed in the top 10 twice.

As a whole, the 2013–14 team placed third in the UAA Championship last March, 14 strokes behind winners Emory University. In the classroom, the team finished the academic year with a cumulative QPA of 3.70, the second time the Tartans have won the top academic honors from the Division III Golf Coaches Association of America.

The golf team plays its home matches at the Longue Vue Country Club in Verona, Pa., about seven miles northeast of campus. The team plays there in the Carnegie Mellon Fall Invitational on Oct. 8. But the fall season opens first Sept. 7 at the Hal Hansen Invitational in Clarion, Pa.

Tennis

File photo by Jonathan Leung

Angela Pratt

Carnegie Mellon's men's and women's tennis teams ended last year each ranked second in the UAA, the women notching a final record of 19–5 and the men going 18–7.

The No. 8-ranked women's team closed out the season in May in the quaterfinal round of the NCAA Division III Championships. With current sophomore Vanessa Pavia out of the No. 1 doubles and No. 2 singles spots due to injury, the team dropped its final match 5–1 to Amhert College. It was the Tartans' fourth trip to the NCAA quarterfinals in the past six years.

The No. 5-ranked men's team closed out the season in May in the NCAA Division III Regional Championships, losing a close match, 5–4, to Case Western Reserve University in the round of 16.

Three Carnegie Mellon players made it to the NCAA Division III Championships in singles play: current senior Angela Pratt, current senior Christian Heaney-Secord, and current junior Abhishek Alla. They each advanced to the round of 16 before losing to opponents.

Men's soccer

Last year's men's soccer team notched a record of 12–3–3 (4–1–2 in conference play), good for second place in the UAA behind the University of Rochester. But the team's top four scorers and primary goalkeeper have all graduated, leaving room for returning players to step up. Sophomore Tristan Lockwood had 11 shots on goal and scored seven points last year. Senior goalie Jacob Rice appeared in three games and blocked all seven shots he faced.

The team will be playing this year under new head coach Brandon Bowman, who took over the position Aug. 1 after previous coach Arron Lujan stepped down last spring.

"Carnegie Mellon represents the perfect balance between academic expectations and athletic achievement," Bowman said in a university press release in April. "I am excited to lead this soccer program with such a rich tradition."

The first game will be on Saturday, Aug. 30 at the weekend-long Carnegie Mellon DoubleTree Invitational.

Cross country

Two Carnegie Mellon cross country runners advanced as far as the NCAA Championships last year. Then-senior Josh Newby ran the men's 8K in 25:35.5 at NCAAs and placed 53rd, while current junior Rekha Schnepf ran the women's 6K in 23:16.7 and placed 189th.

Among returning runners, seniors Hailey Brown and George Degen, juniors Marc Daniel Julien and Rekha Schnepf, and sophomore Emily Joyce were noted as All-Academic honorees by the U.S. Track and Field and Cross Country Coaches Association. The award goes to student athletes with at least a 3.3 QPA and a top-25-percent finish at an NCAA regional meet.

Of the cross country team's eight fall meets in 2014, only one will be a home event at Carnegie Mellon: the Carnegie Mellon Invitational on Oct. 11. The first meet of the year, though, also takes place in Schenley Park, as the Tartan squad participates in the Duquesne Duals on Saturday, Aug. 30.

File photo by Jason Chen

Josh Newby

Women's soccer

The women's soccer team had a banner year in 2012, recording 14 wins and 13 shutouts en route to a second-place finish in the UAA. The team then ended 2013 with an overall record of 9–5–2 and 3–3–1 in the UAA, a fourth-place finish in the conference. This year, the squad returns three strong scorers in the form of junior Louisa Pendergast, junior Carson Quiros, and senior Amanda So, each of whom played in 16 games last year and scored eight goals. Sophomore goalkeeper Katie Liston racked up 543 playing minutes last year as the team's No. 2 goalie, blocking 12 of 16 shots against her.

The Tartans begin 2014 on the road, with games Friday, Aug. 29, and Saturday, Aug. 30, both in Gettysburg, Pa.

Compiled by
GREG HANNEMAN

SPORTS COMMENTARY

ICC game brings top soccer talent, support to Heinz Field

NISHANT RENIWAL
Staffwriter

After last year's success, the International Champions Cup was back this summer as several top European teams competed in a preseason-friendly tournament to warm up for the season ahead. This time around, there was a game in Pittsburgh, a city known for its NFL, NHL and MLB teams, but not for its following of soccer. The crowd of nearly 3,5000 at the Heinz Field, home to the Pittsburgh Steelers and the Pittsburgh Panthers, was however electric as heavyweights AC Milan and Manchester City took on each other.

Manchester City was without several top stars who had competed in the World Cup, such as Vincent Kompany, Sergio Agüero, David Silva, Pablo Zabaleta, and Fernandinho, but still had impressive talent on display with the likes of Jesús Navas and Stevan Jovetic headlining the starting eleven for them. Milan is not the force they were years ago when club legends Andrea Pirlo and Paolo Maldini graced their team, but still had the top midfielders Keisuke Honda and Sulley Muntari playing for them with star striker Mario Balotelli starting on the bench. The game went to form as Milan was eviscerated by City's pact front line, with Navas shredding the Milan back line time and again. It finished 5–1 to City, with Jovetic grabbing a brace and Navas, Scott Sinclair and Kelechi Iheanacho also getting a goal each while Muntari scored a consolation goal for Milan.

It brought to light the massive rise in power of City while also putting some perspective on the major rebuilding phase that Milan is going through. City has a squad that is deep in every position with the acquisition of defensive midfielder Fernando, who also played in the game, and versatile full back Bacary Sagna adding some much needed squad depth in those positions and goalkeeper Willy Caballero giving Joe Hart some competition. They risk making the same mistakes as their last title winning season however, and by not directly upgrading their immediate first team, they risk stagnating while their peers improve. Milan currently is going through a small financial crisis as owner Silvio Berlusconi does not have the power he once did and there is a continuous struggle at the boardroom level between longtime director Adriano Galliani and new face Barbara Berlusconi. They are struggling to produce quality football, with former managers Max Allegri and Clarence Seedorf failing to integrate new signings and old heads effectively. Milan currently has a large collection of mediocre talent rather than a few world class players who can push them toward the Champions League spot. Their fans will be hoping new manager Pippo Inzaghi, another legend to play for the club, will turn their fortunes around and Milan will finally have an identity. On the evidence of this game and the preseason in general though, that looks unlikely.

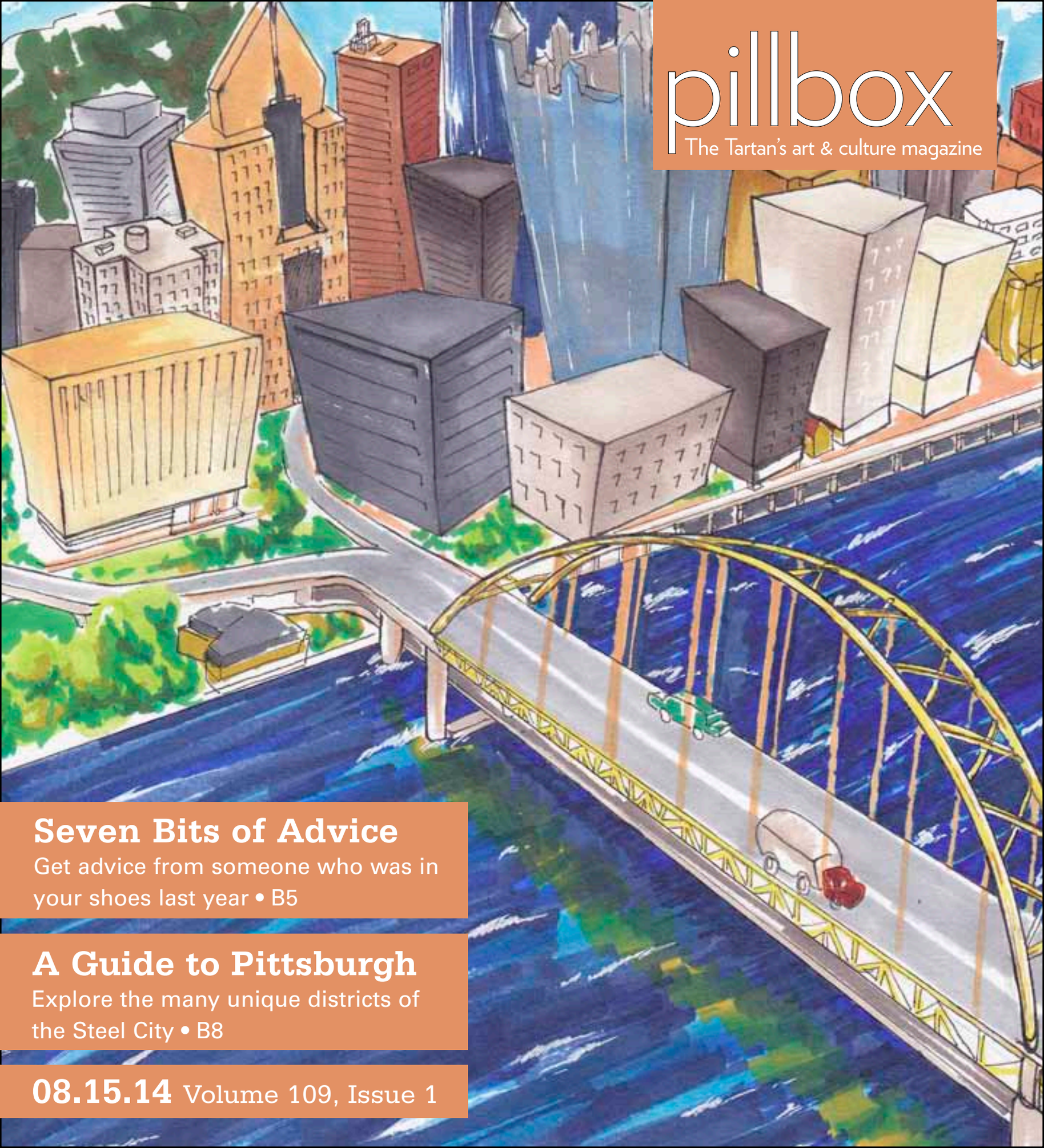
Courtesy of Omgitsjustash via Wikimedia Commons

Heinz Field hosted the International Champions Cup this year, with AC Milan and Manchester City on the field.

I happened to watch this game, and what surprised me most was the passion of the Pittsburgh support. The stadium was not full, but had a large crowd who were vociferous in their support for both teams.

I had the opportunity to speak to a few locals about their following of soccer and found that there are several people in the city who are well exposed to sport and, in fact, follow it to a large extent.

The support for the game and the fantastic turnout may mean that Pittsburgh could witness a lot more soccer over the years. With the MLS growing larger and stronger, and after a strong showing at the World Cup, where fans of the U.S. were consistently among the best, soccer in the U.S. is definitely on the rise. With expansion teams in New York, Orlando and Miami entering the league, could Pittsburgh have Pennsylvania's first strong soccer following?



pillbox

The Tartan's art & culture magazine

Seven Bits of Advice

Get advice from someone who was in your shoes last year • B5

A Guide to Pittsburgh

Explore the many unique districts of the Steel City • B8

08.15.14 Volume 109, Issue 1

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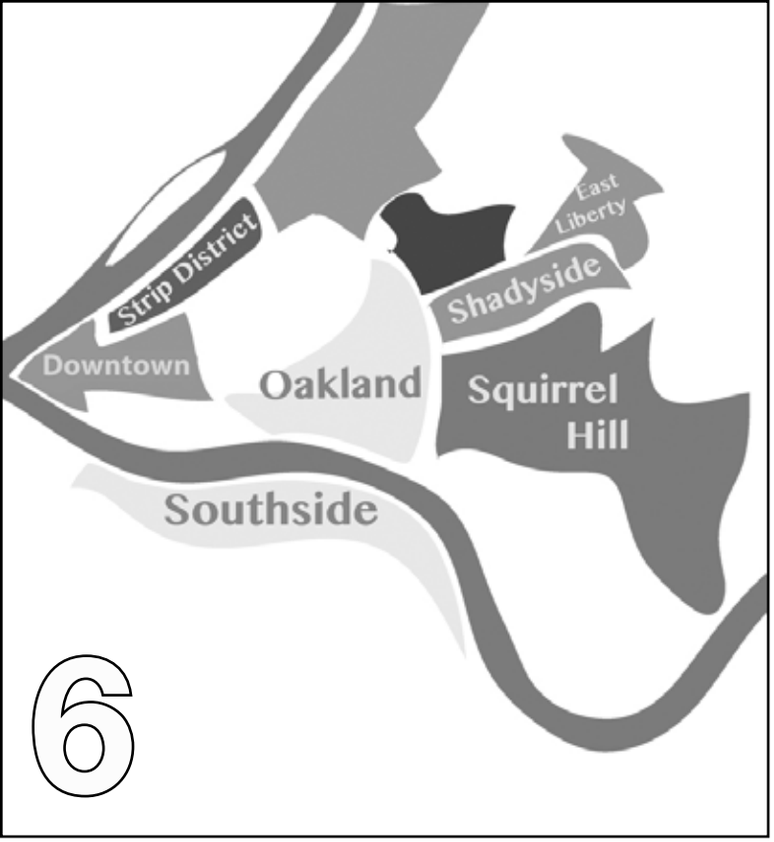

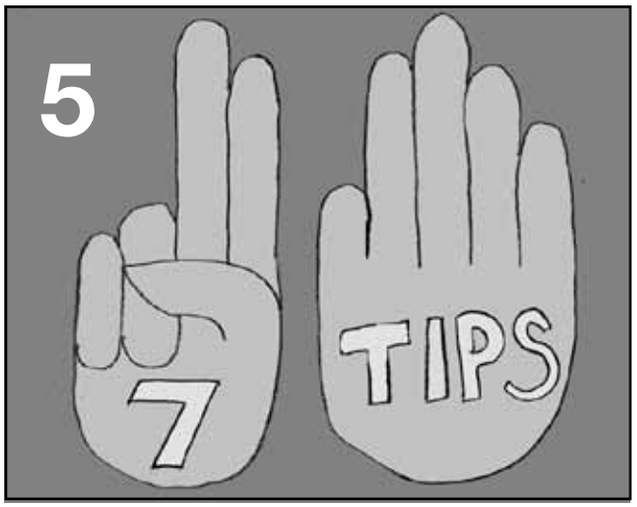

...diversions

regulars...

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A first-year's fashion guide

What to wear as you navigate your first weeks

As an incoming first-year, you may be unsure of what is and isn't acceptable to wear on a daily basis in college. While you may have heard that everyone wears sweats or pajamas to class, this isn't entirely true. On the other hand, you might think that the absence of a high school dress code is your chance to wear things you couldn't before.

Since you're coming to Carnegie Mellon, the latter is probably not the case for you, but here are a couple of **dos** and **don'ts** that can guide you in the right direction. Remember that it's important to be comfortable and express yourself, but also to make a good impression.

Courtesy of David M Tranl via Wikimedia Commons

Do try to look presentable. You don't have to get dressed up for class, but find a balance. It's okay to occasionally give the impression that you rolled out of bed and dragged yourself to class, but every day is a bit much. An outfit as simple as jeans and a T-shirt can make a difference.

Don't get too dressed up if there's no reason to — during Orientation week, for example. If I could do it again, I'd only wear shorts and T-shirts.

Do stay hygienic. This may seem like common sense, but you would be surprised. Just make sure you shower and brush your hair, for obvious reasons.

Don't wear your pajamas to class. The occasional sloppy day in sweatpants is excusable, but leave your Spongebob-patterned sleepwear at home.

Do dress up for events that require you to. You may have to dress formally sometimes if you're in a certain major or program, so take these things seriously.

Don't wear stuff with offensive words or images. Hopefully, you know the difference between what's acceptable and what isn't. Stay away from the latter.

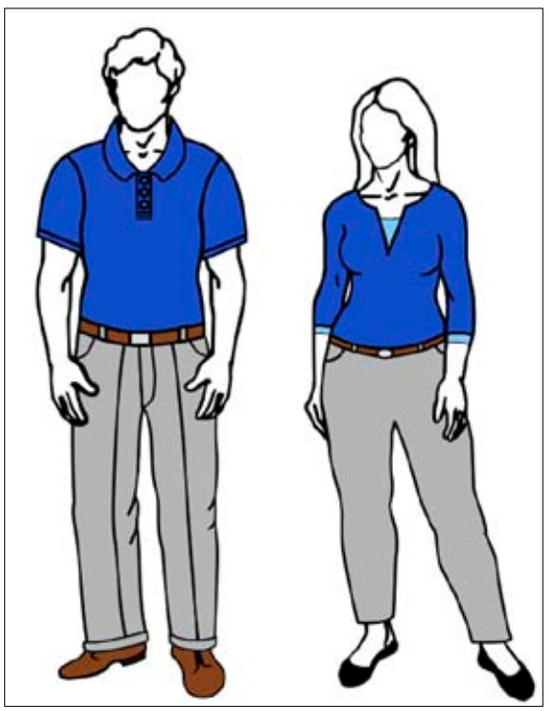
Do dress appropriately for the weather. Pittsburgh weather is notably bipolar, so wearing layers is smart.

Don't get too caught up in what you wear during finals. Lots of people don't care what they wear during this week, since they spend most of their time studying at the library anyway. Wear something comfortable, and bring everything you need to avoid making multiple trips back to your dorm.

Do put your own personality into what you're wearing. College is all about independence and individuality, so express yourself!

Don't forget to carry an umbrella with you, since it invariably rains at least once every day in Pittsburgh.

Nikita Mishra | Staffwriter



Courtesy of Elkagye via Wikimedia Commons

Advice for awkward people

About being offensive and getting laid

Dear Evan,

I'm a Carnegie Mellon parent and alumna, and I'm ashamed at the state that this advice column has fallen to. I used to write in all the time, but now all the answers are dead boring. What happened to the racist commentary? The masturbation jokes? If this continues, I just might cancel my Tartan subscription, leaving you with only two people who subscribe to the paper version.

Yours,
Tired of Euphemisms, Aphorisms, and Maturity, Must Indulge in Ludicrous Farces

Dear TEAM MILF,
I made a New Year's resolution this May that Advice for Awkward People will reach a level of distastefulness so high that we receive at least one angry email regarding our inappropriate content every week.

That said, this column is geared toward Carnegie Mellon students, so I'll mostly be making fun of them — but our school prides itself on its diversity, so I'm sure I'll be able to touch on nearly every subgroup. Also, racism isn't funny, but masturbation is definitely on the table.

Plus, everyone loves a good penis joke,
Evan Kahn

Dear Evan,

I want to get laid during my first month at Carnegie Mellon, but I don't know anyone here at all. I'm not, like, super attractive, but feel like I could bust some moves if I met someone mildly interested. What can I do?

At a loss,
Forging Intimate Relationships Sucks, Too Youthfully Egregious Apropos of Rhetoric, Besot with Overpowering Yearnings

Dear FIRST-YEAR BOY,
Sometimes not knowing anyone, especially at a party, can be a great first step toward shagging. That said, considering that you're the type of person to write to a school newspaper column asking how to get laid, I doubt you have the necessary skills to pick someone up or flirt in the real world. After all, you do go to Carnegie Mellon (you set yourself up for that one). Saying "bust some moves" doesn't really help your case, either.

Unfortunately for you, even Tinder requires some degree of proficiency in flirtation, if not more than usual. Try matching interests with someone on a faceless dating app like Twine Canvas. You'll probably have more luck.

Or just calm your libido,
Evan Kahn

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

A Letter from the Head Orientation Counselors

A word about beginning your adventure at Carnegie Mellon University

Dear Class of 2018+,

Welcome, and congratulations! We, your seven head Orientation counselors, are so excited to finally have you on campus! We've been preparing for your arrival all summer, planning and perfecting the week-long Orientation program that we are so passionate about.

It seems like just yesterday that we were in your shoes, pulling up on move-in day, brimming with nervous excitement as the week began. And now, as we reflect on where we are, it's clear that we've all taken different side roads on our journey to get here. But what we all have in common is that we've taken risks, overcome obstacles, and challenged ourselves. No good adventure story is without its twists and turns, and that's what makes college some of the most exciting years of your life.

Your next years here will be anything but predictable, which is a good thing. The untapped potential is completely yours to make your own. You are in charge of what path you take; you get to choose your own adventure.

The best part of your adventure is that you cannot do it alone. The people you will meet over this week, and the next four or five years, will all be a part of your story. Your classmates, floormates, Orientation counselors, resident assistants, professors, advisors — the list goes on — will be there to make your journey more fun, easy, and exciting than if you were to embark on it alone.

The people here are really what make Carnegie Mellon a place like no other; our community is teeming with passion, drive, and diversity. We hope that this week will introduce you to the most interesting people you have ever met, and hopefully, your closest friends.

From running around during Playfair, the hugest icebreaker you'll ever do, to trying your luck at Casino Night, you won't have a dull moment during Orientation week. By the end of the week, use all that spirit and pride you've built up, and go all out for House Wars to win the coveted Carnegie Cup for your house!

The week will be filled with plenty of information: academic and personal resources, new places, new names, and new faces. Try not to let it overwhelm you, and reach out to your Orientation counselors or resident assistants if you have any questions.

It's hard to describe our love for Carnegie Mellon and the Orientation program in only a few paragraphs, so instead, we hope that this week will introduce you to all the amazing opportunities, people, and places that this university and city have to offer.

This is one of the only times your whole class will be together until you graduate, so take advantage of every moment and just enjoy yourself.

You only get one first-year Orientation! So go into this week with an open mind, have fun, and let your adventure begin.

Your 2014 Head Orientation Counselors,

Steve Posney, Tommy Sterling,
Natalie Giannangeli, Harley Montano,
Anthony Corletti, Gabriela Pascuzzi
Evan Starkweather

Courtesy of the head orientation counselors

Head orientation counselors from left to right: Steve Posney, Tommy Sterling, Natalie Giannangeli, Harley Montano, Anthony Corletti, Gabriela Pascuzzi, and Evan Starkweather

Seven things to make your first year a success

Advice for excelling in your academics, as well as outside of the classroom

Starting college in a new location surrounded by new people can be difficult. To help you navigate your first few weeks on campus, here are seven tips for a successful college experience from a person who was in your shoes just last year.

Everybody is going to give you advice. Most of the time, it will be opposing advice. Do what makes you comfortable.
You're starting college, and suddenly, everybody's an expert. It doesn't matter who the person giving the advice is, whether they went to college or when they did, or even if they grew up in the area. The advice is going to come. But it's important to remember that what you ultimately decide to do is in your hands, and no one else's. So if any advice makes you uncomfortable, mentally note that and try something different. Take even these tips with a grain of salt.

Use your resources.
What you'll hear the most about during Orientation week will be your resources. Carnegie Mellon offers a lot of them, and during information sessions, you may be nodding your head, thinking how great it is that you have access to so many different people. But you may never use half of them. The simplest way to solve a difficult problem is to ask for help, and here at Carnegie Mellon, help is always nearby. So, if you aren't sure what you want to major in, talk to your advisors. If you're confused about a career path, talk to members of the Career and Professional Development Center. If you're feeling down or homesick, make an appointment with Counseling and Psychological Services (CAPS). And if you feel that none of these can help, you can always — always — ask a fellow student to meet with you. Realize that there are plenty of resources and make use of them.

Meet your professors.
Introduce yourself to your professors after their first classes, and go to office hours. Unlike high school, classes at Carnegie Mellon might be large. It's unlikely that professors grade tests, so they may never associate your name and face together. By introducing yourself, you make that connection easy for them. It will never hurt, so there is no need to be shy. You never know when you're going to get a good opportunity. At the end of my first semester, I got an email from my professor asking if I would like to be a teaching assistant (TA) for a class. In the middle of my second semester, I got another email from a different professor asking me to do research with him. Both of these opportunities came about because my professors knew my name.

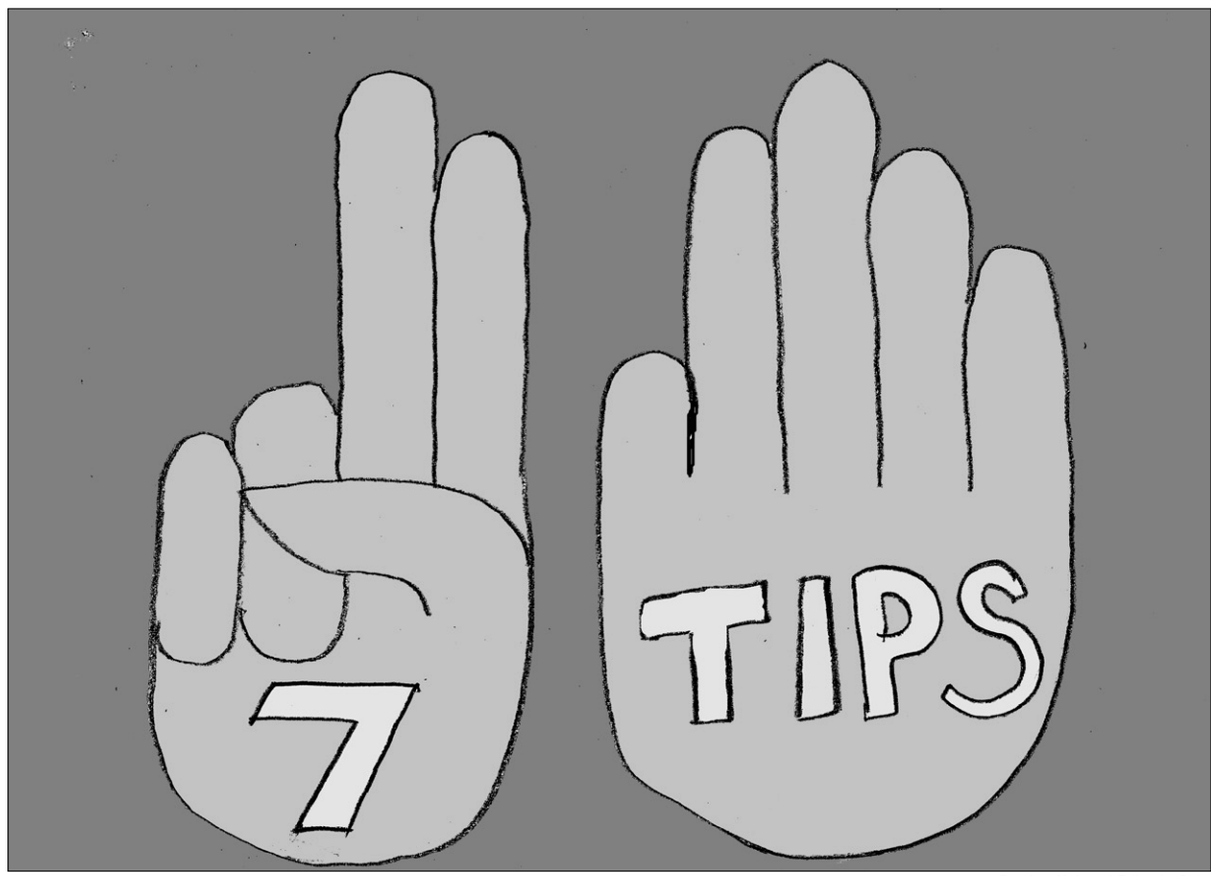
TAs are your friends.
Although meeting professors is important, you don't want to forget about your TAs. Chances are, they are the ones grading your papers and will have more opportunities to get to know you on a personal level. At one point or another in your college career, you will have to ask a TA for help. It makes it a lot easier if the TA knows who you are and why you are struggling. Also, since many TAs are undergraduate and graduate students, they will be happy to share their experiences with you and help you succeed.

Try something new, but don't overwhelm yourself.
College is great — there's a club for everything and for everyone. When you first discover all the wonderful opportunities, you might, like I did, go crazy and sign up for over thirty clubs. Very soon, you will realize that you simply cannot do so many things and you will have to make some difficult decisions. Do not be afraid to try new things, but remember, you don't need to try everything at once. Clubs and organizations are a way to relax, and if they are causing you more stress than pleasure, maybe it's time to rethink your interests.

You don't have to be best friends with your roommate.
You've seen all the movies where roommates are the best of friends. Chances are, someone on your floor has that relationship with their roommate. And you may be questioning why your roommate doesn't seem to be "the one." Don't worry. As long as you are both respectful of each other, you will have an easy and pleasant experience living together. And you will make other friends. Just give it some time.

Take time to create a schedule.
Students at Carnegie Mellon are incredibly busy. Between your classes, extracurricular activities, that new job you have, and your social life, it can be incredibly difficult to manage time, especially if you cruised through high school without really having to try. Make yourself a calendar and schedule everything you plan to do. Unfortunately, the people who struggle most with time management feel that they do not have time to make such a calendar. It seems counterintuitive to spend time trying to find a way to save time. But, I promise you, making this calendar will be incredibly helpful. So find thirty minutes a week, preferably at the beginning of the week, to schedule yourself and stick to your schedule.

Aline Naroditsky | Staffwriter



Braden Kelner | Editor-in-Chief

A beginner's guide for exploring the City of Bridges

Gather your roommates and take a trip around Pittsburgh's many neighborhoods and districts

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.

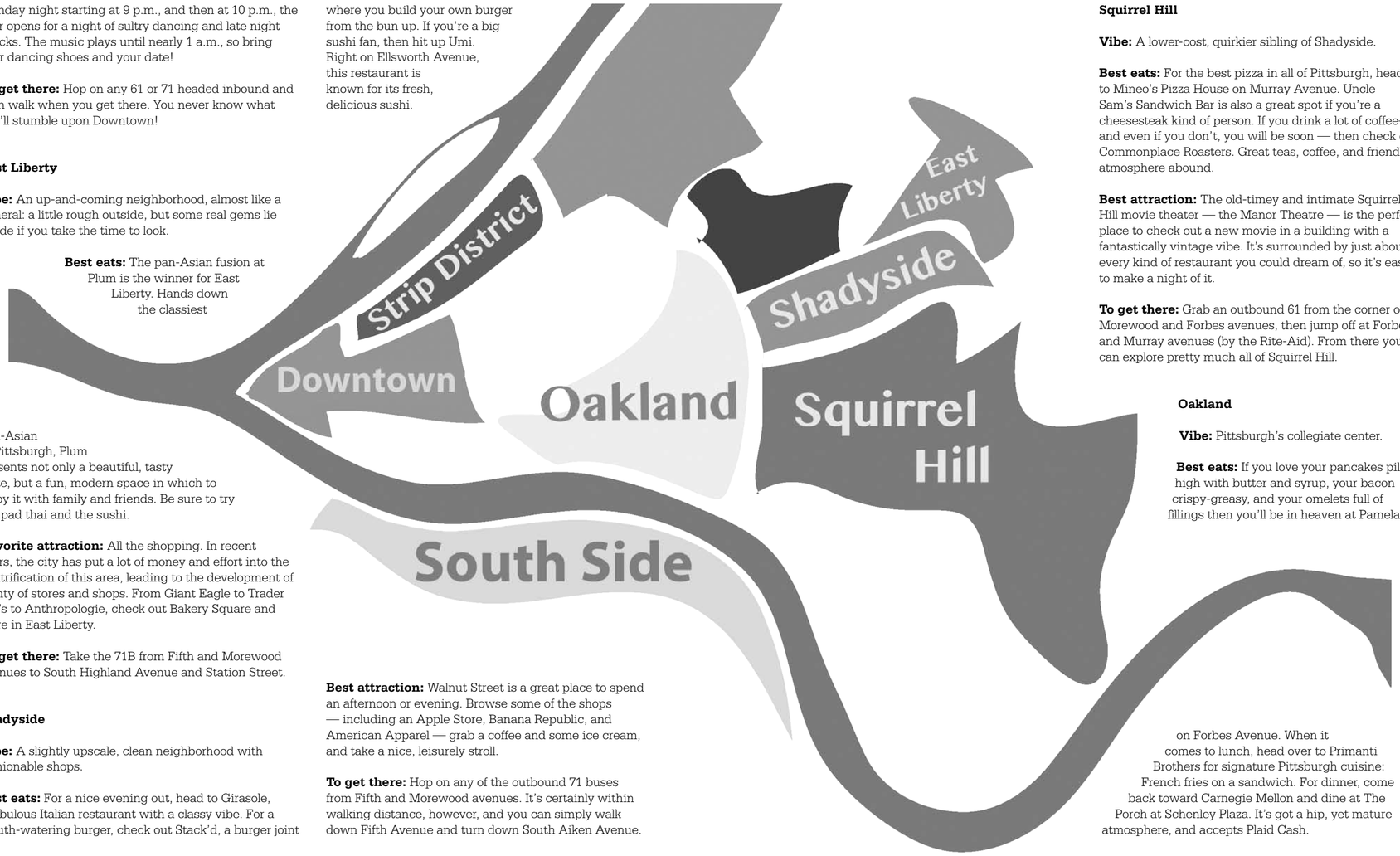
Favorite attraction: All the shopping. In recent years, the city has put a lot of money and effort into the gentrification of this area, leading to the development of plenty of stores and shops. From Giant Eagle to Trader Joe's to Anthropologie, check out Bakery Square and more in East Liberty.

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.

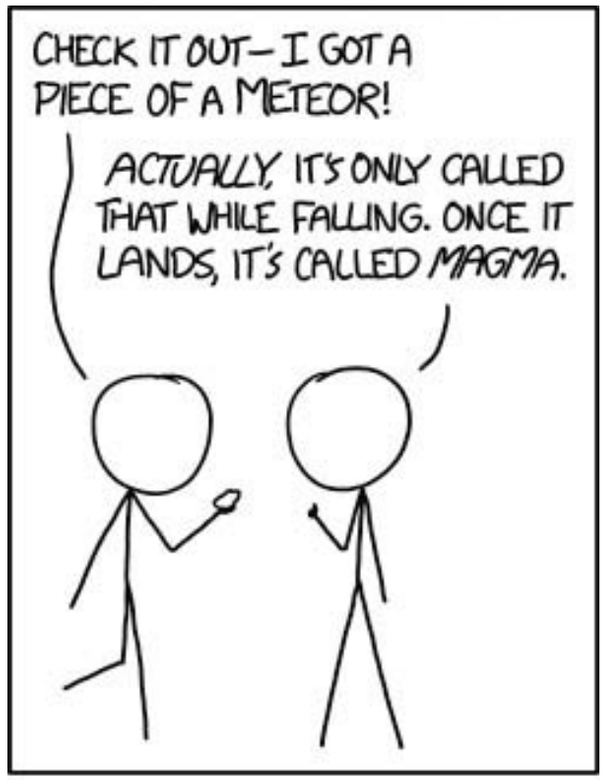
Best eats: If you have a big group, definitely hit up Buca di Beppo. This almost cheesy Italian restaurant serves great food family style, meaning large servings in big bowls to pass and share around the table. They'll have to roll you out after eating so much pasta. For a truly hilarious dining experience, 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!

Joey Peiser | Pillbox Editor
Laura Scherb | Operations Manager

Meteor by xkcd



press@xkcd.com xkcd.com

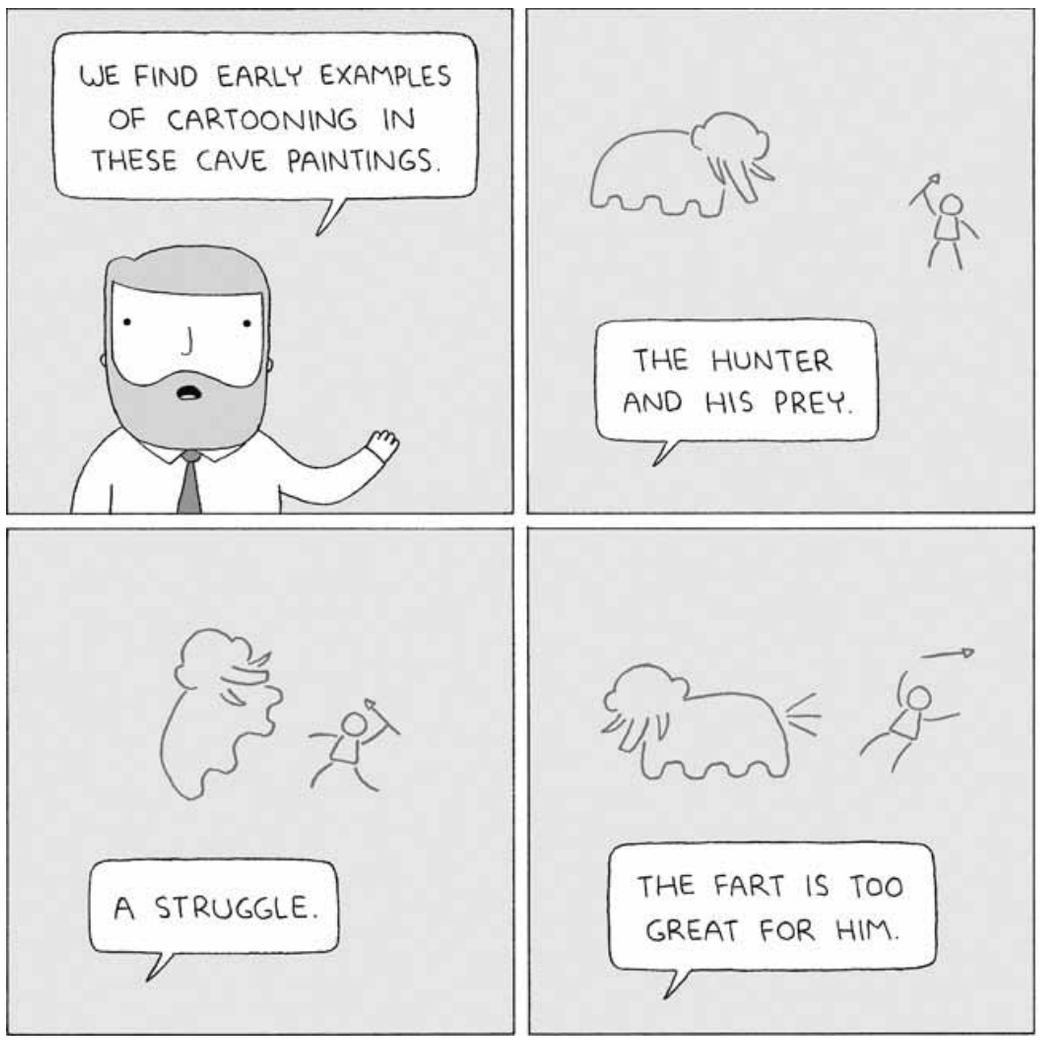
Dog Toys by buttersafe

buttersafe@gmail.com www.buttersafe.com

Tidying Up by Dog House Diaries

thedoghousediaries.com

Early Examples by Fake



wronghands1@gmail.com wronghands1.wordpress.com/about

Horoscopes

aries
march 21–april 19

You'll be meeting a lot of new friends during Orientation, but don't forget to go past the stale greetings and really get to know some of the people you'll be studying with for the next four years.

taurus
april 20–may 20

You may feel somewhat disorganized this week, with so many different activities going on. Have fun, but also make sure to take time to collect yourself before school starts.

gemini
may 21–june 21

The last few days have been pretty tough, but you're finally here! Relax, and enjoy yourself — Orientation only happens once, and you don't need to stress out about the future just yet.

cancer
june 22–july 22

You may get to feel a bit introverted this week, with so many social events forced upon you. Focus on getting to know the people you live with and forming a few strong bonds rather than many weak ones.

leo
july 23–aug. 22

You're a bit homesick, but that's totally normal this time of year. Even upperclassmen feel the nostalgia during the start of the school year, so be comforted by the fact that a little anxiousness from the new year is perfectly normal.

virgo
aug. 23–sept. 22

You'll have to work extra hard this week to keep up with all the happenings around campus. Try not to tire yourself out before the larger events, like Playfair and House Wars.

libra
sept. 23–oct. 22

Take this first week as a chance to experiment with a new fashion style. Check out our fashion dos and don'ts for some Orientation tips!

scorpio
oct. 23–nov. 21

Orientation is a great time to begin networking with some really cool people. Get to know your professors during the academic day, as they can be a great resource throughout the rest of your career here.

sagittarius
nov. 22–dec. 21

Orientation is the only week of the school year where they force you up at 7 a.m. to do social activities. While it's important to maintain good sleep habits, don't let an early bedtime stop you from bonding with your peers.

capricorn
dec. 22–jan. 19

Take time to analyze what you hold to be most important in your life. Whether its a career, a loved one, or a set of principles, it's important to understand what makes you happy. During Orientation, seek out peers that you think may share similar priorities.

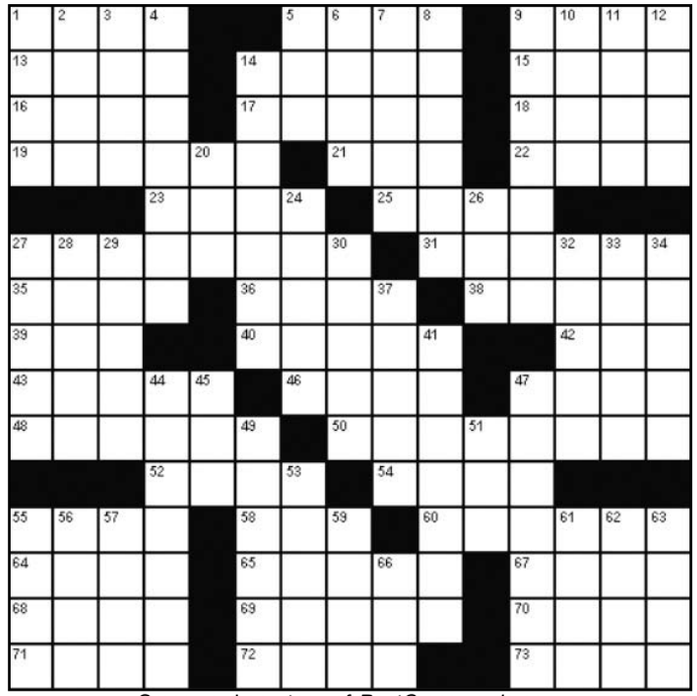
aquarius
jan. 20–feb. 18

Take this week to gain a new perspective on things. You've probably spent most of your life in one place, and you'll be meeting people from all around the world. Try to diversify your experiences, and open your mind to new possibilities.

pisces
feb. 19–march 20

Check out some of the clubs and activities available to you on campus. You may want to try something new. Not only will you meet people, but you'll also get to do something you love.

James Wu | Copy Manager



Crossword courtesy of *BestCrosswords.com*

Across

1. Costly
5. "The King and I" setting
9. Letters, e.g.
13. Hurt
14. Mezzo-soprano Marilyn
15. The King ___
16. Oil-rich nation
17. Inquired
18. Still
19. District adjacent to a city
21. Lady of Sp.
22. Bingo call
23. How sweet ___!
25. Burn balm
27. Fine sheep leather
31. Half-hour funny show
35. In this place
36. Over-50 org.
38. Capital of Tibet
39. Shipping magnate Onassis
40. Spasm
42. IV units
43. Orange Bowl site
46. Drinks (as a cat)
47. Coup d'___
48. Portion of time
50. On an upper floor
52. Final Four org.
54. 365 days
55. Nota ___
58. AWOL chasers
60. Consisting of nine
64. ____-friendly: not too technical
65. Unemotional
67. Switch ending
68. In ___ land
69. Gladden
70. Obstacle
71. Soothe
72. Vega's constellation
73. When said three times, a 1970 war movie

Down

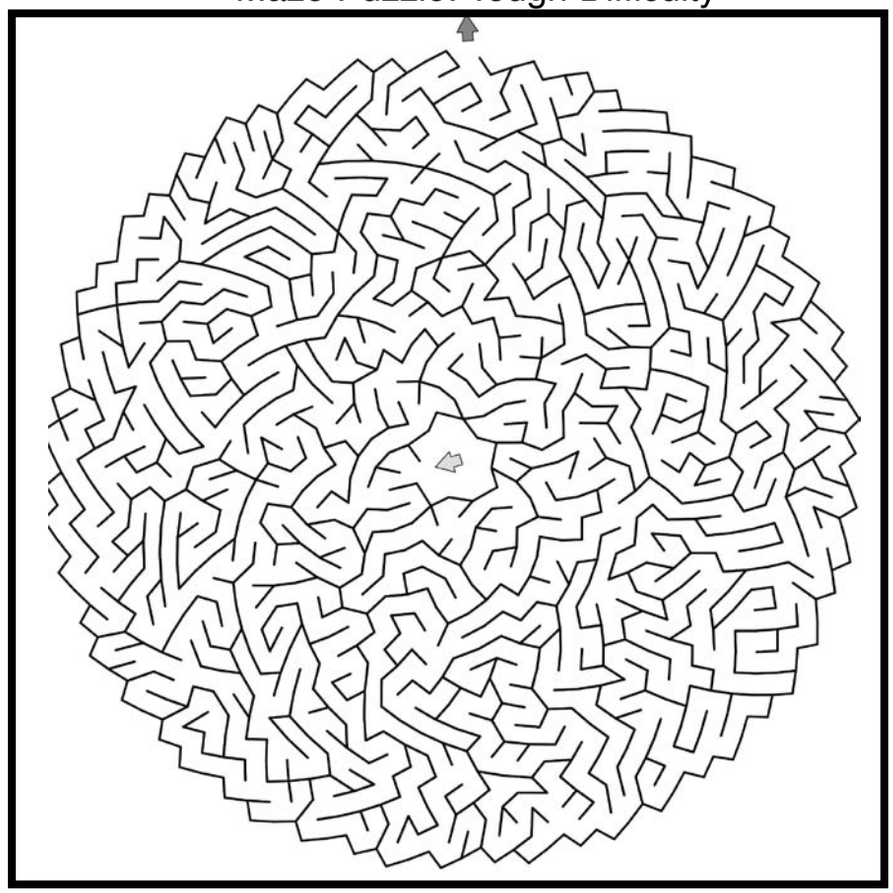
1. Raised platform
2. Beige cousin
3. Captain of the Pequod
4. Have need of
5. Distress signal
6. Bothers
7. The end of ___
8. Military decorations
9. Tragedy by Shakespeare;
10. Med school subj.
11. Doing nothing
12. Describe
14. Natural environment
20. Road with a no.
24. Lesley of "60 Minutes"
26. Lubricate
27. Munch
28. Eagle's home
29. Wild rose
30. Chilean pianist Claudio
32. Desert bloomers
33. Academy award
34. Poles for sails
37. Opium flower
41. Spirit
44. Ore
45. Summer Games org.
47. Serious in intention
49. Maiden
51. Chinese "way"
53. In a fitting way
55. Male of a bovine mammal
56. Son of Rebekah
57. 1994 Jodie Foster film
59. Skyrocket
61. Cartoonist Peter
62. Stadium din
63. Indian exercise method
66. Give ___ rest

Sudoku: Tough Difficulty

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

Sudoku courtesy of *www.krazydad.com*

Maze Puzzle: Tough Difficulty



Maze courtesy of *www.krazydad.com*

Start from the middle arrow of the maze and find your way out the maze.

Summer Concerts

Courtesy of Stuart Sevastos via Wikimedia Commons

Courtesy of mattbuck via Wikimedia Commons

Courtesy of rufus via Wikimedia Commons

This summer, a variety of artists performed at venues across Pittsburgh, including Neon Trees at Stage AE on May 14, Arctic Monkeys at Stage AE on June 17, and Katy Perry on July 17 at the Consol Energy Center. Other notable artists included Paul McCartney, Panic! at the Disco, and the Backstreet Boys and Avril Lavigne, among others. **Top left:** Arctic Monkeys. **Top right:** Katy Perry. **Bottom:** Neon Trees.